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Deconstructing Elevated Expressways: An Evaluation of the Proposal to Remove the Interstate
10 Claiborne Avenue Expressway in New Orleans, Louisiana

A Thesis

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Master of Science
In
Urban Studies

by

Kim T. Henry

B.S. Chemical Engineering, Tulane University, 1984

December 2009

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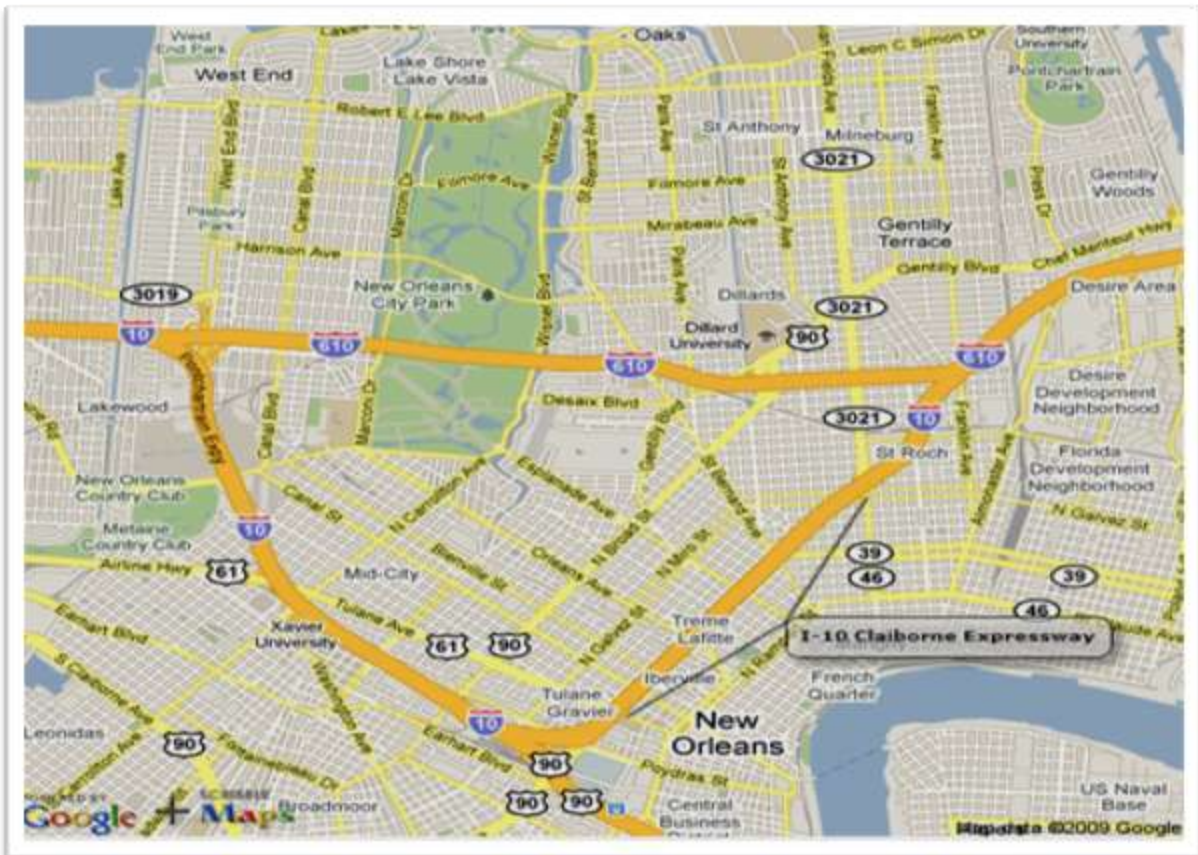
Abstract

With the passage of the Federal Aid Highway Act of 1956, the interstate system included an elevated segment of Interstate 10 constructed over Claiborne Avenue in New Orleans, Louisiana. The I-10 Claiborne Expressway provided access to downtown by destroying a tree-lined boulevard and contributing to the decline of an African American neighborhood. In 2005, after hurricane Katrina, several community-based plans proposed that the elevated I-10 Claiborne Expressway be removed. This thesis compares the removal proposals to the decision making processes of five case cities that have removed expressways. Necessary conditions were applied to all expressway removal cases. Currently, the I-10 Claiborne Expressway decision making process lacks defined structural integrity and safety concerns, a reduction in the value of freeways by power brokers, documented support of the business community and “selling” of idea by a public agency. These conditions were necessary to the decision to remove expressways in all case cities.

Freeway removal, elevated freeway demolition, Interstate 10, Claiborne Avenue, New Orleans, deconstructing elevated highways

Introduction

In the aftermath of the devastation of Hurricane Katrina that began on August 29, 2005, a flurry of city-wide, community-based, planning activities commenced in each of 13 planning districts recognized by the New Orleans City Planning Commission. During the post-Katrina planning process, the residents of Planning District 4 proposed that a study be initiated to evaluate the removal of the elevated segment of Interstate 10 above Claiborne Avenue (I-10 Claiborne Expressway). The demolition or removal proposals vary, but basically, involve a 2 mile segment of the elevated interstate from Elysian Fields to Tulane Avenue (or Canal Street) and 8 to 12 associated ramps.



Source: Google Maps, Edited by author using Scribblemaps.com

Figure 1 New Orleans Interstate System with Major Street Names

The purpose of this study is to explore the proposed demolition of the elevated highway segment, I-10 Claiborne Expressway in New Orleans, Louisiana by comparing the New Orleans case to the experiences of selected case cities that have completed a demolition, removal or deconstruction of elevated interstate highway segments. In my research, I will explore the proposals to demolish the I-10 Claiborne Expressway in New Orleans and compare the New Orleans case to the selected case cities. This comparative analysis will be based on relevant theory from existing literature detailing the circumstances under which demolition occurs. It is my hypothesis that freeway removal will only take place in New Orleans when the necessary conditions common to the case cities are present in the I-10 Claiborne Expressway decision making process.

My research questions are as follows:

- What are the necessary conditions that yield a decision to remove urban elevated expressways?
- What are the dynamics of the decision making process for I-10 Claiborne Expressway?
- Based on experiences of other cities, is the removal of the I-10 Claiborne Expressway feasible?

In New Orleans prior to Hurricane Katrina, the planning literature was limited relative to proposals to demolish or deconstruct the elevated I-10 Claiborne Expressway. Most of the previous studies are limited to beautification proposals or critical reviews of the impacted community, and rarely question the continued existence of the elevated I-10 Claiborne

Expressway structure. My research will attempt to broaden the literature on the demolition alternative of the elevated I-10 Claiborne Expressway.

The demolition proposal for the I-10 Claiborne Expressway was captured in the New Orleans Neighborhood Revitalization Plans (also known as Lambert Plans) in 2006. A similar proposal was included in the 2007 Unified New Orleans Plan (also known as UNOP) for Planning District 4. Both the Lambert and UNOP plans recommend that funding be provided for an initial study of the proposal to remove I-10 Claiborne Expressway. (Lambert Advisory LLC; Zyscovich, Inc.; Cliff James; Byron Stewart, 2006; Frederic Schwartz Architects; Eskew+Dumez+Ripple; HOK; Wayne Troyer Architects; New Orleans Community Support Foundation, 2007).

Additionally, the Congress for New Urbanism (CNU) ranked the I-10 Claiborne Expressway fifth out of ten “freeways without futures”. These were urban freeways that have the “opportunity to stimulate valuable revitalization by replacing the aging urban highways with boulevards and other cost-saving alternatives” (Congress for the New Urbanism). The CNU is a Chicago based, national organization that promotes walkable neighborhoods (Cohen, 2008).

In September 2009, a proposal to study the feasibility of replacing the I-10 Claiborne Expressway with a tree-lined at-grade boulevard was presented in the draft of the City of New Orleans Master Plan entitled *Plan for the 21st Century New Orleans 2030*. The Master Plan for the City of New Orleans will have the force of law as a result of a city charter change approved by the citizens of New Orleans in November of 2008. This charter change requires that the city develop a master plan and that land use actions be consistent with the master plan.

It has been theorized in the UNOP that the demolition of I-10 Claiborne Expressway would yield “positive impacts by reconnecting neighborhoods and restoring what was once a beautiful tree lined avenue” and that “traffic redistribution provides economic development benefit to a corridor ripe for more volume.” (Frederic Schwartz Architects; Eskew+Dumez+Ripple; HOK; Wayne Troyer Architects; New Orleans Community Support Foundation, 2007, p. 62).

The draft New Orleans Master Plan theorizes that the I-10 removal would “right a decades old wrong committed in the name of urban renewal, ...enhance the liveability and character of adjacent neighborhoods...and promote investment in the neglected blocks along the expressway” (Goody Clancy, Camiros Ltd, GCR Inc, Maning Architects , 2009). All plans acknowledge the concerns associated with diverting traffic from I-10 to I-610 as shown in the Figure 1.

This thesis begins with a brief history of the interstate system in the United States, New Orleans and more specifically the I-10 Claiborne Expressway. Chapter 2 explores the origins of the proposals to remove the elevated I-10 segment. In Chapter 3 and 4, the federal and local policy implications and planning impacts are discussed relative to the future of Interstate 10. Chapter 5 presents the theory and conditions that are the basis for this research and Chapter 6 addresses methodology for my research. Chapters 7 through 11 are case summaries of the five cases cities that have completed demolition or removal of an elevated interstate segment. Chapter 12 is a cross case analysis of the cases cities and the proposal to demolish the elevated segment of I-10 Claiborne Expressway. This thesis concludes with limitations of research and responses to research questions.

Chapter 1 – Historical Perspective of the Interstate System

United States Interstate System

The very early planning for the interstate system in America began with the Federal Aid Act of 1938 under the direction of Thomas McDonald who would serve as Chief of the Bureau of Public Roads (BPR) from 1919 to 1953 (McNichol, 2003, p. 59). The BPR was the precursor agency to the U.S. Department of Transportation which was established 1967. The 1938 act allocated funds for 46 states to conduct highway planning surveys of their roads. The survey results were published in a highway planning report entitled *Toll Roads and Free Roads* presented to Congress in 1939 (Weingroff, Highway History, 2008).

Another early planning document for the US interstate system was entitled *Inter-regional Highways* was presented to Congress in 1944. This report detailed a 33,920 mile network of rural and urban highways and provided a section on the principles of route selection. Both reports, *Toll Roads and Free Roads* and *Inter-regional Highways* contained “considerable detail on freeways in cities” (Weingroff, Highway History, 2008)

The freeway system in America was conceived in large part by highway engineers as early as the 1930’s and 1940’s. In the infant stages and for many years thereafter, the planning and construction of freeways and the interstate system was dominated by an engineering perspective in a rural or suburban landscape. President Dwight Eisenhower took office in 1953 and shared the perspective that the inner city was no place for the interstate.

However, Thomas Harris MacDonald, the Chief of the Bureau of Public Roads, fervently believed that the rural areas could not justify interstate highways and that the interstate must traverse the inner cities. President Eisenhower did not retain Chief MacDonald upon taking office in 1953, but the so called “Yellow Book” created under MacDonald’s tenure would become the blueprint for the location of the interstate system in the United States. This document entitled, *General Location of National System of Interstate Highways* included schematics of 122 maps of the proposed highway system in 43 states (McNichol, 2003, p. 140). The Yellow Book was delivered to every member of the House and Senate and was instrumental in the passage of the Federal Aid Highway Act of 1956. In the Highway Act 1956, Congress authorized funding for the construction of over 41,000 miles of highway funded by the federal government at 90 percent with the states accountable for 10 percent (McNichol, 2003, p. 107).

Although, President Eisenhower never intended for the interstate to traverse the inner city, he was unable to do anything about it because of the desire of every congressman and senator to bring the federal highway construction projects to their hometown. Thus, the Dwight D. Eisenhower System of Interstate and Defense Highways, named for the 34th president, went straight through the middle of almost every major urban area in the United States.

The engineers involved in the design of the original interstate system did not adequately account for the nuances of the urban landscape in the inner city. The major American cities are comprised of complex spatial and social functions that were not fully considered in the alignment, design and construction of the urban freeways. The construction of expressways in the urban areas resulted in the displacement of many poor and minority residents and dismantled

many neighborhoods to accommodate freeways often under the guise of urban redevelopment. In his book *Interstate*, Mark Rose summarizes the focus of the interstate construction by stating that “traffic patterns of motorists and truckers and decisions of engineers determined the outlines of Interstate construction.” With this focus, engineers intentionally sought out cheap land by reviewing city tax maps and targeting the so-called slums for replacement by the interstate.

Ironically, the interstate highway construction was encouraged by the leadership of many central cities that have themselves been adversely impacted by the mass exodus of residents to outlying suburban areas and the decentralization of the functions of the central city in favor of locations near the interstate interchanges (Muller, 2004). By 1960, many public officials and businessmen were eagerly anticipating the construction of the interstate to increase access to their cities and spawn economic development.

The interstate construction pre-dates and was often the impetus for legislation such as the National Environmental Policy Act (NEPA) of 1970 that would require a review of the impacts to the human and natural environment of all federal funded transportation projects and mandates community involvement in the process.

The construction of the interstate highway system had a significant effect in defining Americans preference for automobile travel. However, there were other notable historical events that assisted the highway system in fostering auto dependence in the U.S. These include General Motors systematic buy-out and dismantling of the urban light rail systems in over 100 U.S. cities beginning in the 1930s for the purpose of eliminating alternate transportation options in favor of selling more cars. “National City Lines, General Motors and the other defendants were found guilty of conspiracy to

monopolize the local transportation field” and “were individually fined \$5,000.” (Klein, 1996). Also, beginning in the mid 1940s, the housing policies of the US Federal Housing Administration (FHA) and Veterans Administration (VA) mortgage programs favored new construction in the auto accessible suburbs as opposed to the restoration of the inner city (Hanchett, 2000).

The interstate system has shaped the discussion of transportation in the United States and has produced many benefits and challenges. It has been noted that “The interstates reduced the cost of transporting goods, provided safe, convenient access for employees and shoppers; and helped to increase America’s dependence on the automobile” (Daniels, 2003, p. 338).

By the 1960s, several cities were beginning to organize opposition to the interstate construction, particularly in urban areas such as San Francisco, Boston, Baltimore and New Orleans. The results were a combination of successful and failed attempts to halt interstate construction. The construction of portions of I-95 in Boston was halted in 1952; the construction of I-70 in Baltimore was halted in 1968; the construction of I-40 through Overton Park was halted in 1981, the construction of the New Orleans Riverfront Expressway was halted in 1969 and San Francisco stopped construction in progress on the Embarcadero and Central freeways in 1959. However, riots in Detroit (1965) and Los Angeles (1965) are attributed in part to the tensions in the poor and minority communities when freeways were constructed causing the decline in transit, decreased mobility caused by passing over and under freeway structures, and air and noise pollution from vehicular traffic. There was no formal input or representation by the affected poor and minority communities in the decision making process for these structures.

The proposed interstate systems that became the subject of opposition and controversy in the above mentioned cities were generally located in the core of residential areas, in poor and minority communities, in business districts and along scenic areas such as waterways and parkways. Elevated expressways are also well represented in the controversial discussion of interstate highways particularly given the collapse of two San Francisco freeways and one Oakland freeway during the 1989 Loma Prieta earthquake. The full impact of the construction of these massive concrete structures is still currently being debated in a number of cities.

Many cities are formally re-evaluating the existence of and need for these elevated highways. Several cities have already opted to dismantle these structures in an attempt to correct past errors in design that have adversely impacted the quality of life and increased efficiency of traffic flow within these cities. The removal of elevated expressways has been credited with “opening up access to waterfronts, removing physical obstructions, and revitalizing economically stagnant neighborhoods.” (Cervero, Kang, & Shively, From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco, 2007, p. 2)

Among the cities that have reconsidered the need for, and value of urban expressways, particularly elevated expressways, are Boston, Massachusetts (Central Artery I-93); San Francisco, California (Embarcadero Freeway I-480); San Francisco, California (Central Freeway I-80), Milwaukee, WI (Park East Freeway I-43) and Portland, Oregon (Harbor Drive). Portland was one of earliest urban cities to demolish an expressway in 1976. The Portland Harbor Drive expressway was not elevated but was situated near the

Willamette River water front as are many of the interstate segments being evaluated for demolition.

Some of the cities that are actively considering proposals to remove freeways include Milwaukee, Wisconsin – Interstate 65; Brooklyn, New York - Gowanus Expressway I-278, Seattle, Washington - Alaska Way Viaduct; Louisville, Kentucky - Interstate 64 and Portland, Oregon - Interstate 5 (The Preservation Institute, 2007). As evidenced by post-Katrina community planning reports, New Orleans is also reconsidering the utility of the elevated segment of I-10 Claiborne Expressway.

New Orleans Interstate System

Entering the city from the west, the interstate system in New Orleans is primarily composed of I-10 that runs east and west from Jefferson Parish bending southerly into the Pontchartrain Expressway (Exit 230 to Exit 234) followed by a northeasterly bend into the North Claiborne Avenue Expressway. I-10 then continues in an easterly route to New Orleans East and then on to Slidell, Louisiana. Construction of this system was largely complete by the mid-1960s. The Interstate 10 at Claiborne Avenue is a segment of the I-10 route that curves similar to river before turning in an east/west direction to New Orleans East. This segment (Exit 234C to Exit 238B in Figure 2) was complete in March of 1968 and is the subject of this research.

The final portion of the original interstate system is the I-610 which serves as a bypass of the Central Business District (CBD) of New Orleans for commuters traveling east or west (Exits 1B to 4 in Figure 2). By 1972, the construction of I-610 was underway; however construction was briefly delayed by a class action lawsuit filed on February 24, 1972 because of its route through City Park (Open Jurist, 2009).



Source: South East Roads Website http://www.southeastroads.com/new_orleans.html

Figure 2 - New Orleans Area Interstate System with Numbered Exits

The interstate system in the New Orleans area developed in much the same manner as the US system throughout the country. Most notably there are two major freeway decisions that continue to impact current transportation and land use issues in New Orleans. One

involves the decision to build the I-10 Claiborne Expressway and the other involves the decision not to build the interstate on the riverfront in the French Quarters (Lewis, 1997; Mohl, *The Interstates and the Cities: Highways, Housing and the Freeway Revolt*, 2002; Mohl, *Planned Destruction: Interstates and Central City Housing*, 2000; Wright, *New Orleans Neighborhoods under Siege*, 1997).

Proposed Riverfront Expressway

In the original interstate designations, New Orleans was to have the I-10 that runs east-west and loops southerly through the central business district and a bypass of the CBD designated as I-610. However, in 1960, the Riverside Consultant firm issued a report to the New Orleans Chamber of Commerce that resulted in a memo being submitted to the U.S. Bureau of Public Roads. The essence of the memo was to appeal for consideration of a riverfront expressway in the new interstate system.

A riverfront expressway, the Vieux Carre Expressway, was originally proposed for the City of New Orleans in a 1946 plan by the prominent New York highway builder, Robert Moses. This proposed riverfront expressway was incorporated into the interstate plans of the Bureau of Public Roads (BPR) on October 13, 1964 and given the designation of I-310 (Weingroff, *Infrastructure- The Second Battle of New Orleans, Vieux Carre' Riverfront Expressway (I-310)*, 2005). The historic citizen battle for and against the proposed riverfront expressway is captured in the 1981 book entitled, *The Second Battle of New Orleans* by Richard O Baumbach, Jr. and William E. Borah. Baumbach and Borah were major and active opponents of the riverfront expressway.

The Louisiana Highway Department (now the Louisiana Department of Transportation and Development) proposed the riverfront expressway in January of 1966. By June of 1967, the opposition and controversy surrounding the elevated riverfront expressway had become so intense that the Federal Highway Administration (FHWA) officials, formerly the BPR, held a public meeting in New Orleans. In January of 1969, the LHD, New Orleans City Council and the FHWA all approved of a surface expressway with only a portion elevated instead of an elevated riverfront expressway.

The designation of the French Quarter a historic landmark greatly aided the opponents of the riverfront expressway. The passage of the National Historic Preservation Act of 1966 created a process for Federal, State, local officials and historic preservationist to address issues of impacting prehistoric and historic resources. The Act also created the Advisory Council for Historic Preservation as a “forum for public consideration of historic preservation issues” (Weingroff, Infrastructure- The Second Battle of New Orleans, Vieux Carre' Riverfront Expressway (I-310), 2005).

The Times-Picayune newspaper first reported that the riverfront expressway was no longer approved by the FHWA in January 1969 amid lawsuits by preservationist and lack of the opportunity for the Advisory Council for Historic Preservation to comment as was then required by law. The new United States Department of Transportation (US DOT) was authorized in 1966 and the first secretary was John A. Volpe. On July 9, 1969, Volpe cancelled the Vieux Carre' Expressway project sighting damage to the French Quarter and “separation of the French Quarter from its Mississippi River levee and waterfront”. The I-310 designation of the Vieux Carre' Expressway was eventually reassigned to the Hale Boggs Memorial (Luling) Bridge which opened to traffic in 1983.

(Weingroff, Infrastructure- The Second Battle of New Orleans, Vieux Carre' Riverfront Expressway (I-310), 2005).

Planning and Construction of I-10 Claiborne Expressway

The predominantly “white New Orleans residents” who opposed of the Riverfront expressway were ultimately successful in their battle and the highway was never built. However, the “nearby mid-city black community along Claiborne Avenue was less successful” (Mohl, *The Interstates and the Cities: Highways, Housing and the Freeway Revolt*, 2002, p. 237). Mohl further contends that the preservationist that fought the riverfront expressway were instrumental in offering the Claiborne Avenue corridor as an alternate route.

The I-10 segment over Claiborne Avenue is located in the Treme, Mid-City area of New Orleans. The Treme area is “adjacent to the French Quarter and near the Central Business District (CBD) of the City of New Orleans.” This area is reportedly one of the “oldest black neighborhoods in America” (Riker, 2002, p. 3). Prior to the construction of the elevated interstate segment, this area was a thriving black community and boasted a median with oak trees “four stories high” and is said to have been the “longest contiguous chain of oaks in the United States” (McNichol, 2003, p. 155).

The I-10 Claiborne Expressway was not originally the preferred route of the 1946 Arterial Plan developed by Robert Moses. The Riverfront Expressway was the recommended route as Moses expressed concerns about moving in and out of the core of the city. Moses also favored the proposed Riverfront expressway because it was near the

city center, posed no problems with ramps, provided needed light and air and would not result in depressing real estate values (Samuels, 2000).

The planning of the New Orleans interstate is detailed in Daniel Samuels', thesis research entitled *Remembering North Claiborne: Community and Place in Downtown New Orleans, 2000*. According to Samuel, there were "some nine alternate routes" being considered for the expressway through the inner city near the CBD (Samuels, 2000, p. 60). By the mid-1950s, the inner city routing of the interstate was becoming a priority since the Mississippi River Bridge and Pontchartrain Expressways were constructed and the Eastern leg of the interstate was being planned.

In April of 1954, the Director Secretary of the New Orleans City Planning Commission, Louis C. Bisso, presented the *1954 Major Street Plan* at a public hearing. The plan contained two expressway routes through the city. Both routes were located in public rights of way eliminating the need for extensive acquisition of privately held land. These routes included a Florida Avenue route as the cross town connection and a North Claiborne Avenue to connect New Orleans East to the CBD.

In 1956, the state of Louisiana developed a report by Howard, Needles, Tammen and Bergendoff that proposed a New Orleans interstate alignment similar to the 1955 BPR report entitled *General Location of National System of Interstate Highways*, the infamous "Yellow Book". The route proposed in the Howard Needles report was very similar to the proposed routes in the 1954 Major Street Plan with the exception of a "new right-of-way to avoid the dogleg in the bend of North Claiborne" (Samuels, 2000, p. 62).

The city and state plans for the interstate in New Orleans were predicated on justifications such as projected population growth, increasing vehicle registrations, time savings for commuters, elimination of congestion and economic development. Other groups such as the Chamber of Commerce Central Area Committee supported the interstate as a tool to “reverse the trend of businesses and people leaving the CBD.” The Chamber collaborated with the Director of CPC, Mr. Bisso, to compile a report entitled *A Prospectus for Revitalizing New Orleans’ Central Business District* in October 1957. The plan embraced a concept of inner arterial belt around the CBD with radiating arterials connected to outer belts via radiating arterials. The proposed Claiborne Avenue Expressway was an integral part of this plan.

During a public hearing on February 11, 1958, the audience was hostile and booed R.B Richardson the State of Louisiana Director of Highways who was presenting the proposed interstate system. The then Mayor Morrison, reprimanded the audience for its behavior and offered comments referring to the city as a “transportation center” that under no circumstances should allow the new “interstate system to bypass New Orleans.” (Samuels, 2000, p. 67)

By the late 1950’s the planning of the interstate system in New Orleans was becoming a contentious issue among many communities with regard to the logistics of the interstate’s route through core of the city. As previously discussed, French Quarter preservationists were strongly opposed to the Riverfront Expressway and were successful in its defeat. The homeowners in Lakeview and Gentilly were in opposition of a cross town route. However, the state and local governments were coalescing with regard to the proposed Claiborne Avenue expressway.

The North Claiborne Avenue route would be selected for a number of purely logistical reasons including its location near the CBD, the wide expanse of its right-of-way capable of accommodating an interstate highway, the minimal land acquisitions needed, and the fact that US Highway 90 was a state controlled highway. However, as Samuels states in his research, “there is not a single entry in the public record that suggests that North Claiborne was conceived by local planning officials in any terms beyond its utility as an expressway route.” (Samuels, 2000, p. 70) The impacts to the surrounding communities were rarely mentioned. It is important to note that in a historical context; the construction of the I-10 Claiborne Expressway pre-dates the 1970 NEPA legislation that would eventually mandate an extensive public participation process as part of the environmental clearance documents required for federally funded transportation projects. It has been stated that “Unlike the hoopla that surrounded proposals for the construction of the Riverfront/Vieux Carre’ Freeway, no public hearings were held to inform the black community of the Claiborne Avenue section of I-10.” (Wright, New Orleans Neighborhoods under Siege, 1997, p. 133)

The elevated I-10 Claiborne Expressway opened to traffic in March of 1968 (Riker, 2002, p. 3). The final structure is described as “a six lane facility, entirely elevated on a viaduct structure. From Gravier Street to St. Bernard Avenue the structure occupies the existing median of Claiborne Avenue and from St. Bernard Avenue (and beyond) the facility is constructed on a new right of way. The roadway deck is reinforced concrete, cast in place, supported on pre-cast, prestressed AASHO girders or, at long spans, on welded, builtup steel girders. The girders are carried on cast in place 2-column bents,

supported on pipe piles. Column diameters are 3'0" nominal with special bents having columns as large as 5'0" diameter." (Claiborne Avenue Design Team, 1976, p. 43)

Upon completion of the I-10 Claiborne Expressway, engineers working on the construction remarked that it was a "rather grotesque structure" and another stated, "If we had it to do over again, we wouldn't." (McNichol, 2003, p. 157). These comments were probably some of the earliest of the numerous negative descriptions of the elevated I-10 structure.

Chapter 2 The Proposal to Remove I-10 Claiborne Expressway

Origins of the I-10 Claiborne Ave Removal Proposal

The literature on the I-10 Claiborne Expressway and its impact on the culture, sense of place and transportation in New Orleans can be divided in to two distinct eras. Pre-Katrina, the literature is primarily focused on the post–construction impacts to the Treme community around the elevated structure and recommendations for beautification and improved land use of the space beneath the elevated structure. Post-Katrina the literature is focused on a more radical idea of removing the elevated structure and replacing it with a tree-lined surface boulevard as a strategy for economic revitalization of the Treme area.

Pre-Katrina Literature

The *Claiborne Ave Design Team (CADT) I-10 Multi Use Study* was conducted in 1976 and focused on ways to redevelop the rapidly declining area around the Claiborne Ave I-10 overpass. The study area was 3.51 miles of the I-10 corridor from Poydras Street to Peoples Avenue which is longer than the current corridor proposed for demolition. The CADT report is a comprehensive plan for redeveloping the area and includes existing conditions including environmental issues, historical context of the area, demographic data and proposed design and financing strategies. The CADT recommended alternative included landscaping, street improvements, parking facilities, street lighting, street furniture, kiosk and graphics under the overpass and the creation of a linear park at the existing railroad site from Basin Street to Jefferson Davis Parkway. The plan recommends removal of off and on ramps between Esplanade and St. Phillips Streets and addition of an off ramp at St. Bernard Avenue. The CADT also recommended that the alignment of Claiborne Avenue be relocated under the

northside of the elevated I-10 structure from Dumaine to St. Bernard Avenue (Claiborne Avenue Design Team, 1976, p. 68 & 109)

A study on the relationship between community and place in the I-10 Claiborne Expressway corridor is the subject of the thesis entitled *Remembering North Claiborne: Community and Place in Downtown New Orleans, 2000* by Daniel Samuels. Samuels concludes that policy whereby the dynamic between “community and place” are not fully considered will result in the affected community bearing a disproportionate share of the “cost of public actions” as is the case in the Treme area. Samuels research provides a detailed look at the planning of the interstate and the interstate corridor several decades after the construction of the elevated structure. He focuses on the impact of the Interstate 10 on “community and place” by utilizing “archival history and oral history to explore the role of North Claiborne in sustaining the downtown community’s viability and identity, and to examine the impacts of the Interstate on those relationships.” (Samuels, 2000, pp. ix-x) The author presents the historical context of the Treme area prior to the construction, the planning process for locating the Interstate and the resulting struggle to restore place nearly 50 years after the decision to locate the elevated I-10 on North Claiborne Avenue, in the Treme area.

Samuels research noted that the public record from the beginning of the planning process to actual construction of the I-10 contains no information beyond the “utility” of the “expressway route” (Samuels, 2000, p. 70). The research revealed that the affected communities were only giving consideration in the context of their “utility to the CBD”. The author finds that the North Claiborne Ave decision makers were influenced by a desire for the City of New Orleans to participate in the federally funded urban renewal program. As such, the goal was to designate

the Treme area as a slum and a candidate for renewal by locating the I-10 in the middle of it. The considerations of community and place were not explored. Samuels research addresses policy issues as opposed to recommendations involving the physical structure of the elevated expressway.

The May 2002 University of New Orleans Masters of Urban and Regional Planning program final project report by Jonathan Riker entitled *Overcoming the Impact of Interstate 10:*

Recommendations for Revitalizing North Claiborne Avenue in New Orleans is another pre-

Katrina examination of the impacts of the I-10 Claiborne Ave. In this final project report, Riker

examines the current condition of the Treme area adjacent to the elevated I-10 and proposes

“aesthetic and design recommendations for improving the area such as landscaping, column

design and public art, highway walls and murals, banners, signage and green space under the

elevated I-10. The report contains a section entitled “Measuring the Impacts of I-10 on the Study

Area” (pps 17-21) that contains demographic, income, social, economic data largely from the

CADT report. This report also addresses the “physical destruction” of the area from the taking

of homes in an eight square block area to facilitate a proposed cultural center. The Mahalia

Jackson Theater for Performing Arts was the only building of the multiple buildings planned for

the center that was actually constructed.

Post-Katrina Literature

It is in the post-Katrina literature that the proposals to demolish the elevated segment of the I-10

Claiborne Expressway begin to appear. The demolition proposal has appeared in three major

post-Katrina community planning documents and several newspaper articles.

The post-Katrina planning documents that propose to demolish or remove the I-10 Claiborne Expressway are the 2006 New Orleans Neighborhood Revitalization Plans (also known as Lambert Plans), the 2007 Unified New Orleans Plan (also known as UNOP), the September 2009 draft of the City of New Orleans Master Plan entitled *Plan for the 21st Century New Orleans 2030*.

Lambert Plan - 2006

The demolition proposal for I-10 at Claiborne was captured in the New Orleans Neighborhood Revitalization Plans (also known as Lambert Plan) in 2006. The Lambert Plan was a citywide, community based, post-Katrina planning document that contains 46 neighborhood plans for New Orleans. The plans were funded by the New Orleans City Council using previously unallocated Community Development Block Grant (CDBG) funds (NOLAPlans.com, 2006).

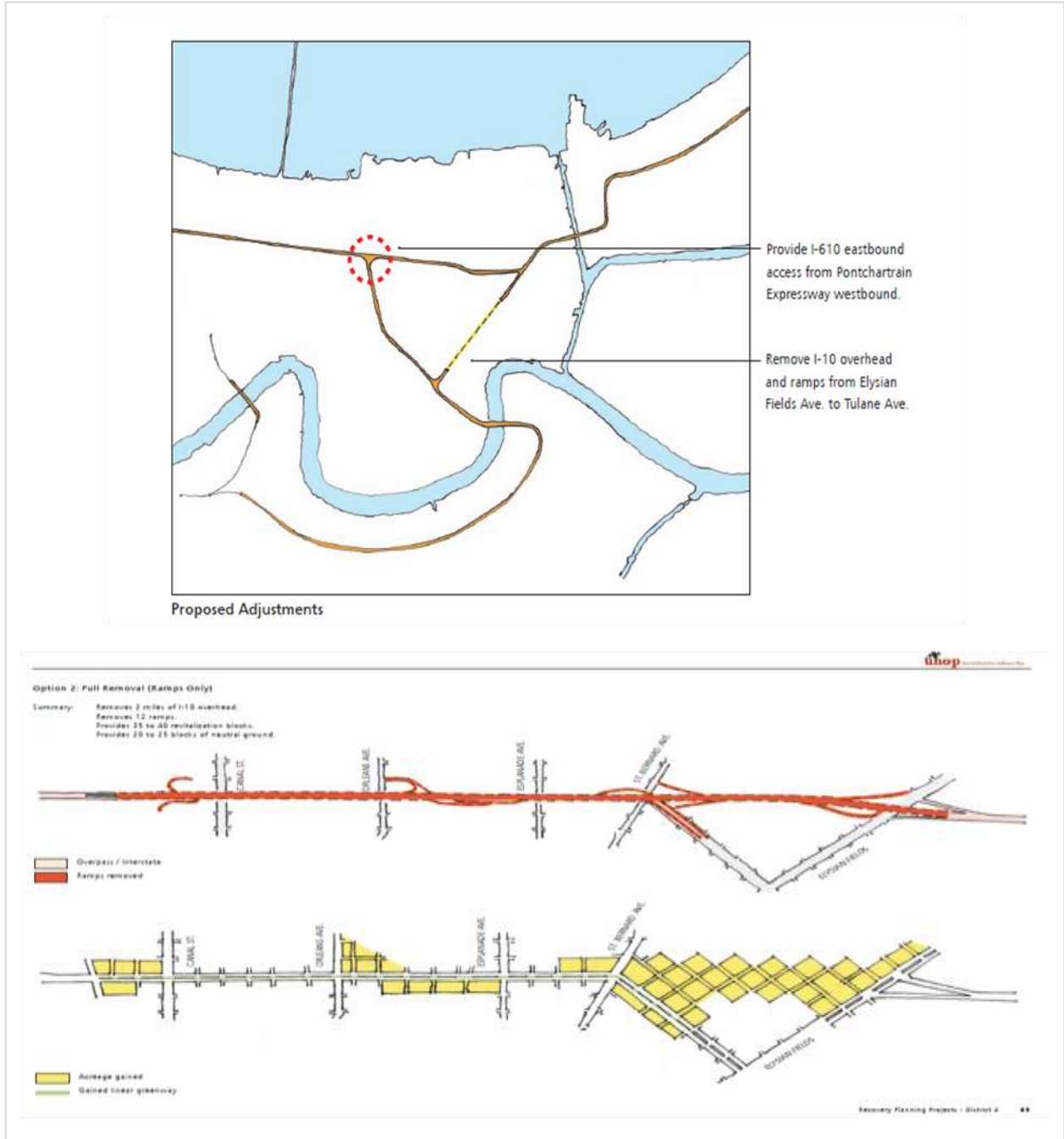
The planning district that included the Treme area and the elevated I-10 Claiborne Ave was referred to as the 6th Ward/Treme/Lafitte Neighborhood (Treme). The Transportation and Public Transit section, page 17, of Treme plan presents the communities desire to have an initial study and a phased approach to the removal of the interstate.

The Lambert plan recommends that an initial study be conducted to determine “how the impacts of this divisive and destructive elevated roadway can be minimized or eliminated.” The plan suggests that the construction be phased with ramps such as the Ursulines Street Ramp being removed early due to its limited utility. The plan then proposes a “directed feasibility study on decommissioning” the elevated segment of I-10 “from Canal Street to Elysian Fields.” (Lambert Advisory LLC; Zyscovich, Inc.; Cliff James; Byron Stewart, 2006, p. 17).

The plan describes the primary issues driving the desire to demolish the elevated segment as health and welfare and points to “pollution and debris,” from the roadway, “acoustical pollution” to residents, “vibrations” causing structural cracks, the “antiquated design standards for guard rails and access ramps, and “poor drainage” as considerations for a study. The Lambert Plan further states that should the early studies find that removal is not an option then a plan to mitigate impacts is strongly recommended. However, the Lambert Plan intentionally does not offer any specific alternatives to the removal proposal because the I-10 Claiborne Expressway is “not a place for people.” (Lambert Advisory LLC; Zyscovich, Inc.; Cliff James; Byron Stewart, 2006, p. 18)

UNOP Plan – 2007

A similar proposal was included in the 2007 Unified New Orleans Plan (also known as UNOP) for Planning District 4. The UNOP plans were also the result of a city-wide planning effort funded by the “Greater New Orleans Foundation (with grants from the Rockefeller Foundation, the Bush-Clinton Katrina Fund and GNOF)” (NOLAPlans.com, 2007). The UNOP developed district plans for 13 districts that comprise the City of New Orleans. Planning District 4 is the location of the elevated I-10 Claiborne Expressway.



Source: Frederic Schwartz Architects; Eskew+Dumez+Ripple; HOK; Wayne Troyer Architects; New Orleans Community Support Foundation.

(2007). *UNOP District 4 Recovery Plan*. Retrieved from Unified New Orleans Plan: www.unifiedneworleansplan.com

Figure 3 UNOP Removal Proposal for I-10 Claiborne Expressway

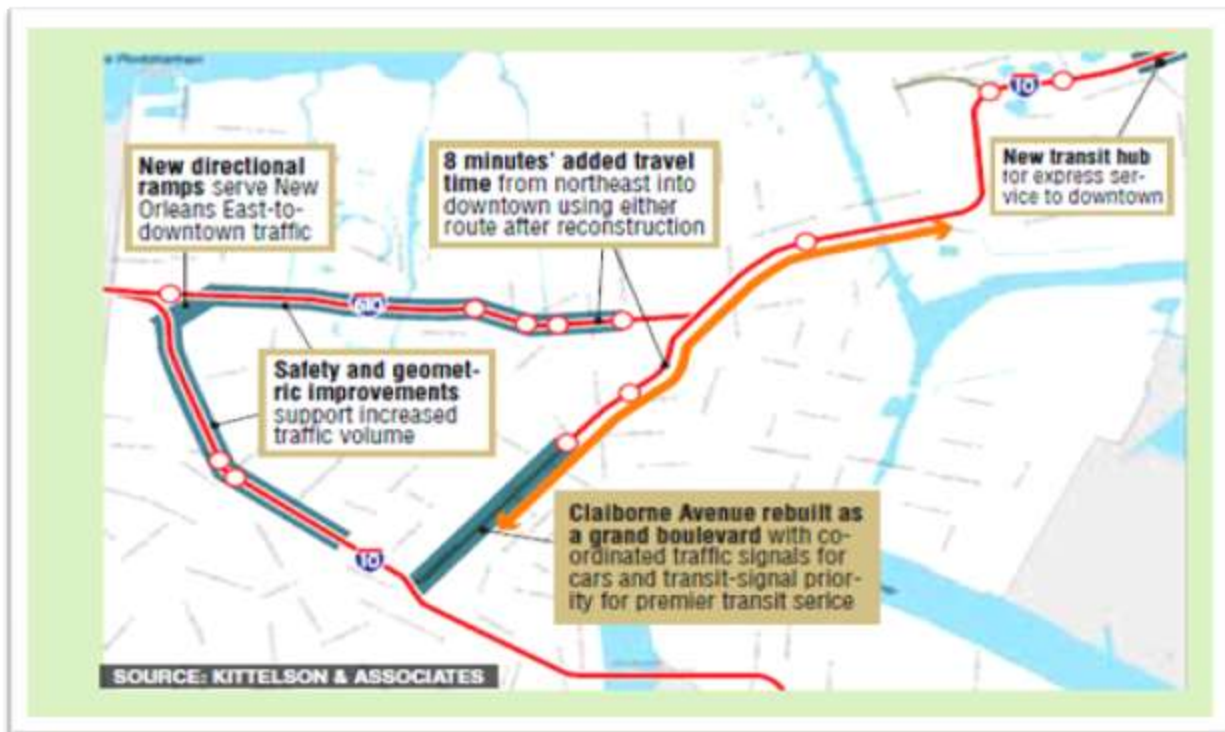
The UNOP plan proposed to fund a study and the removal of I-10 Claiborne Expressway from Elysian Fields to Tulane Avenue. The plan describes a “study addressing the transportation, housing, economic and cultural impacts and traffic distribution associated with the removal of a section of I-10. The removal of I-10 in Treme would have considerable positive impacts by re-connecting neighborhoods and restoring what was once a beautiful tree-lined avenue. Traffic redistribution provides economic development benefit to a corridor ripe for more volume.” (Frederic Schwartz Architects; Eskew+Dumez+Ripple; HOK; Wayne Troyer Architects; New Orleans Community Support Foundation, 2007, p. 64).

The UNOP plan further proposes a 2 to 5 year timeline for completion of the study and suggests that study funding by the U.S. and Louisiana Departments of Transportation and Development. The plan proposes that a mix of federal, state and local funding would need to be determined, if the removal of I-10 were approved. The UNOP plan also mentions the need for the study to consider traffic rerouting utilizing the existing I-610 and other surface streets.

New Orleans Master Plan - 2009

In September 2009, a proposal to study the feasibility of replacing the I-10 Claiborne Expressway with a tree-lined at-grade boulevard was presented in the draft of the City of New Orleans Master Plan entitled *Plan for the 21st Century New Orleans 2030*. The Master Plan for the City of New Orleans will have the force of law as a result of a city charter change approved by the citizens of New Orleans in November of 2008. This charter change requires that the city develop a master plan and that land use action should be consistent with the master plan. A series of public hearings are being held in October 2009 and the New Orleans City Council will consider the draft Master Plan in November of 2009.

Based on Figure 3, the Master Plan proposal appears to involve a study to remove the elevated segment from I-10 Pontchartrain Expressway interchange to the Claiborne Avenue exit. The study area boundaries are not explicitly stated in the plan but reference “removing to St Bernard Avenue.” The Master Plan recommends that the “process of replacing the expressway begin with feasibility and environmental impact studies”. The Master Plan suggests that these federally funded studies would begin to determine the cost of “maintaining the aging structure” and would address the transportation, economic, social, environmental, and other benefits” of demolishing the elevated structure. The studies would also begin to evaluate the alternatives including increased capacity of I-610 to accommodate the rerouted traffic, recapturing the historic nature of Claiborne Ave by replacing the tree lined boulevard, providing transit options, reuse of newly available lands for housing, recreation and other uses. The plan also discusses a goal of avoiding the need to widen I-610 thus avoiding potential negative impacts to the residents in that area.



Source: Goody Clancy, Camiros Ltd, GCR Inc, Maning Architects . (2009). *New Orleans Master Plan and Zoning Ordinance*. New Orleans: City of New Orleans.

Figure 4 New Orleans Master Plan Removal for I-10- Claiborne Expressway

The Master Plan expects that the removal of the I-10 Claiborne Expressway would “right a decades-old wrong committed in the name of urban renewal, enhance the livability and character of the adjacent neighborhoods like Treme, promote investment in the neglected blocks along the expressway” and begin “restoring historic Claiborne Avenue as a grand tree-lined boulevard.”

(Goody Clancy, Camiros Ltd, GCR Inc, Maning Architects , 2009, p. 11.24)

Other Articles and Publications

The Congress for New Urbanism (CNU) ranked the I-10 Claiborne Expressway. fifth out of ten “freeways without futures”. These were urban freeways that have the “opportunity to stimulate valuable revitalization by replacing the aging urban highways with boulevards and other cost-saving alternatives” (Congress for the New Urbanism). The CNU is a Chicago based, national organization that promotes walkable neighborhoods (Cohen, 2008).

The demolition proposal has been covered by local print media and appeared on the front page of the July 12, 2009 edition of the *Times Picayune* newspaper. In this article, Mr. Armand Charbonnet of the Charbonnet-Labat Funeral Home family, fondly recalls the long ago, shuttered Claiborne Avenue businesses such as The Capital Theatre, Labranche’s Drug Store Peoples Life Insurance and Two Sister’s Restaurant. The article also references the ranking of 5th in the nation for the CNU listing of freeways without futures. In a recent article by Lolis Elie in the *Time Picayune* newspaper, Mr. Bill Borah, co-author of the book *The Second Battle of New Orleans* detailing his own activism in the successful defeat of the proposed Riverfront Expressway, states that the interstates built in the city “accelerated the exodus to the suburbs and it caused cities to be homes for automobiles rather than people.” (Elie, 2009)

Mr Borah also comments in a March 30, 2009 *City Business* article that for years he has been urging power brokers to “Tear down this monstrosity.” David Waggoner of Waggoner and Ball Architects indicated that the primary reason that the removal of the elevated interstate has never been seriously considered is that “people of New Orleans seem to be wired to believe that they are incapable of successfully tackling large projects.” (Webster, 2009)

Approval and Funding of I-10 Claiborne Expressway Removal

The proposal to remove or demolish the elevated I-10 Claiborne Expressway is in the very early stages of the decision making process. The approval process for public roadway and infrastructure projects can be a lengthy, regardless of the outcome. The process that ultimately killed the Riverfront Expressway officially began with the 1946 Moses proposal and ended in 1969 with then US DOT Secretary Volpe removing the project from the interstate system. That's over 2 decades. The process of determining the alignment of the Claiborne Avenue interstate spanned nearly 4 years and began with the 1954 Major Street Plan. The current alignment was selected following a 1958 public hearing in New Orleans.

Both of these events are in the era before the passage of the 1970 NEPA legislation that requires detailed environmental clearance documents such as environmental assessments and environmental impact statements, before proceeding with federally funded highway construction projects. The average NEPA approval process took 75 months (or 6.3 years) for projects receiving a signed record of decision (ROD) in fiscal year 2008 (Federal Highway Administration). This includes time from the initial notice of intent (NOI) to the final FHWA record of decision (ROD).

Based on an August 11, 2009 interview with Mr. Walter Brooks, Director of the New Orleans Regional Planning Commission (RPC), any project involving the Claiborne Avenue elevated segment would require federal funding. The initial process would involve the local governing authority, the City of New Orleans, endorsing a plan of action such as the Master Plan. Mr. Brooks indicated that the initial studies to evaluate a

demolition proposal and alternatives would need to be funded for inclusion in the Uniform Planning Work Program for Transportation Planning (UPWP). The UPWP “describes all federally funded transportation studies being conducted within greater New Orleans Transportation Area” for a given fiscal year beginning in July 1st and ending on June 30th. This study area for the UPWP includes “three urbanized areas (UZAs) - New Orleans, Slidell and Covington/Mandeville.”

The Louisiana Department of Transportation and Development (LDOTD) maintains the interstate system and would need to be involved in all decisions regarding the future of the elevated expressway. The LDOTD typically administers the engineering design, contract selection and construction of roadway projects involving the interstate system. The LDOTD maintains the Statewide Transportation Improvement Program (STIP) for the state of Louisiana. The STIP is “a prioritized listing/program of transportation projects covering a four year period that is consistent with the long-range statewide transportation plan, metropolitan transportation plans and the Metropolitan Planning Organizations (MPOs) Transportation Improvement Plans (TIPs). In order for a project to be federally authorized for funding it must be included in the STIP.” (Louisiana Department of Transportation and Development, 2009) Any proposal regarding the I-10 Claiborne Expressway must ultimately be approved for construction as part of the funded projects in the STIP.

Chapter 3 Policy Implications for I-10 Claiborne Expressway

There are several pieces of federal legislation that are applicable to transportation planning, construction and maintenance which would include the interstate highway system as well other transit modes. Communities now have at their disposal a number of legislative instruments that were previously not available during the initial construction of the interstate in the 1950's and 1960s.. These policies will have implications on the decisions made regarding the elevated I-10 Claiborne Expressway.

State and Local Policy Implications

At the local level, the metropolitan planning organization (MPO) is a major stakeholder in most transportation related decisions. The MPO is regional planning agency formed by federal mandate for all urbanized areas (UZAs) with populations of 500,000 or more. The New Orleans area Regional Planning Commission (RPC) includes Jefferson, Orleans, Plaquemine, St Bernard, St and Tammany parishes (Regional Planning Commission MTP, 2007; Regional Planning Commission TIP, 2008). The RPC together with the state department of transportation, the Louisiana Department of Transportation and Development (LADOTD) have “oversight of the Louisiana transportation system” (Regional Planning Commission MTP, 2007, p. 9) and as such would be directly involved in all decision relative to the elevated I-10 at Claiborne. The RPC maintains a 25 year, long range, Metropolitan Transportation Plan (MTP) and a shorter range, Transportation Improvement Plan (TIP). The only project listed involving the I-10 Claiborne Expressway is a transportation enhancement project involving landscaping (Regional Planning Commission MTP, 2007, p. 35).

On November 4, 2008, the citizens of New Orleans approved a amendment to the Home Rule Charter to require the city “to prepare a Master Plan to direct its future land development that will have the force of law – that is a plan that public officials as well as private citizens will be required to follow” and that “all land use regulations- including the zoning ordinance will have to be consistent with the plan.” (Borah, 2009, p. 1)

The September 2009 draft of the Master Plan recommends that the elevated segment of the I-10 Claiborne Expressway be returned to a tree-lined boulevard. The plan recommends that the initial process begin with a study of “the benefits and costs of replacing the elevated highway.” The plan also suggests that the “current elevated highway is in substandard condition and has reached a point in its lifecycle where it will require very significant investment.” The master plan and federal law would both require public participation at every stage of the process.

Federal Policy Implications

Clean Air Act Links with Transportation

A gradual policy shift is underway and is promoting a more multi-modal transportation network in America with less emphasis on highways and auto transportation. This policy shift is beginning to take shape with the passage of the Clean Air Act Amendments of 1990 (CAAA) and the Intermodal Surface Transportation Act (ISTEA) in 1991 which “linked transportation planning to air quality planning” (Guiliano, 2004, p. 399) since the automobile has been identified as a “major contributor of the nation’s air pollution problems” (Hanson, 2004, p. 24). Regions not complying with the CAAA air quality standards are required to develop a regional transportation plan (RTP) detailing how and when compliance will be achieved.

Additionally, a study of disadvantaged populations living near freeway air pollution shed (FAPS) concluded that “poor and African-American residents are represented in disproportionately higher numbers in FAPS” (Bae, Sandlin, & Bassok, 2007, p. 160), based on data from the cities of Portland and Seattle. The Bae et al study defined a “freeway air pollution shed” as “a 330 feet buffer from roadways with a minimum of 100,000 vehicles per day” (Bae, Sandlin, & Bassok, 2007, p. 159). The Bae et al study concluded that minority and low income residents tend to cluster near freeways and FAPS have a negative relationship to housing pricing after considering other factors such as “traffic noise”. These findings may have applicability to the Treme area and the I-10 in terms of similar adverse impacts to health and housing values of the area.

However, in an August 11, 2009 interview with Mr. Brooks of the RPC; he noted that the removal of the elevated expressway and replacing with an at-grade boulevard would also have air quality implications to the ground level air quality. Mr. Brooks indicated that moving truck traffic to grade level with limited alternate routes would necessitate a review ground level air quality.

ISTEA, TEA-21, SAFETEA-LU and Beyond

Intermodal Surface Transportation Act (ISTEA) expired in 1997 and was succeeded by the Transportation Equity Act of the 21st Century (TEA-21) in 1998. Like ISTEA, TEA-21 has continued to provide local and regional planning agencies such as Metropolitan Planning Organizations (MPOs) with greater flexibility to use Federal Funding for “all surface modes of transportation, including walking, bicycling, and public transit, which the planning process has neglected in the past.” (Hanson, 2004, p. 24) Prior to ISTEA

and TEA-21, transportation funding was primarily reserved for highway projects. TEA-21 expired in 2003 and was replaced with Safe Accountable Flexible and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) of 2005 which continues to broaden the transportation issues particularly issues relating to impacted communities being served.

The United States is at the brink of entering another transportation bill era as SAFETEA-LU expired on September 30, 2009. The reauthorization of a new transportation bill has not yet been completed by the U.S. Congress, but Congress authorized a 3 month extension to the current SAFETEA-LU transportation act. Congressman James Oberstar (D-MN), the Transportation and Infrastructure Committee Chairman has introduced a \$500 billion new transportation bill that is being referred to as the Surface Transportation Authorization Act.

The UNOP and Lambert plans both request that a feasibility study be conducted to explore the option of demolishing the I-10 Claiborne Expressway. Any such study or subsequent planning will likely require federal funding under the provisions of SAFETEA-LU or its successor legislation. The study must be included in the UPWP to obtain federal funding would be administered by the New Orleans RPC, the MPO for the New Orleans area.

Environmental Justice

Transportation equity encompasses environmental justice and environmental racism issues such as “residential displacement, neighborhood disintegration, environmental and health impacts”, and has been expanded to include “employment accessibility, transportation service quality,

wage inequality, transit fares and safety issues.” (Sanchez T. a., 2007, p. 95) In many ways, the transportation policies of the past have focused narrowly on the private automobile at the expense of poor and minority communities with little or no voice in the decision making process. Legislations such as the National Environmental Policy Act (NEPA) of 1969 mandated a review of the purpose and need of planned highway projects and a review of alternatives, mitigation measures, and mandated public participation in the process. Additionally, Executive Order No. 12898 “Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations” signed by President William Clinton in February of 1994 raised awareness of environmental justice issues by requiring that all Federal agencies address the environmental justice issues of their programs that have adverse effects on human health and the environment particularly related to minority and low-income populations.

Community impacts are often examined in the context of environmental justice and equity concerns. These impacts must be examined with regard to the fate of the I-10 Claiborne Expressway as the current literature (i.e. post-Katrina) is limited in its review of these issues in the context of the recent transportation legislation. Bullard and Sanchez address the issues of environmental justice and environmental equity in transportation planning. (Bullard, 2004; Sanchez, Brennan, Ma, & Stoltz, 2007). Sanchez defines transportation equity as referring “to a range of strategies and policies that aim to address the inequities in the nation’s transportation planning and delivery system” (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 7). The RPC TIP defines the goal of environmental justice as “to ensure that no communities are sacrificed for the good of the others” (Regional Planning Commission MTP, 2007).

Other policies specific to transportation equity include National Environmental Policy Act of 1969 (NEPA), Title VI of the Civil Rights Act of 1964, the Federal Aid Highway Act of 1970, Executive Order No. 12898, US Department of Transportation (USDOT) Order on Environmental Justice (DOT Order 5610.2) and the Federal Highway Administration Order to Address Environmental Justice (6640.23) (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 73). NEPA requires that any transportation project that is funded with federal dollars must undergo a NEPA environmental review to determine if there are any significant impacts to people or the environment and to obtain community involvement. Since any project involving the I-10 Claiborne Expressway would likely involve federal transportation funds, the projects would be subject to the NEPA process.

The effective application of these policies will be critical to the community's role in the fate of the I-10 Claiborne Expressway. According to Napolitan, the NEPA process for conducting environmental assessments routinely consider the "no-build" alternative, but have not routinely or automatically included a "tear down" alternative (Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008). This dichotomy has application to the decision making process for the I-10 Claiborne Expressway because the "tear down" option might be one among many alternatives the need to be studied in detail.

Chapter 4 Other Impacts for I-10 Claiborne Expressway

There are a number of anticipated impacts to any decision to demolish or maintain the I-10 Claiborne Expressway. Many of these issues were identified following the initial construction of the elevated I-10 and will likely continue to be re-evaluated whether or not the I-10 Claiborne Expressway is demolished. The primary impacts discussed herein include community and cultural impacts, the impacts of current urban renewal and smart growth philosophies, gentrification, the impacts of traffic rerouting and induced demand and post-Katrina priorities.

Community and Cultural Impacts

Much has been written about the adverse community and cultural effects that the construction of the elevated I-10 Claiborne Expressway has had on the minority community in the Treme area (Claiborne Avenue Design Team, 1976; Samuels, 2000; Riker, 2002; Lacho, Parker, & Carter, 2005; Parekh, 2008; McNichol, 2003; Wright, *New Orleans Neighborhoods under Siege*, 1997). Most notably, the literature repeatedly describes Claiborne Avenue, prior to construction of the interstate, as a wide, scenic boulevard measuring 6100 feet long and 100 feet wide from Canal Street to St Bernard Avenue with a grassy, oak tree lined median (locally referred to as a neutral ground) in contrast to the elevated concrete structure and the cavernous area under the overpass. Some of the previous research offered the recommendations for beautification and aesthetic improvements of this area (Riker, 2002; Claiborne Avenue Design Team, 1976), but fall short of directly addressing mitigation of any cultural and community impacts obtain by implementation of a removal or demolition alternative.

The importance of community involvement in the decision making process for highway projects is crucial as indicated in the literature (Mohl, *The Interstates and the Cities: Highways, Housing*

and the Freeway Revolt, 2002; Bullard, 2004; Carlson, Wormser, & Ulberg, Chapter 4 Replacing Transportation Blunders with Community-Derived Solutions, 1995; Mohl, Planned Destruction: Interstates and Central City Housing, 2000). Recent transportation legislation has evolved beginning in 1991 with ISTEA, then TEA-21, and the current version SAFETEA-LU recognizes the importance of community involvement and reflects this intent in these legislation (Regional Planning Commission TIP, 2008; Regional Planning Commission MTP, 2007).

Urban Renewal and Current Planning Principles

Many of the interstate highway construction projects of the 1950' and 1960' were touted as urban renewal projects. Highway projects displaced 250,000 persons in New York alone. (Caro, 1974, p. 19) The poor and the disadvantaged neighborhoods were disproportionately impacted by the construction of the interstate system following the 1956 passage of the Interstate Highway Act (Mohl, The Interstates and the Cities: Highways, Housing and the Freeway Revolt, 2002; McNichol, 2003, p. 154; Mohl, Planned Destruction: Interstates and Central City Housing, 2000).

The sustainability of the current automobile dependent transportation infrastructure in the US has been studied widely and is the basis for urban planning perspectives such as Smart Growth and New Urbanism (Congress for the New Urbanism; Transportation Research Board, 2002). These planning approaches emphasis reduced automobility, increased walkability, decrease environmental impact of transportation and a more balance transportation infrastructure that offers a variety of modes of transport.

The proposed I-10 at Claiborne and the freeway demolitions that have been completed generally involve the sustainability issues that attempt to address changing transportation priorities,

economic priorities and cultural priorities (Newman & Kenworthy, 1999, p. 27; Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008).

Hanson defines a sustainable development involves “meeting the current needs in ways that improve economic, environmental and social conditions while not jeopardizing the ability of future generations to meet their own needs” (Hanson, 2004). Sustainability is defined as “any economic or social development should improve not harm the environment.” (Newman & Kenworthy, 1999, p. 1) In a 1996 journal article, Newman concludes that “support for construction and maintenance of freeways is decreased.” He states that the era of the freeway is nearing an end and is no longer sustainable. He points to the decisions not to rebuild the San Francisco freeways impacted by the 1989 earthquake as examples of public “revolts” in favor of other options.

The research by Robert Cervero et al on the removal of the elevated Embarcadero and Central Freeways in San Francisco has concluded that the replacement of elevated freeways with surface boulevards have resulted in gentrification of neighborhood formerly in decline and can be considered a form of “re-prioritization as the transportation planning shifts from automobility to “neighborhood quality”. The Cervero et al research also concludes that combining surface boulevards with transit enhancements were effective solutions to preventing the predicted gridlock in the aftermath of freeway removal. Finally, the conversion to boulevards, have urban renewal effect of turning the negative “dis-amenity” of living next to a freeway into an amenity when converting into a surface boulevard (Cervero, Kang, & Shively, *From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco*, 2007; Cervero, *Freeway Deconstruction and Urban Regeneration in the United States*, 2006).

Gentrification

Gentrification is defined as “Whiter, higher income people moving into predominantly minority and lower-income neighborhoods, fixing up house, and driving minorities and lower-income people out because of rising housing prices. New businesses that cater to the new population often follow.” (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 166). Relative to land use in the Treme area, gentrification has two perspectives. One is the contention that gentrification is already occurring in the Treme area (Parekh, 2008) and the other is a concern that vulnerable communities that may be in support of the expressway demolition may be adversely affected if the anticipated increase in property values occurs post demolition and they are no longer able to afford to live in the neighborhood (Bullard, 2004, pp. 91-92). In San Francisco, a 300 percent increase in property values is often credited to the demolition of the Embarcadero Freeway (Siegel, 2007). Wright, the Director of the Deep South Center for Environmental Justice, expressed concerns related to the impacts of gentrification and increased property values post-demolition on the African American community (Wright, Director Deep South Center for Environmental Justice, 2009).

Traffic Rerouting, Induced Demand and Reduced Demand

The demolition proposals acknowledge the need for traffic rerouting should the expressway be demolished. The UNOP plan proposes to reroute traffic via the Pontchartrain Expressway and the Lambert plan proposes to I-610 as an alternate route (Lambert Advisory LLC; Zyscovich, Inc.; Cliff James; Byron Stewart, 2006; Frederic Schwartz Architects; Eskew+Dumez+Ripple; HOK; Wayne Troyer Architects; New Orleans Community Support Foundation, 2007). The UNOP plan speculates that the I-610 and the surface streets could absorb rerouted traffic

necessitated by the removal of the I-10 Claiborne Expressway. The Master Plan states that roughly 8 minutes would be added to travel time, if traffic were shifted from the elevated I-10 to the I-610. The Master Plan also envisions that the western I-10/I-610 interchange would need to be reconfigured to accommodate eastbound traffic and other capacity improvements to the spans of I-10 and I-610 affected by the traffic increase.

The traffic count data for I-10 Claiborne Expressway was over 100,000 annual average daily traffic (ADT) (Louisiana Department of Transportation and Development) in 2004 prior to hurricane Katrina. Post Katrina, the 2008 traffic count data at most locations along the I-10 Claiborne Expressway is about 60,000 ADT. A major concern of any reduction in freeway capacity such as the removal of I-10 Claiborne Expressway is the predicted traffic congestions.

Several studies have shown evidence of the induced demand theory which suggests that increasing roadway lanes induces more traffic upon the roadway (Kruse, 1998; Parthasarathi, Levinson, & Karamalapati, 2003). The converse would be reduced demand following a decrease in freeway capacity. Research suggests that traffic is dissipated due behavioral changes of the drivers. Drivers quickly tend to modify their travel behavior by using alternate routes or changing their time of travel away from peak hours (Kulash, 2005). Kulash also suggests a change in the “pattern of origins and destinations” such as homeowners moving to suburbia following the expansion of highways and conversely suggests that reductions in capacity will prompt reinvestment in inner city neighborhoods. The Central Freeway removal in 1996 did not result in the traffic nightmares that were predicted (Nolte, 1996).

Cervero’s research on the Embarcadero and Central freeways in San Francisco concluded that the freeway removals did not result in traffic havoc” (Cervero, Kang, & Shively, From Elevated

Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco, 2007). Sally Cairns has also conducted research on the effects of highway capacity reductions on traffic that suggest that the predicted traffic congestion following highway reductions are overstated (Cairns H.-K. a., 1998; Cairns, Atkins, & Goodwin, 2002). However, a brief article in the satirical online newspaper features an article about the irony of a planner stuck in traffic in Pittsburgh as a result of his own anti-freeway projects. The articles states that “the city's designers are regularly lauded for their elegant, modern buildings and stuck in traffic of their own making for hours at a time.” (The Onion, 2004)

Post-Katrina Priorities

The Regional Planning Commission (RPC) is the metropolitan planning organization for the New Orleans region and would be actively involved in any funding for studies or other projects relative to the fate of the I-10 Claiborne Ave. As mandated by SAFETEA-LU, the RPC maintains a Transportation Improvement Plan (TIP) and a Metropolitan Transportation Plan (MTP). Both of these plans acknowledge the impact of Hurricane Katrina on the transportation plans for the region (Regional Planning Commission MTP, 2007, pp. 6-8; Regional Planning Commission TIP, 2008, pp. 4-5).

RPC maintains the long range plan, the MTP, and a short range construction plan, the TIP. Both of these plans are mandated by SAFETEA-LU and previous transportation legislation to be “financially constrained to reflect realistic and available levels of funding.” (Regional Planning Commission TIP, 2008, p. 3) The RPC has indicated that a number of projects are currently “unfunded mandates” meaning that the NEPA environmental clearance documents for these projects have been approved but due to fiscal constraints the project cannot be included in the

MTP or TIP. (Brooks, 2009) These projects and the estimated costs include “I-49 South Raceland to the Westbank Expressway, \$5 billion; Earhart Extension West, \$250 million; Almonaster Bridge \$60 million; I-10 West Clearview to Veterans Blvd., \$60 million; Harvey Canal Bridge Improvements, \$50 million.” (Brooks, 2009) Thus, the I-10 Claiborne Expressway removal project would be competing with over \$5 billion dollars of currently unfunded mandates.

Chapter 5 Theory and Conditions

Relevant Theory

This research will apply relevant conditions to the I-10 Claiborne Expressway case. The relevant conditions have been obtained from a review of literature. The experiences of comparative case cities will also be utilized to evaluate and analyze the current decision-making process of the subject case, the I-10 Claiborne Expressway.

This research is qualitative and the concept of theory in qualitative research is often thought of as the “endpoint” of a study and some qualitative studies “do not employ any explicit theory” (Creswell, 2003, pp. 132-133). It is not likely that the relevant “theories” will necessarily predict the outcome of every demolition decision including the decision with regard to the future of I-10 Claiborne Expressway. Therefore, I will refer to the selected theoretical framework as “conditions” rather than “theories.” These conditions will guide the collection and analysis of data for this multiple case study.

Napolitan and Zegras Conditions

Relevant theory on freeway removal is the subject of a research article by Francesca Napolitan and P. Christopher Zegras entitled *Shifting Urban Priorities? Removal of Inner City Freeways in the United States* and Napolitan’s master’s thesis with the same title.

The Napolitan and Zegras research uses a case study of three cities to analyze the growing trend of “freeway revolts” of an aging interstate highway system. The current trend has shifted the paradigm from opposition to construction to opposition to the continued existence of interstate highways, resulting in “urban freeway removals”.

In this research, the authors review three case studies of cities that have grappled with the alternative of removing a freeway. Two of the cities, San Francisco (Central Freeway) and Milwaukee, WI (Park East Freeway) chose the removal option. The third case was Washington, DC Whitehurst freeway that was not successful in removing the elevated freeway. All three cases involved elevated interstate highways. The well-known Boston Central Artery project in Massachusetts was not selected because the freeway capacity was restored via a tunnel.

Napolitan and Zegras concluded that expressway removal takes place only when:

- a freeway condition raises concerns over integrity and safety,
- a window of opportunity exists, some event that enables a freeway removal alternative to gain serious consideration,
- the value of mobility is lower than other objectives such as economic development,
- those in power value other benefits more than they value the benefits associated with freeway infrastructure. (Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008)

Altshuler and Luberoﬀ Conditions

The book, *Megaprojects, The Changing Politics of Public Investment* by Alan Altshuler and David Luberoﬀ presents common patterns noted in so-called “mega-projects”. Altshuler defines a mega-project as follows:

“... initiatives that are physical, very expensive, and public. More specifically, mega-projects involve the creation of structures, equipment, prepared development sites, or some combination thereof. They cost at least \$250 million in inflation-adjusted year 2002 dollars. Mega-projects are fundamentally an expression of public authority. The clearest indicator of their

public nature since 1920 has been public financing, wholly or in part.” (Altshuler & Luberoﬀ, 2003, p. 2)

It is assumed herein that any elevated expressway project would be defined as a “mega-project” and hence would be expected to be subject to these common patterns. However, with the exception of the Boston Central Artery case; the cases selected herein do not meet the cost threshold for “mega-projects.”

The common patterns for mega-projects include

1. “Urban mega-projects ceased to be routine after 1970.”
2. “Mega-project support coalitions were, with rare exceptions, spearheaded by business enterprises with very direct interest at stake.”
3. “Mega-projects frequently originated in the public sector and were then “sold” to perspective constituencies.” This is so-called “public entrepreneurship.”
4. “...mega-project proposals rarely proceeded to implementation if they imposed more than trivial costs on neighborhoods or the natural environment.” This is so-called “do no harm.”
5. “Even the most sensitively planned mega-projects generated some negative impacts,... widely accepted that these impacts be “mitigated” as far as possible.”
6. “Though often funded in large part by the federal government, urban mega-projects almost invariably originated and drew their main constituency support locally, with little if any regard for national purposes.” This is so-called “bottom-up federalism.”
7. “The central imperative of mega-projects finance was to avoid increases in broad-based local taxes...”
8. “Mega-project cost rose dramatically in the years 1973-2000 and generally exceeded official cost estimates at the time of project authorization by a considerable margin.” (Altshuler & Luberoﬀ, 2003, pp. 220-221)

Conditions 2 thru 6 will be the subject of this study. The other Altshuler conditions 1, 7 and 8 were not as salient to the decision making process for freeway removal.

Condition 1 states that large or mega-projects after were not routine after 1970. Freeway removal is a relatively new phenomenon in urban areas and all the identified cases occurred well after 1970. Even the earliest freeway removal, the Harbor Freeway, in Portland occurred in 1978. Thus, this condition will not likely enlighten the research on this subject.

Condition 7 has public tax implications that I feel would overwhelm or redirect my study toward complex issues of taxation that might be better suited for another study. Condition 8 also has cost implications and will not be utilized for this research. It would be very difficult to perform cost comparisons to the New Orleans case because the project scope and official cost estimates are not available for the New Orleans case. However, it is recognized that cost would be a major factor in the pursuit of any actions regarding the I-10 Claiborne Expressway. Available cost data is presented in case studies; however, a detailed analysis of cost and tax implications would be better suited for inclusion in another study.

Necessary Conditions for this Research

Based on the research of Napolitan and Altshuler, nine (9) theoretical necessary conditions have been identified. These conditions are considered common to most “mega-projects” or are considered “necessary conditions” for a freeway removal to gain the serious consideration needed to actually be undertaken. For the purposes of this study, these criteria will be referred to as “necessary conditions”.

The UNOP plan also puts forth conditions or hypothesis relative to the removal of the I-10 Claiborne Expressway. But upon further review, these are actually “expected outcomes” of the

removal. These expected outcomes predict positive impacts of reconnecting neighborhoods and the economic development opportunities of traffic redistribution resulting from a freeway removal, but do not address the “necessary conditions” that must be present for a demolition or removal to occur. Therefore, the UNOP conditions are not included in the “necessary conditions” for this study.

The “necessary conditions” that are the basis for this research are summarized in Table 1.

Table 1 Necessary Conditions

Necessary Condition	Definition
Integrity and Safety Concerns	Concerns over integrity and safety of structure.
Window of Opportunity	Some event that enables a freeway removal alternative to gain serious consideration.
Decreased Value of Mobility	Value of mobility is lower than other objectives such as economic development.
Power Brokers Value of Freeway Less than other Benefits	Power value other benefits more than they value the benefits associated with freeway infrastructure.
Support of Business Enterprises	Spearheaded by business enterprises with very direct interest at stake.
Public Entrepreneurship	Originated in the public sector and were then “sold” to perspective constituencies.
“Do No Harm” Principle	Not imposing more than trivial costs on neighborhoods or the natural environment.
“Mitigated” Negative Impacts	Negative impacts “mitigated” as far as possible.”
“Bottom-Up Federalism”	Main constituency and support are local, with little if any regard for national purposes. May be federally funded.

Source: Altshuler & Luberoff, 2003; Napolitan, Shifting Urban Priorities: Removal of Inner City Freeways in the United States, 2007

The selected conditions address the origination or conceptualization of large projects such as an expressway demolition which is the focus of my research. The origination and conceptualization of the New Orleans case is being compared to completed the expressway demolition cases.

Table 2 Summary of Freeway Removal Cases

Location	Highway Name	Elevated	Nearest Water Body	Traffic Count (VPD)	Length (mi.)	Yr. Built	Yr. Demo'd	Acres Freed
Boston, MA	Boston Central Artery (I-93)	Elevated	Boston Harbor/ Charles River	190,000	3.5	1959	2004	27
Chattanooga, TN	Riverfront Parkway (State Hwy)	No	Tennessee River	20,000		1960s	2004	129
Milwaukee, WI	Park East Freeway (I-43)	Elevated	Milwaukee River	48,500	0.8	early 1960s	2006	26
New York, NY	West Side Highway	Elevated	Hudson River	UNK	UNK	1929-1936	1977-1989	NA
Niagara Falls, NY	Robert Moses Parkway	no	Niagara Gorge	UNK	6.5	1961	2001	NA
Oakland, CA	Cypress Freeway (I-880)	Elevated	San Francisco Bay	160,000	1.25	1957	1989	14
Paris, France	Pompidou Expressway	no	Seine River	70,000	8	1967	2002	NA
Portland , OR	Harbor Drive (US Rte 99W)	no	Willamette River	25,000	2	1942	1978	37
San Francisco, CA	Embarcadero Freeway (I-480)	Elevated	San Francisco Bay	100,000	1.2	1953	1991	NA
San Francisco, CA	Central Freeway (I-80 Spur)	Elevated	San Francisco Bay	100,000	1.35	1959	2003	2
Seoul, South Korea	Cheonggye Freeway	Elevated	Cheonggyecheon River	168,000	3.6	1958-1976	2003-2005	NA
Toronto, Ontario	Gardiner Freeway	Elevated	Lake Ontario	175,000	1	1955-1966	2001	NA

Source: Massturnpike.com, 2006; The Preservation Institute, 2007; Seattle Department of Transportation, 2008; Napolitan, Shifting Urban Priorities: Removal of Inner City Freeways in the United States, 2007, Federal Highway Administration. UNK – information unknown. NA- not applicable.

Chapter 6 Methodology

Case Selection Criteria

This research will involve the use of embedded case studies to support the conclusions drawn about the subject case, the elevated I-10 Claiborne Expressway. The experiences of these case cities during the planning and decision making process involving the removal of a segment of interstate will be examined. In an attempt to select cases having relevance to the New Orleans I-10 Claiborne Expressway, specific criteria were applied to each potential case.

The case studies would include highway segments that have been removed, deconstructed or demolished. There are a number of cities that are at varying stages of the planning and proposal process for highway removals (see Table 1), but these case studies are limited to those cities that have completed the demolition process or as in the case of the Crosstown Expressway have reached a firm commitment to demolish a segment of interstate.

Secondly, the highway segments must be elevated, high speed, limited access highways, expressways or freeways, preferably part of the Interstate Highway system. The terms “freeway”, “expressway” and “highway” are used interchangeably for the purposes of this document; however the American Association of State Highway and Transportation Officials (AASHTO) maintains official definitions of each term.

This study is limited to elevated expressways as opposed to at-grade structures. The replacement of elevated expressways with “slower moving at-grade boulevards” has been said to increase “access to waterfronts, remove physical obstructions and revitalize economically stagnant neighborhoods.” Elevated expressways also “formed barriers and visual blight, cast shadows

and sprayed noise, fumes, and vibrations on surrounding neighborhoods.” (Cervero, Kang, & Shively, *From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco*, 2007, pp. 2-3). The I-10 Claiborne Ave is an elevated expressway segment and all comparative cases are elevated expressways for the purposes of this study.

Finally, the cases selected were also a part of the interstate system in the United States as opposed to highways in foreign countries such as Gardiner Freeway in Ontario, Cheonggye in Korea, Bonaventure Expressway in Quebec or Cahill Expressway in Australia. The intent was to allow direct applicability to policies and trends in America.

The case selection criteria for this study are summarized as follows:

- Freeway segments that are elevated.
- Freeway segments that have been removed or deconstructed.
- Freeway segments that are a designated part of the US Interstate highway system.

Selected Cases

Preliminary research identified 12 case cities that have reportedly “demolished” segments of limited access expressways as shown in Table 1. Upon further inquiry, some of these cases do not comply with the definition of “demolition” for this research. For the purposes of this research “demolition” will be defined as the permanent removal of an elevated structure from its current location. The definition does not preclude the relocation of the structure or a net reduction in freeway capacity.

The cases for Chattanooga, TN, Niagara Falls, NY, Paris, France, and Portland, OR involve at-grade expressways instead of elevated expressways. Thus, these cases were not selected for

further study. The New York Westside highway was not selected as it was not part of the US interstate system. The Seoul, Korea and Toronto, Canada case are not selected because of their location in foreign countries, hence they are not part of the US Interstate system.

The remaining case cities that meet the selection criteria for this case study are as follows:

- Boston, MA Central Artery (I-93)
- Milwaukee, WI Park East Freeway (I-43)
- Oakland, CA Cypress Freeway (I-880)
- San Francisco, CA Embarcadero Freeway (I-480)
- San Francisco, CA Central Freeway (I-80 Spur)

These remaining five cases will be utilized to advance this study and its research questions. The information and experiences of these cities will be compared to the subject case, I-10 Claiborne Expressway.

Data Collection

Data collection for this research was obtained from various sources. These sources include available relevant literature in published books, research documents, newspaper articles, research papers and published journal articles. Some documents were accessed and reviewed in hardcopy format and others were accessed electronically via the internet.

Data and insight was also obtained from personal interviews with Walter Brooks, Director of Regional Planning Commission; Keith Scarmuzzo, UNOP District 4 planner with the firm Mathes Brierre; and Dr. Beverly Wright, Director of the Deep South Center for Environmental Justice. These individuals provided an oral historical perspective of current, past and future impacts to the elevated I-10 Claiborne Expressway.

Chapter 7 Boston, MA, Central Artery (I-93) – Case 1

The Central Artery/ Tunnel project (CA/T) removed an elevated segment of Interstate 93 (I-93) in downtown Boston, Massachusetts and replaced it with an underground tunnel as part of a larger project known as “The Big Dig”. The CA/T project is an engineering marvel in its scope and execution and is said to be the “largest, most complex and technologically challenging highway project in American history” (PBS Online, 2001).



Source: Massachusetts Department of Transportation
http://www.massdot.state.ma.us/Highway/images/bigdig/completion_lg.jpeg

Figure 5 Map of Boston Central Artery / Tunnel Area

Construction of Central Artery -1950s

The Central Artery was a 3.5 mile elevated segment of I-93 that traversed downtown Boston near the waterfront of the Boston Inner Harbor and the Charles River in Massachusetts. Construction of the former elevated Central Artery I-93 segment began in 1953 and opened to traffic in 1959.

As the United States was constructing interstates thru urban areas all over the country, the Boston area urban area became involved in the “freeway revolt” early. The public opposition of the plans for urban freeways in Boston began in 1953 with the agreement to bury a portion of the original Central Artery near Chinatown. Thus, even before construction of the Central Artery was complete in late 1959, officials began to respond to organized public opposition and stopped freeway construction for further study that resulted in the last leg of the original Central Artery becoming a tunnel.

Origins of Central Artery Tunnel (CA/T) Replacement Project

In 1970, about 11 years after the Central Artery was completed, the Governor of Massachusetts, Frank Sargent, stopped work on a number of publicly opposed urban highways including the proposed Inner Belt that was to run through Cambridge and Boston. Governor Sargent commissioned a “restudy” of transportation plans in the Greater Boston area. This restudy is known as the Boston Transportation Planning Review (BTPR). The final report of the BTPR was issued in 1972 and two projects that would become integral parts of the CA/T project were conceived. One project was a tunnel to the Logan Airport and the other involved replacing a segment of the Central Artery with an “underground intermittently decked road” (Altshuler & Luberoff, 2003, p.

89). The latter tunnel was originally proposed by Bill Reynolds, a BTPR representative of the highway contractors and eventually championed by Fred Salvucci, then a transportation advisor to Boston mayor Kevin White.

Approval and Funding of CA/T Project

Following the initial conceptual idea for the depression of the central artery Massachusetts Governor Sargent and his State Transportation Secretary, Alan Altshuler, thought the concept had merits, but they were not ready to attempt to pursue it. Key to this decision was a major fear of gridlock for many years during construction of the proposed tunnel (Altshuler & Luberoﬀ, 2003, p. 91).

In 1974 Dukakis became governor of Massachusetts. Fred Salvucci was appointed State Transportation Secretary and continued to champion the CA/T project. Salvucci initiated the process of convincing the FHWA to include the CA/T project into the 1975 Interstate Cost Estimate (ICE).

The inclusion of the CA/T project or any project in ICE was significant because only ICE projects could receive federal interstate funding (Altshuler & Luberoﬀ, 2003, p. 93). The federal funding ratio was 90% federal with a 10% state match up until the passage of ISTEA in 1991. Thus, inclusion of the CA/T project in ICE would render it eligible for 90% federal funding (Altshuler & Luberoﬀ, 2003, p. 97). Additionally, the federal government was obligated to fund ICE projects to completion (Aliosi, 2004, p. 16).

The United States House of Representatives majority leader was the late Thomas “Tip” O’Neill, Jr., a powerful Democratic congressman from Massachusetts. Congressman O’Neill was instrumental in convincing FHWA to put funding for the CA/T project into

the 1975 ICE despite the FHWA contention that the Central Artery was a designated segment (i.e. built after the interstate program was enacted) and not eligible for ICE funding.

In 1978 Dukakis was ousted by rival Ed King who did not favor the CA/T but did favor the Third Harbor tunnel. However, the King administration was not capable of advancing either the CA/T project or his preferred project, a third tunnel to the Boston Logan Airport.

In 1982, Dukakis was reelected Governor and Salvucci returned as his state transportation secretary. Salvucci refined and expanded his plan to include a burial of the entire central artery as opposed to intermittent segments. In the expanded scope, the third tunnel would be from a location in town to a terminus inside the airport, thus eliminating disruption of East Boston neighborhoods.

With Salvucci's persistence, the project overcame a number of obstacles and adversaries. First Salvucci sold the project to Gov Dukakis, then to the business community, to the East Boston neighborhood, to environmental groups, and to the Reagan administration FHWA administrator Ray Barnhart. With the continued assistance and support of Speaker of the House Tip O'Neill (D-MA), the CA/T project was included in the ICE and survived every attempt to remove it.

In 1987, the CA/T project also survived a veto of the omnibus transportation funding bill by President Ronald Reagan. The Reagan veto was overridden by Congress. However, by the time the necessary environmental planning and approvals were secured; construction of the CA/T project began after 1991 and was not eligible for historical 90%

federal funding. The enactment of ISTEA brought an end to the 90% federal funding of interstate highway projects (Aliosi, 2004, pp. 27-28). The CA/T project was ultimately funded at 58% federal dollars based on a 2002 cost estimate of \$14.6 billion dollars. (Altshuler & Luberoff, 2003, p. 116)

Elevated Central Artery Demolished - 2004

After many years of planning and evolution, the Central Artery/ Tunnel project (CA/T) would remove the elevated segment of I-93 in downtown Boston and replaced it with an underground tunnel. This project known as “The Big Dig” included a number of roadway and infrastructure improvements, in addition to the replacement of the waterfront expressway, known as the Central Artery (I-93). As shown in Figure 1, the other projects included tunnels and bridges such as the Ted Williams Tunnel beneath Boston Harbor, the Charles River Bridges, the Massachusetts Turnpike (I-90) extension and interchange to Logan Airport via the Ted Williams Tunnel. Also, included in the CA/T projects was the capping and filling of a former city landfill dump known as Spectacle Island which has become a public park with a marina, dock for ferry access, recreational boats, beaches and picnic areas.

The northbound and southbound tunnels of the Central Artery were open to traffic in March 2003 and December 2003, respectively and were later named the Thomas P. (Tip) O’Neill Tunnels in honor of the late Massachusetts Congressman and former Speaker of the House of Representatives.

Upon completion of the tunnels, the dismantling of the elevated Central Artery expressway began in 2004. For the first time in half of a century, the Boston waterfront



Source: Massachusetts Department of Transportation
<http://www.massdot.state.ma.us/Highway/bigdig/bigdigmain.aspx>

Figure 6 Boston Central Artery Redeveloped

and North End neighborhoods were reconnected to the downtown. Another residual of the new Central Artery tunnel was the creation of 27 acres of open land in the area where the elevated expressway once stood.

The elevated Central Artery extended from Boston’s North Station south to Chinatown and its demolition resulted in an opportunity to redevelop 27 acres of land that was divided into over 24 parcels of land shown in Figure 2. The Land Use Plan proposed in anticipation of the newly exposed land from the demolition of the Central Artery and replacement with subsurface tunnels dates back to 1991 and was developed by the Massachusetts Turnpike Authority (MTA), the agency responsible for the CA/T project and tunnel operation.

The “Big Dig” construction began on the Ted Williams Tunnel under the Boston Harbor in 1991 and on the Central Artery tunnels in 1996. The CA/T project took 14 years to complete with a total cost estimated to be about \$14.6 billion dollars (Road Traffic Technology, 2006).

A Review of “Necessary” Conditions

Initially, the Central Artery was a six-lane structure designed to accommodate 75,000 vehicles per day. The Central Artery traffic had increased to more than 200,000 vehicles per day by the early 1990’s and was projected to be 245,000 vehicles per day by 2010. Thus, Boston had one of the worst traffic congestion problems in the country with commuters regularly spending 8 to 10 hours a day in traffic jam and an “accident rate of four times the national average for urban interstates” (Massturnpike.com, 2006). The tunnel has a vehicle capacity of 245,000 vehicles per day versus the former Central Artery that was congested beyond its 75,000 per day design capacity (Massturnpike.com, 2006).

Unlike the San Francisco freeways, the CA/T project did not involve structural concerns due to immediate damage from a natural disaster such as an earthquake. The traffic congestion problems were chronic and evolved over time. In 1972 when the proposal to remove the Central Artery was first released in the BTPR study, the elevated structure was only 15 years old and had a number of years of useful life remaining (Altshuler & Luberoff, 2003, p. 91).

The federal funding formula (i.e.90% federal and 10% state) that “inspired” the CA/T project “no longer exists.” (Altshuler & Luberoff, 2003, p. 120) ISTEA and the

subsequent 1998 transportation funding bill, TEA 21, did not continue to fund new interstate highway projects according to the historical 90% federal formula. However, proponents of the CA/T project strategically timed and structured the project to ensure that it was in the ICE which would qualify the CA/T project for federal funding until completion albeit at a lower percentage (58%) of federal funding.

The CA/T project resulted in an increase in lane capacity from 75,000 to 245,000 VPD. Thus, there was no apparent decrease in the value mobility, particularly automobility. Transit projects that were once a part of the Boston area transportation planning were not included in the CA/T projects (Aliosi, 2004, p. 95). A residual of the CA/T project was the unprecedented opportunity to redevelop 27 acres in downtown Boston. These developments included the Rose Kennedy Greenway located in the footprint of the former Central Artery and other developments captured in the land use plan.

Again the power brokers in the Boston CA/T project lead by Governor Dukakis, State Transportation Secretary Salvucci, Congressman O'Neill and others were not directly faced with the dilemma of choosing freeways over other benefits because the freeway was in effect replaced by an even higher capacity underground tunnel. According to the study by Napolitan, the CA/T project did not meet the criteria for a "freeway removal" because the project did not remove and replace the elevated freeway with an at-grade roadway of lower carrying capacity (Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008).

However, throughout the process of "selling" the project, Salvucci remained committed to "one unchangeable principle: not one home would be displaced" (Aliosi, 2004, p. 16)

Salvucci systematically obtained the support of the Boston business community by exchanging their support of the central artery/tunnel project for the Dukakis administration support of the airport tunnel project favored by the business community. Salvucci also convinced the business community that the impending deadline for submitting environmental documents was critical, that the two projects were only effective in tandem and that the new slurry wall technology would greatly minimize traffic interruption in the downtown area during construction. The discovery of slurry wall technology made the construction of the tunnels possible without first excavating which would have closed down the city with severe economic impacts. Salvucci further suggested that the central artery was approaching end of life. (Altshuler & Luberoff, 2003)

The CA/T project was conceived during the BTPR study commissioned by then Massachusetts governor, Frank Sargent. The actual idea was proposed by Bill Reynolds, a BTPR representative of the highway contractors and later kept alive by Fred Salvucci, then a transportation advisor to Boston mayor Kevin White and eventually State Transportation Secretary to Governor Dukakis. Mr Salvucci spent a great deal of time and effort “selling” the project first to his boss, Gov. Dukakis and then to the many business, community, environmental and political stakeholders.

Unlike the highway projects of the 1950’s that forced removal, relocation and other impacts upon residents; the CA/T project committed to ensuring that no residents would be displaced by the project. Additionally, the use of slurry wall technology to construct the tunnels allowed the streets above the tunnel to remain open during the construction to minimize interruption of the businesses and residents.

Nearly one third of the CA/T project budget was dedicated to mitigation issues on behalf of the groups affected by the project and maintaining the economic viability of the city during construction (i.e. keeping the city open for business). The mitigation cost just for the tunneling under the city was \$600 million (Massachusetts Turnpike Authority, 2009).

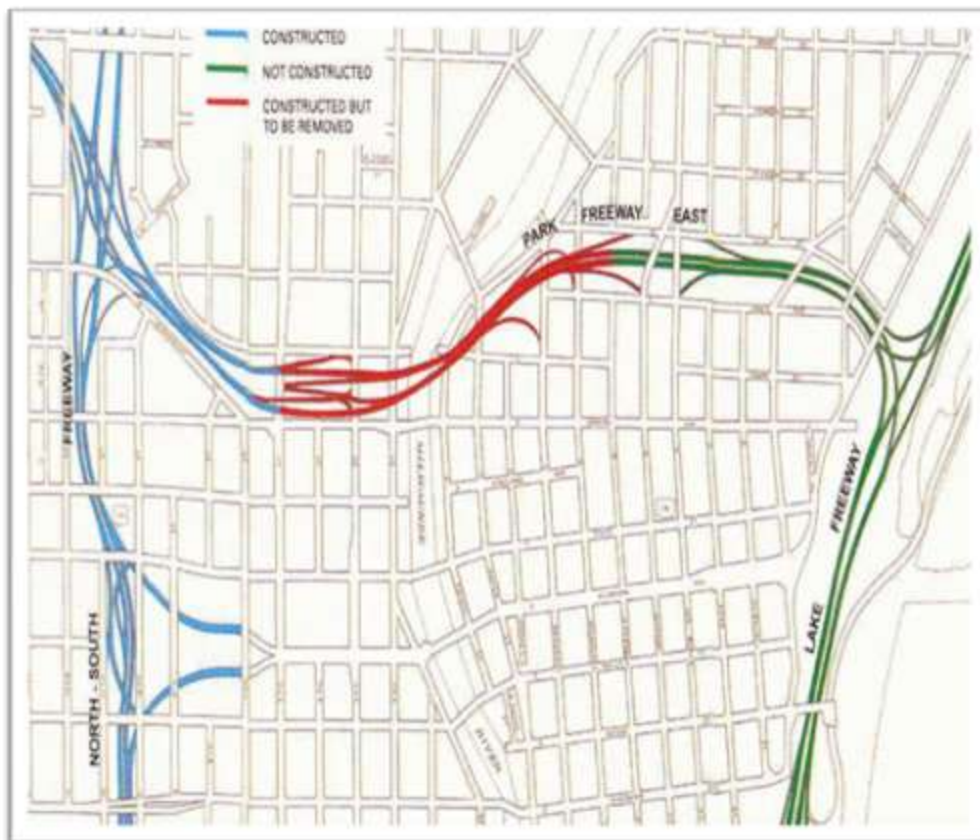
The CA/T project was conceptualized by the Boston Transportation Planning Review (BTPR) commissioned by then Massachusetts Governor Sargent. Following the study, the subsequent governors aided by the state transportation secretary (i.e Salvucci) were instrumental in convincing the federal government to fund the project. The CA/T project was not of national

The Boston Central Artery project has been touted as one of the most extensive and expensive public works project in this century. The project took nearly 15 years to complete at a price tag of \$14.6 billion dollars. Critics of the Central Artery project point to the \$14.6 billion price tag as too expensive especially since it “more than tripled since 1987 when Congress approved its financing” even after adjusting cost to 2002 dollars (Altshuler & Luberoff, 2003, p. 119) . Also, the substantial cost overruns also generated allegations of corruption during the project construction.

Chapter 8 Milwaukee, WI, Park East Freeway (I-43) – Case 2

Park East Freeway, an elevated structure approximately 0.8 miles in length (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 79), was a part of US Interstate 43 (I-43) running through the central business district of Milwaukee, Wisconsin.

In 2003, the freeway was replaced with an at-grade boulevard, McKinley Avenue, and the street grid was restored.



Source: Wisconsin Highways

http://www.wisconsinhighways.org/milwaukee/park_map_parkeast1965.

Figure 7 Park East Freeway Milwaukee, WI

Construction of Park East Freeway – 1960s

The Park East freeway opened to traffic in 1971 after construction during the 1960s. As originally proposed, the Park East freeway was a portion of a larger freeway simply known as Park Freeway. The Park freeway is often referred to as Park East and Park West freeways. The Park West segment of the Park Freeway (I-43) was supposed to have a northwesterly alignment to the west of the North South freeway. To the east of the North South freeway was the Park East freeway which was to connect to the proposed Lake freeway (Figure 2). As proposed, the Lake freeway was to be a waterfront expressway that ran along the shore of Lake Michigan. Due to public opposition of the planned obstruction of the lakefront began in 1965. The Lake Freeway was cancelled in 1971 and never built.

Similarly, construction of the Park West freeway was stopped in 1972. An Environmental Impact Statement (EIS) was ordered by US District Judge John Reynolds under the relatively new environmental legislation known as the National Environmental Policy Act (NEPA) of 1969. In January of 1977, the Park West freeway alignment was rejected by the federal government based on the EIS.

With the Park East and Lake Freeways cancelled by 1977, the Park East freeway was destined to be “underutilized” because the other connecting segments of the proposed freeway loop were never completed. The Park East freeway was relegated to an incomplete spur carrying approximately 54,000 vehicles per day (Seattle Department of Transportation, 2008, pp. 6K-2). There were no plans on behalf of state and local officials to complete the proposed Interstate loop through downtown Milwaukee and the Park East Freeway “created a visual and physical

barrier” between northern downtown and the rest of the city and decreased “ property values on surrounding land” (Seattle Department of Transportation, 2008, p. 6K1)

Origins of Park East Freeway Removal Project

The cost of repairs for the aging Park West freeway structure was estimated to be in the range of \$80 dollars in the early 1990s (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007). Led by longtime Mayor of Milwaukee, John Norquist, the city began to explore the idea of removing the incomplete spur that was the Park East freeway.

Mayor Norquist was an influential, veteran, anti-freeway advocate. Norquist was elected to the Wisconsin State Assembly in 1975, the state senate in 1983 and as mayor of Milwaukee from 1988 to 2004 (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007). Norquist was elected on an anti-freeway platform and continued his anti-freeway advocacy in all his capacities as a public servant. Norquist began promoting the idea of removing the Park East freeway as soon as he was elected mayor in 1988.

Approval and Funding of Park East Demolition

When Norquist took office in 1988, the Park East freeway removal idea began to gain momentum. However, Norquist would have to obtain the support of a number of stakeholders.

In 1993, Norquist appointed Peter Park as his Planning Director. Mr. Park was previously involved in University of Wisconsin-Milwaukee, Architecture Department research into the “implications of tearing down urban freeways” and was tasked with “changing the mindset of city engineers that capacity should never be reduced.” (Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008).

In 1998, Norquist and Park began to formalize efforts to demolish the Park East freeway to make available large tract of land for redevelopment with an at-grade boulevard replacing the freeway. The City of Milwaukee along with the Milwaukee Redevelopment Corporation and the Wisconsin Center District Board contracted A Nelessen Associates to develop a comprehensive master plan. The plan process involved community participation in public workshops. The outcome of these workshops was an overwhelming sentiment that the Park East freeway had no future in the new Master Plan for downtown Milwaukee. The master plan identified the freeway removal as a key element of revitalizing downtown. (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007)

The master plan process was participatory and became instrumental in securing the support of the business community, the residents and relevant government agencies.

The support of the business community was secured based on a study released by the Southeastern Wisconsin Regional Planning Commission (SWRPC) that concluded that the demolition of the Park East freeway would not greatly impact traffic congestion or commuting times. Both of which would have had an adverse impact on the business community.

Then, Governor Tommy Thompson and the Milwaukee County Board of Supervisors began to consider supporting the removal of Park East when Harley Davidson, the motorcycle manufacturer, expressed interest in locating a museum in the downtown area of Milwaukee.

The Wisconsin DOT, the City of Milwaukee and the Milwaukee County Board of Supervisors conducted Environmental Impact Assessment Study (EA) to look at removal alternatives. The EA included modeling of the traffic flow and concluded that reconnecting to the street grid would improve traffic flow.

In April of 1999, the funding agreement was established between “Mayor Norquist, the County Executive of Milwaukee County and the Governor” to use Interstate Cost Estimate funding allocated to the State of Wisconsin by the federal transportation funding program ISTEA. Shortly before the 1999 deadline for the state of Wisconsin to use or lose the federal funds, the state agreed to allocate \$25 million of the state \$241 million in ICE money to the removal of the Park East freeway spur. The final funding allocation according to the “Letter of Agreement on the Allocation of ICE Dollars and on Milwaukee Transportation Projects” ICE provided \$21.3 million and \$3.7 million from the local (state, city and county) match for a total of \$25 million. (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007)

Park East Freeway Demolished- 2002

In June of 2002, the demolition of the elevated Park East freeway began. The westbound lanes were removed first and the eastbound lane was used to move traffic in both directions. Subsequently, the eastbound lanes were removed in 2003 and the reconstruction of the city street grid took place through to 2004. (Bessert C. J., 2008)



Source: City of Milwaukee Department of City Development <http://www.mkedcd.org/parkeast/update/Projects.pdf>

Figure 8 Park East Redevelopment Area

The Park East freeway area released 26 acres of land for redevelopment. The city created three new neighborhoods called the McKinley Avenue District, the Lower Water Street District, the Upper Water Street District. Each neighborhood is being developed using New Urbanist design codes with mixed use developments including residential, office development, and retail.

Approximately \$250 million in investment is expected in the Park East redevelopment area. (The Preservation Institute, 2007)

A Review of “Necessary” Conditions

The Park East freeway was an aging structure in need of an estimated \$80 million of repairs. However, there were no imminent integrity or safety concerns associated with the Park East

freeway. (Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008)

The window of opportunity in the Park East case occurred during the tenure (1988 to 2004) of Mayor John Norquist who was a veteran anti-freeway activist. The momentum for removal of Park East was accelerated by the City led effort to develop a comprehensive master plan that would become the Downtown Master Plan for the city of Milwaukee. The master plan, with its broad input from the residential and business communities, transformed the concept of removing the Park East Freeway from an “informal idea pushed by the Mayor to a formal proposal” (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 85).

There are a number of indications in the Park East freeway removal case to suggest that the value of mobility was diminished relative to other benefits. Initiated by Mayor Norquist and his Planning Director Peter Park, the Park East removal idea soon gained approval of the larger public as a vehicle for economic growth and revitalization of downtown. The business community and some government agencies were initially leery of the proposed removal, but the interest of the Harley Davidson museum development, the underutilization of the Park East freeway, the success of the East Point Commons development on a former freeway corridor and the experience of the San Francisco Embarcadero removal were a few issues that eased concerns over the reduction in mobility. (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007)

The support of Mayor Norquist was instrumental in the Park East freeway removal. He came into office with the removal of Park East as a stated goal. Norquist and Park led the effort to

charge to obtain the support and approval of other key governmental bodies such as the Governor of Wisconsin, the Wisconsin DOT, County of Milwaukee and Milwaukee city engineers.

The business community was initially fearful of reduced mobility and traffic. A traffic study by the SWRPC was instrumental in securing support of the business community. The report entitled “Analysis of Existing Year 2020 Traffic Impacts of the Termination of the Park East Freeway at N. 4th Street and Points East” concluded that the freeway demolition “would have minimal impact on traffic congestion.” (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 82)

The Park East freeway was an idea born locally in the public sector, primarily by Mayor Norquist, and sold to the private sector constituency as well as other governmental agencies.

The major concern for the Park East removal was related to predictions of traffic congestion. The 1998 traffic study by SWRPC concluded that the impact to traffic would be minimal. A subsequent study conducted in November 2000 by HNTB on behalf of the Federal Highway Administration (FHWA) concluded that the traffic impacts would be even less than the original 1998 traffic study projections (The Preservation Institute, 2007).

The Environmental Impact Study and other traffic studies addressed the issue of traffic impacts and found them minimal. The most significant public opposition was led by a downtown merchant, Mr. George Watt. The US District Judge Charles Clevert ruled against the plaintiffs in the lawsuits filed by Mr Watts regarding air quality and traffic impacts of the Park East removal (The Preservation Institute, 2007).

The Park East Freeway removal received \$21.3 million of the \$25 million dollars total project costs from the federal government. However, the removal of the Park East freeway had no major national benefits or implications. This was another project that was conceived locally then sought and received federal funding through legislation such as ISTEA.

Compared to most freeway removal projects (i.e. the Central Artery in Boston at \$14.6 billion) the Park East freeway removal was relatively inexpensive at \$25 million. The final cost of the removal is projected at \$30 million. Thus, the difference between the initial cost estimate and the actual is about a 20% cost increase.

Chapter 9 Oakland, CA, Cypress Freeway (I-880) - Case 3

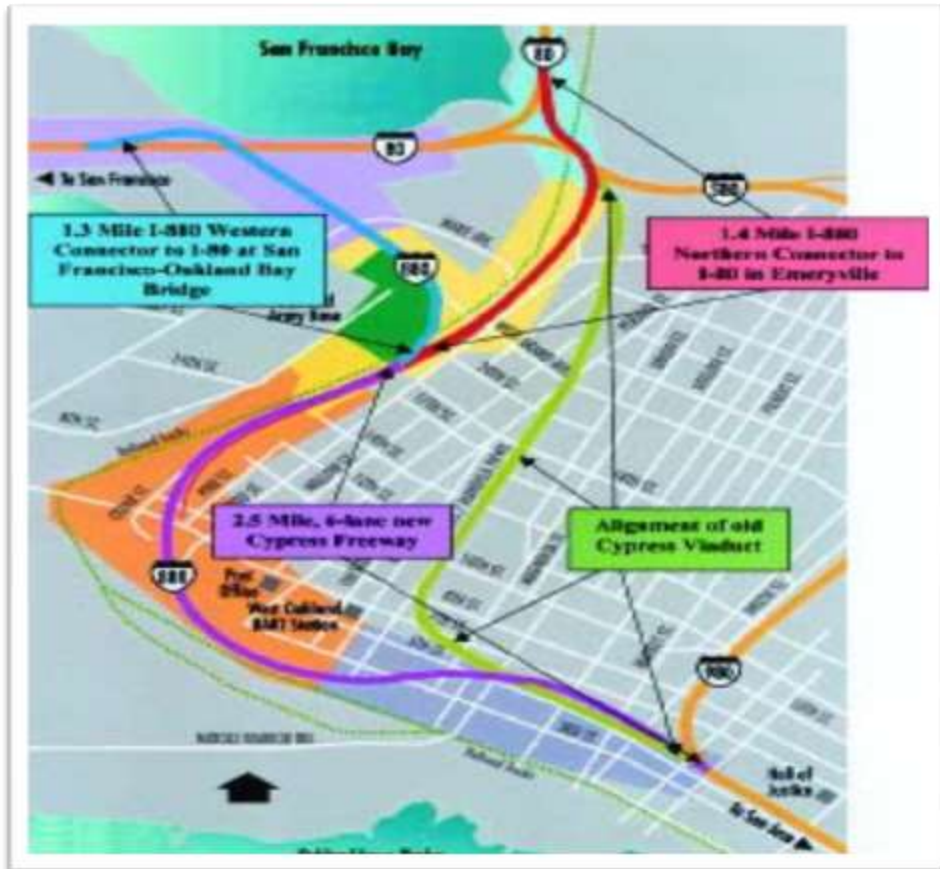
The Cypress Freeway was a double-deck freeway located in Oakland California. The Cypress Freeway was given the designation of Interstate 880 and was part of the Nimitz Freeway that linked to Interstate 80. The double-deck portion of the Cypress Freeway was an elevated section known as the Cypress Street Viaduct with each deck having five lanes of traffic plus ground level traffic.

On October 17, 1989 during the pre-game show for game three of the baseball World Series between San Francisco Giants and Oakland As, the massive Loma Prieta earthquake caused the collapse of the Cypress Freeway and 4 forty-two people were killed by the fallen 1.25 mile concrete structures. Ironically, the Loma Prieta earthquake would also damage the Central Freeway and the Embarcadero Freeway, in the neighboring San Francisco, California. (Federal Highway Administration)

Construction of Cypress Freeway – 1957

The Cypress Freeway was constructed to connect the sprawling area of “Alameda County to downtown San Francisco and Oakland’s industrial waterfront.” (Federal Highway Administration). Like many of the freeways constructed in the 1950s, the alignment of the Cypress Freeway cut through a predominantly African American neighborhood of West Oakland. The freeway was a physical barrier from the more affluent neighborhoods and the “sandwiched” the West Oakland area against the heavy industrial areas of the Port of Oakland.

The Cypress Freeway carried 160,000 vehicles per day prior to the devastation of the earthquake. But, the freeway’s construction displaced 600 families and is blamed for the decline of the quality of life in the area (Jackson, 1998).



Source: US Department of Transportation Federal Highway Administration
<http://www.fhwa.dot.gov/environment/ejustice/case/case5.htm>

Figure 9 Cypress Freeway Old and New Alignment

Origins of Cypress Freeway Replacement Project

Immediately after the earthquake, the California department of Transportation (Caltrans) favored an option that would have replaced the freeway in its current location. However, organized opposition to this plan surfaced immediately and the Citizens Emergency Relief Team (CERT) formed with the mission of providing a forum for the West Oakland community during the rebuilding in the aftermath of the earthquake. The CERT was supported by several influential members such as “a Bay Area Rapid Transit director, a former Port of Oakland CEO, an Alameda County supervisor and a former mayor of Berkeley” (Federal Highway Administration). These individuals were versed in policy and capable of influencing it.

Caltrans presented its proposal in January of 1990 and CERT had already begun to evaluate alternate routes. The CERT alternate alignment would run to the west of the current freeway route, nearer to the Port of Oakland and some portions would run along the Southern Pacific Railroad right-of way. A small residential area would be impacted by the route, but the vast majority West Oakland supported this plan.

Approval and Funding of Cypress Freeway Replacement Project

The Cypress Freeway was destroyed during the Loma Prieta Earthquake and the area was declared a disaster area by the federal government and state of California. This declaration qualified the Cypress Freeway for “\$300 million in immediate relief” (James, St. Onge, van Voorst, & Walker).

The NEPA process involving preparation of an Environmental Impact Statement (EIS) was employed to evaluate the alternative and select a route for the new Cypress Freeway. Following the public comment period for the draft EIS which ended on February 1, 1991, Caltrans selected a recommended route from amongst six (6) alternate routes including the existing route. The selected route was west of the existing route and closer to the industrial areas of West Oakland. Although, the proposed new route involved over \$500 million in land acquisition costs; it was viewed as a chance to “reunite West Oakland.” The level of participation in the decision of where to locate the new Cypress freeway was an opportunity to influence the process that was not available to the community when the freeway was originally constructed over 30 years prior.

Cypress Freeway Demolished/ Damaged Beyond Repair – 1989

The rubble from the collapsed Cypress Freeway was removed in shortly after the 1989 earthquake. The newly aligned Cypress Freeway was completely reopened to traffic in

September 1998. In 2002, Caltrans began construction of the Mandela Parkway in the former Cypress Freeway right-of-way. The Mandela Parkway Improvement Project was to create a “fully landscaped tree-lined parkway and arboretum on Mandela Parkway in West Oakland.” The project is about “18 blocks or 1.3 miles in length, with approximately 14 acres of landscaping.” (California Department of Transportation, 2004)



Source: US Department of Transportation Federal Highway Administration
<http://www.fhwa.dot.gov/environment/ejustice/case/case5.htm>

Figure 10 Cypress Freeway Damage

A Review of Necessary Conditions

A major issue in the fate of the Cypress Freeway was the extensive damage to the structure during the Loma Prieta earthquake. The earthquake forced Caltrans and the West Oakland community to decide the location and alignment of a new freeway structure to accommodate traffic congestion that resulted from the loss of the cypress Freeway.

The earthquake can also be viewed as a huge window of opportunity to redress environmental justice issues in the West Oakland community. Legislation such as NEPA gave this community opportunity to legally and formally participate in the decision making process in a way not afforded them during the initial construction of the interstate during the 1950s.

The Cypress Freeway carried over 150,000 cars daily and was a major artery for traffic in the area. The replacement of the freeway along a new alignment would not be described as a decrease in the value of mobility. The new Cypress Freeway (I-880) has an average annual daily traffic (AADT) of over 200,000 vehicles per day (California Department of Transportation, 2009), thus there was no net reduction in expressway capacity that would be indicative of a decreased value of mobility.

In a process that involved organized public input and opposition; the old freeway alignment that was instrumental in the economic decline of the West Oakland neighborhood was replaced with a tree-lined at-grade boulevard and the freeway was rerouted through a more industrial area of Oakland. The community in West Oakland quickly capitalized on the window of opportunity provided by the 1989 earthquake and began organizing themselves immediately. Key to this organization was the support of power brokers such as the transit director, a former port CEO, a county supervisor and a former mayor that formed the CERT. These individuals teamed with the low-income, and minority residents of the area and negotiated several agreements with Caltrans that were beneficial to the economic development of the community.

During the community negotiations with Caltrans, the local business community was awarded \$90 million in contracts and over 1,000 residents were employed during the reconstruction of the

Cypress Freeway. The business community also enjoys the benefits of a new interchange directly to the Port and a Port expansion.

It appears that the public was immediately in opposition of replacement of the Cypress freeway in the old alignment and were not necessarily “sold” on the idea by the public sector. Caltrans was initially focused on replacement of a “crucial link in the East Bay’s freeway network” and favored replacing the freeway on its old site. However, Caltrans responded to the environmental justice issues that the community brought forth and effectively considered alternatives that would accommodate traffic while addressing community concerns.



Source: Flickr.com by ucat <http://www.flickr.com/photos/ucate/2447326228/>

Figure 11 Mandela Parkway Development

The Cypress freeway's new alignment is 3.5 miles and is longer than the old alignment (1.25 miles), but the "the impacts of the Cypress Freeway on West Oakland have been reduced and plans for the Mandela Parkway are generating excitement and enthusiasm in West Oakland rather than opposition." (Federal Highway Administration) Thus, the removal and relocation of the physical barrier that was the elevated Cypress Freeway and the conversion of the old alignment into a Mandela Parkway was considered a giant step in mitigating negative impacts to the area. The business community also got increased access to the Port of Oakland, residents received construction job training funded by Caltrans.

The Cypress Freeway Replacement project was not largely driven by concerns or benefits on the national level. The new alignment does include more direct access to a port but was not the primary impetus for the project. The freeway was a highly traveled route and transportation officials were focused on its replacement, but the selection of a new alignment was driven by the local community.

The replacement of the Cypress Freeway was a very expensive undertaking at a cost \$1.2 billion and nine years to construct (Jackson, 1998). Ninety percent of the funding for the Cypress Freeway came from federal emergency relief funds triggered by the 1989 earthquake (Jackson, 1998).

Chapter 10 – San Francisco, CA Embarcadero Freeway (I-480) - Case 4

The Embarcadero Freeway was a double-decker elevated freeway located on the waterfront of the San Francisco Bay area of California. The Embarcadero freeway was given the Interstate designation Interstate 480 (I-480). The original completed design was suppose to connect the Bay Bridge to the Golden Gate Bridge in San Francisco, but the construction was never complete due to the “freeway revolts” in San Francisco. In 1959, the revolts led to the San Francisco Board of Supervisors cancelling seven of the 10 freeways planned for San Francisco (The Preservation Institute, 2007).



Source: Wikipedia.com
http://en.wikipedia.org/wiki/File:Embarcadero_Freeway_map.png

Figure 12 Embarcadero Freeway San Francisco, CA

After the Loma Prieta earthquake in 1989, the Embarcadero Freeway was closed to traffic due to structural damage to the structure. The freeway was subsequently removed in 1991 and replaced with an at-grade boulevard called The Embarcadero.

Construction of Embarcadero Freeway - 1950s

Construction began on the Embarcadero Freeway in 1953 following city approval of the Traffic Ways Plan in 1951. In 1956, the newspaper, the San Francisco Chronicle, published a map detailing the ten proposed freeways that were planned for the San Francisco area. The editorial opinion of the newspaper was that the citizens waited until it was time for “concrete pouring” to begin protesting freeways and further contended that changes to the current plans would have been “impossible or extremely costly” (The Preservation Institute, 2007).

However, the citizen protest became increasingly active and included several influential downtown neighborhoods on the waterfront such as Sunset, Telegraph and Russian Hills, Potrero, Polk Gulch and Haight-Ashbury (The Preservation Institute, 2007; Cervero, Kang, & Shively, From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco, 2007). These neighborhood groups submitted petitions with 30,000 signatures to the Board of Supervisors. In 1959, the Board of Supervisors voted to cancel seven of the ten freeway projects including the partially complete Embarcadero and Central Freeways. The efforts of the San Francisco Embarcadero area community is credited as the first “freeway revolt” that resulted in the government reversing course and cancelling a freeway project.

The Embarcadero Freeway was never completed as evidence by a stub suspended in the air at the point where the freeway would have continued along the waterfront past the Broadway off

ramp. The 1.2 miles of the double-decker freeway that was completed in 1959, carried over 100,000 vehicles per day (Congress for the New Urbanism). The freeway would create a “physical and visual barrier” between downtown San Francisco and the waterfront for over four decades (Seattle Department of Transportation, 2008, p. 6D1).

Origins of the Embarcadero Removal Project

Prior to the 1989 Loma Prieta earthquake, there were efforts to demolish the partially complete Embarcadero Freeway and other San Francisco elevated freeways. In 1985, the Board of Supervisors voted to remove the Embarcadero and replace with a surface boulevard at a cost of \$171 million of which the city would pay \$10 million and the government would pay the balance (The Preservation Institute, 2007). The proposal included an expansion of the trolley system and had broad support from the Public Utilities, the Port, the Redevelopment Commissions and the sub-committees of the Board of Supervisors, Mayor Dianne Feinstein, and Planning Director Dean Marcis. The proposal also was the subject of a Environmental Impact Report (The Preservation Institute, 2007).

However, initiated by the strong opposition from Supervisor Richard Hongisto and other influential residents such as newspaper columnist Herb Caen; the proposal was put to a vote by the people. Two initiative’s were on the ballot. The Hongisto initiative asked residents should the freeway be demolished. The second initiative asked should the freeway be removed if studies determined traffic congestion would be minimal. Voters rejected both initiatives in June of 1986 and effectively killed the freeway removal proposal at that time.

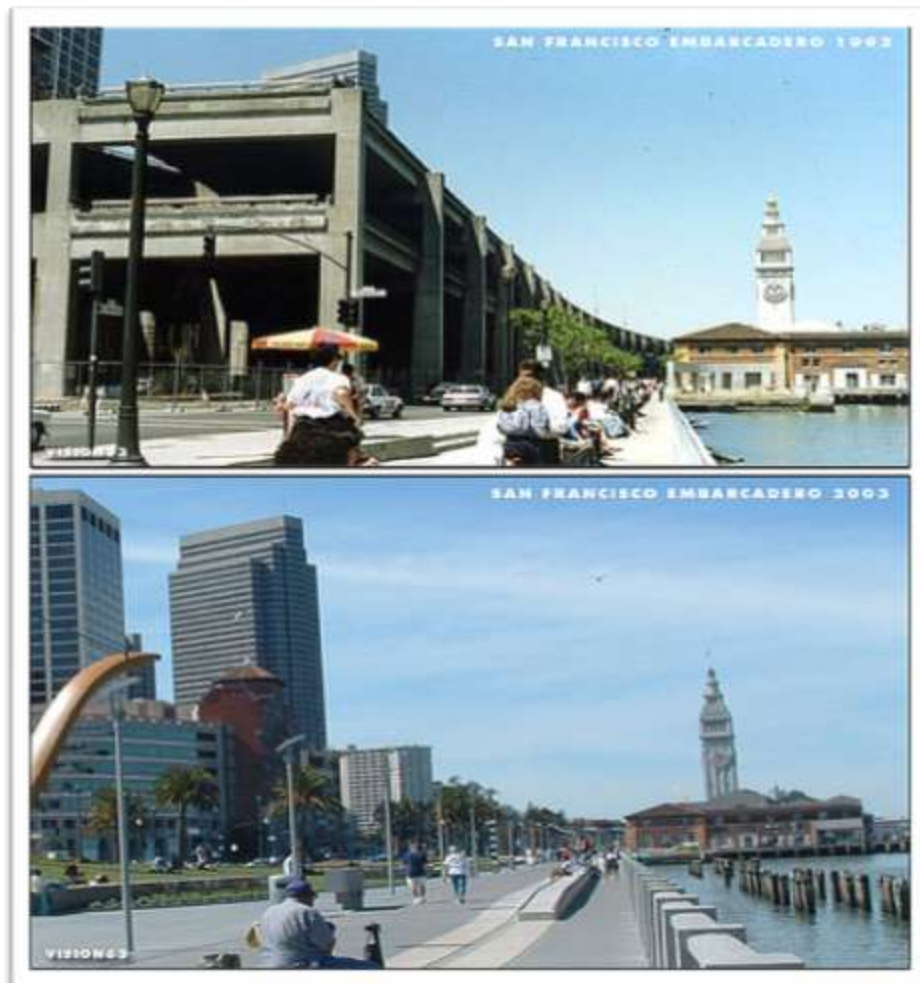
The 1989 Loma Prieta earthquake was a defining moment in reviving the proposal to demolish the elevated, waterfront freeway. The earthquake caused major structural damage to the

Embarcadero Freeway and forced the freeway to be closed. The predictions of gridlock were never manifested except for a brief period. Commuters effectively used alternate route and other modes of transportation (The Preservation Institute, 2007).

Approval and Funding of Embarcadero Freeway Demolition

In the aftermath of the Loma Prieta earthquake, the California Department of Transportation (Caltrans) proposed three options to address the earthquake damaged freeway that included retrofitting the structure, rebuilding a depressed structure or replacing with an at-grade street (Cervero, Kang, & Shively, From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco, 2007, p. 8). After lengthy public debate, the majority of residents wanted the freeway demolished which was the most cost effective option. Finally, the opportunity for economic development and revitalization of the area was a factor in the decision to demolish.

Armed with the proven fact that the closure or removal of the freeway would not result in traffic gridlock, the anti-freeway activist began to call for the demolition of the damaged freeway. In April of 1990, the Board of Supervisors voted to remove the freeway structure against the opposition of Chinatown merchants who felt that the freeway was a necessary route to bring traffic into their businesses.



Source: Flickr.com <http://www.flickr.com/photos/ucat/2447326228/>

Figure 13 Embarcadero Before and After Demolition

Embarcadero Freeway Demolished- 1991

Two years after the earthquake, the Embarcadero Freeway was demolished in 1991 exposing the waterfront to the city again. The demolition was estimated to cost \$3.25 million (Wicker, 1991). The cost of redeveloping the Embarcadero Freeway into Embarcadero, the boulevard was \$50 million dollars (The Preservation Institute, 2007). Since the freeway was primarily located over a street (that would become the boulevard), developable land was minimal. The redevelopment of the Embarcadero involve lining with trees, construction of a pedestrian promenade and restoration of the historic trolley service using authentic trolley cars obtained from other cities in America and Europe. The property values in the area of the new surface boulevard have escalated 300 percent (The Preservation Institute, 2007).

A Review of Necessary Conditions

Integrity and safety concerns were a major issue in the decision to demolish the Embarcadero Freeway. The 1989 earthquake severely damaged the freeway structure and caused it to be closed after the earthquake. The city of San Francisco was forced to make a decision to either rebuild the freeway or demolish it.

The 1989 earthquake provided the window of opportunity for San Francisco as the city was now presented with an opportunity to revisit a long standing history of anti-freeway sentiments. The city could actually justify a demolition of the freeway as a cheaper alternative to rebuilding elevated or subsurface

Most of San Francisco agreed that the freeway was a mistake to build. But as Herb Caen, the influential newspaper columnist stated, “tearing down the Embarcadero Freeway” was “an even worse idea than building it.” (The Preservation Institute, 2007). This ideology was a major

concern (i.e. Would the city be worse off in terms of traffic and mobility without the freeway?). However, the earthquake damage had the effect of causing stakeholders to reevaluate the need for the freeway in light of the fact that a retrofit would be among the most costly options. The redevelopment would result in a boulevard with multiple modes of transportation (i.e pedestrian, trolley car and automobiles) compared to the previous car dominated freeway transportation with no apparent traffic problems.

As evidence of the broad support for the demolition of the Embarcadero Freeway prior to the earthquake, the powerbrokers of San Francisco were beginning to value the waterfront as an amenity with huge economic development potential. The residents were not yet on board and rejected the pre-earthquake proposals to demolish the freeway.

Following the earthquake, “some merchants and property owners” wanted “ the Embarcadero repaired” and reopened (Wicker, 1991). The Chinatown merchants were the primary opponents to the demolition of the freeway. The Board of Supervisors voted to proceed with demolition in 1991 over the objections of many Chinatown merchants who closed their shops to attend the meeting.

Before the earthquake, the demolition proposal presented in 1985 was largely initiated and driven by the support of public elected officials such as implements by public agencies and officials such as the Public Utilities, the Port, the Redevelopment Commissions and the sub-committees of the Board of Supervisors, Mayor Dianne Feinstein, and Planning Director Dean Marcis. An environmental impact report was also completed. However, when a public official who opposed the removal, Supervisor Richard Hongisto, put the proposal to a citizen vote, the residents rejected the demolition proposal.

The concerns regarding traffic gridlock were ironically addressed by the closure of the freeway due to structural damage by the earthquake. The predicted traffic congestion did not occur, therefore this concern was mitigated. The concerns of the Chinatown merchants were not as clearly addressed in the literature.

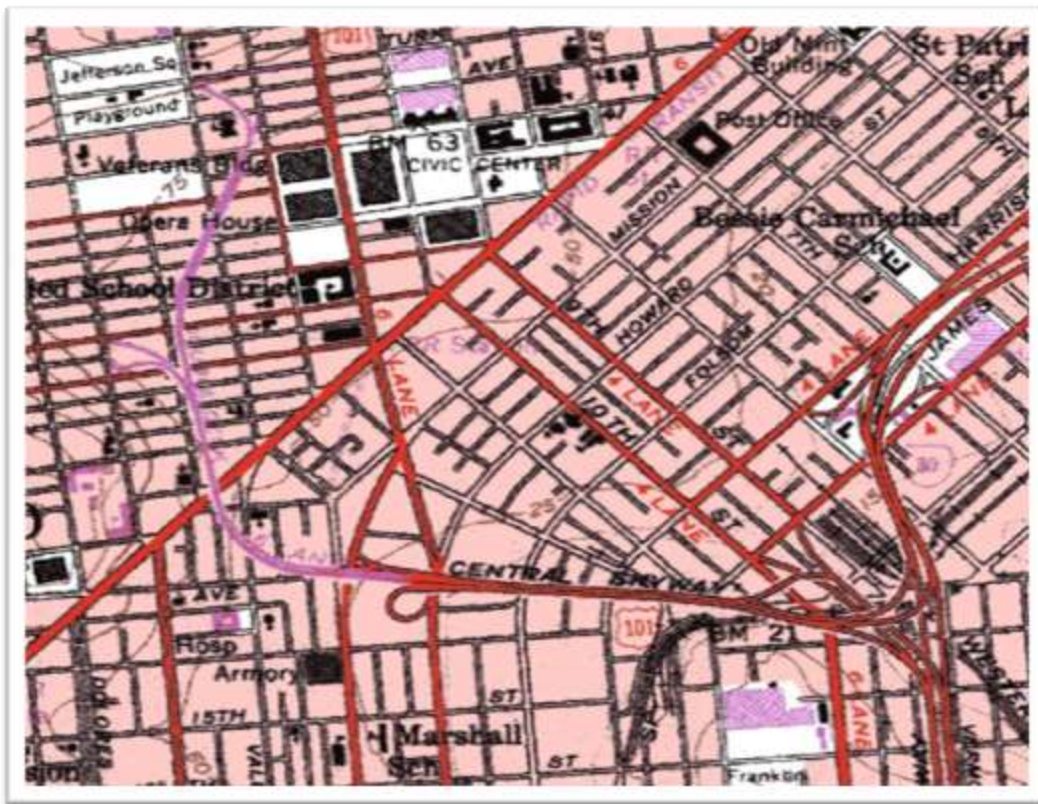
Again the fears of traffic congestion were the greatest concerns of those in opposition of the freeway demolition. Once the street grid demonstrated that it could absorb the additional traffic, the idea of replacing the elevated freeway with a boulevard became the most attractive solution that would result in reopening the waterfront to the people. The removal option was also the most economical solution.

The removal of the San Francisco Embarcadero freeway was of little national significance. However, the project was the recipient of federal emergency fund as a result of the earthquake. The benefits in terms of economic development were largely benefits to the local economy.

Chapter 11 San Francisco, CA, Central Freeway (I-80 spur) - Case 5

The Central Freeway was an elevated double-decker freeway segment that was partially built spur of Interstate 80 (I-80). The Central freeway was not located directly on the San Francisco Bay waterfront like the Embarcadero freeway. However, the early “freeway revolts” of San Francisco did stop the construction of the Central freeway in 1959 (The Preservation Institute, 2007). Construction of the freeway was never completed as proposed.

After the 1989 Loma Prieta earthquake and a long approval process, the partially completed



Source: Wikipedia.com http://en.wikipedia.org/wiki/File:Central_Freeway_map.png

Figure 14 Central Freeway San Francisco, CA

Central freeway spur was removed and replaced by an at-grade boulevard in 2005.

Construction of the Central Freeway - 1950s

The Central Freeway was part of a larger 1951 plan for a system of freeways in San Francisco. It was opened to traffic in 1959 which is the year that the San Francisco Board of Supervisors cancelled all but three of the ten freeways that were proposed for the city. The cancelled freeways included the partially completed Embarcadero and Central Freeways.

The Central freeway was located in the Hayes Valley neighborhood of San Francisco and the original plan was to extend the freeway at two ends. To the north past the Civic Center, it was to extend through the city and to the Golden Gate Bridge. The proposed segment turning west at Fell and Oak Streets was to be routed through Golden Gate Park and then north to the Golden Gate Bridge.

In the 1960s, freeway planners attempted to again execute the 1951 plans but were defeated. An organized group of residents lead by Sue Bierman, a resident of the Haight-Ashbery neighborhood and 77 other community groups managed to garner a 6-5 vote of the Board of Supervisors against the freeway condition (The Preservation Institute, 2007).

Origins of Central Freeway Demolition Proposal

Prior to the 1989 Loma Prieta earthquake, there were efforts to demolish the Central freeway. The Board of Supervisors passed resolutions in favor of demolishing freeways in 1970, 1980 and 1985. Following passage of these resolutions, the necessary “political” and “financial” support for demolitions was not realized (Cervero, Kang, & Shively, From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco, 2007, p. 7). The Central Freeway carried 100,000 vehicles per day at its peak usage before the earthquake (Seattle Department of Transportation, 2008, p. 6C1)



Source: Preservenet.com <http://www.preservenet.com/freeways/FreewaysCentral.html>

Figure 15 Elevated Central Freeway at Market

Immediately following the 1989 earthquake, the California Department of Transportation (Caltrans) demolished the northern-most segment of the Central Freeway due to structural damage. Also in 1996, six (6) blocks of the northern section of the freeway were demolished, again due to structural damage (Cervero, Kang, & Shively, From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco, 2007, p. 9). The predicted gridlock and traffic jams never materialized when the freeway was closed for demolition of the upper deck in 1996 (The Preservation Institute, 2007). The Central Freeway was carrying upward of 80,000 vehicles per day in the 1990s (Cervero, Kang, & Shively, From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in

San Francisco, 2007, p. 10). These partial demolitions gave the residents of the Hayes Valley neighborhood a sense of what the area would look like without the elevated Central Freeway structure. However, the complete demolition of the freeway would be supported by the “moderate income Hayes Valley neighborhood” of residents that were not as influential as the waterfront residents in the area of the Embarcadero freeway. The freeway demolition would be opposed by “those living elsewhere who regularly used the Central Freeway wanted to rebuild it” (Cervero, Kang, & Shively, *From Elevated Freeways to Surface Boulevards: Neighborhood, Traffic and Housing Price Impacts in San Francisco*, 2007, p. 10)

After the 1996 demolitions, neighborhood leaders, Patricia Walkup, and Robin Leavitt began a flyer campaign entitled “Mayor Brown, Tear It Down!” directed at then Mayor Willie Brown (The Preservation Institute, 2007). Walkup and Leavitt led the movement to demolish the remaining Central Freeway and were soon joined by Mayor Brown. Under pressure from the western neighborhoods that favors rebuilding the Central Freeway, Mayor Brown pulled his support for the freeway demolition. But, Walkup and Leavitt continued to led the lengthy effort to complete the demolition of the remaining freeway.

Approval and Funding of Central Freeway Demolition

The approval process for the demolition of the Central freeway continued to be played out at the ballot box in a series of conditions for and against the demolition proposal.

A group called The Coalition to Save the Central Freeway was a key player in getting Condition H on the ballot on November of 1997. Proposition H would have replaced the Central Freeway with another single deck elevated expressway. Proposition H passed. (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 64).

In November of 1998, the freeway opponents placed Proposition E on the ballot. This initiative was led by Walker and Leavitt who gained enough signatures to get Proposition E on the ballot. Proposition E passed and repealed Proposition H.

With the debate raging on both sides of the issue, the Board of Supervisors created a Central Freeway Project Office (CFPO) to manage the future of the project in March 1999. The CFPO hired a firm, Jacobs MacDonald : Cityworks operated by Allan Jacobs and Elizabeth McDonald, to develop a conceptual design and preliminary engineering report for replacing Central Freeway with Octavia Boulevard in June 1999. A second supplemental report of the preferred alternative was released in July 1999. (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007)

Even with the city plans and reports complete, the debate continued on both sides of the issue. In November 1999, two competing propositions were placed on the ballot. Proposition J would repeal Proposition E and rebuild the elevated freeway. Proposition I would removed the freeway and replace with an at-grade boulevard. Proposition I passed and pro-freeway activist opted not to continue their opposition.

The funding for the removal of the Central Freeway was provided in part by \$40 million in federal Emergency Relief funds after the 1989 earthquake. Thirteen million dollars were used to remove the unstable portions of the Central freeway. The remaining \$27 million was available to complete the demolition. Emergency relief funds, proceeds from the sale of right-of ways and a local sales tax were administered by the San Francisco County Transportation Authority on the Central Freeway/ Octavia Boulevard Project. Construction costs are projected to be \$25 to \$35

million. (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, pp. 71-72).

Central Freeway Demolished- 2003

The Central Freeway was demolished in 2003 nearly 14 years after the 1989 earthquake (The Preservation Institute, 2007). North of Market Street, the freeway was replaced with an at-grade boulevard named Octavia Boulevard which opened in 2005 (Seattle Department of Transportation, 2008, p. 6C2). The “133 feet wide” boulevard has “four lanes for through traffic, a landscaped median and two service lanes for slower traffic and bicycles, separated from the through lanes by a landscaped median with a sidewalk” (The Preservation Institute, 2007). The Central Freeway was rebuilt south of Market Street, but the Market Street overpass was eliminated.



Source: Preservenet.com <http://www.preservenet.com/freeways/FreewaysCentral.html>

Figure 16 Market Street Post Central Freeway Demolition

There are plans for transit oriented developments including 750 to 900 housing units on the 7 acres of land released by the freeway demolition (Seattle Department of Transportation, 2008, p. 6C3). A new park is located at the northern end of the new boulevard and is named Patricia's Green in honor of the anti-freeway activist, Patricia Walkup, who died in 2006 (The Preservation Institute, 2007).

A Review of Necessary Conditions

Following the 1989 earthquake, the Central Freeway structure was declared structurally compromised and section of the freeway were demolished immediately following the earthquake and in 1996.

The window of opportunity to demolish the Central Freeway was the 1989 structural damage due to the earthquake. The partial demolitions provided momentum for the anti-freeway activist such as Walkup and Leavitt. These anti-freeway activists were countered by organized pro-freeway activist who also responded to the partial demolitions with desires to rebuild the freeway.

Ultimately the partial demolitions gave the Hayes Valley residents values other issues (i.e. economic development, quality of life, etc.) more than mobility. However, Caltrans and commuters valued mobility (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 120) These conflicting values were resolved at the ballot box by a series of competing propositions to remove or rebuild the freeway. In the end, the values of the Hayes Valley residents won at the ballot box and the freeway was demolished.

The power brokers such as the Mayor Willie Brown, the San Francisco Board of Supervisors and Caltrans had a role in implementing the will of the people. Members of the Board of Supervisors

tended to side with their constituents (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 120). The propositions that were put to a popular vote played a major role in determining the sentiment of these power brokers and directed them on how to proceed. Both sides, for and against, the freeway removal used the power of the vote to further their goals by way of community activist gathering signatures.

It is not clear if the business community's support was crucial to the demolition of the Central Freeway. The support for demolition was primarily the Hayes Valley neighborhood and its neighborhood leadership, Walkup and Leavitt.

The Hayes Valley neighborhood was lower income area with a higher percentage of minorities relative to the city as a whole (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 112). It was the commuters into the city that were largely in support of rebuilding the freeway.

The Central Freeway demolition was born of earthquake damage that forced a portion of the freeway to be demolished due structural integrity concerns. The proposal to remove the remaining freeway segment did not originate in the public sector but was spearheaded by neighborhood leaders. However, the public and elected officials responded to their constituents. The San Francisco Board of Supervisors "assumed responsibility for moving the decision – making process forward" (Napolitan, *Shifting Urban Priorities: Removal of Inner City Freeways in the United States*, 2007, p. 60). The Board of Supervisors created the CFPO and funded the conceptual design and preliminary engineering report for replacing Central Freeway with Octavia Boulevard.

The demolition of the Central Freeway sparked concerns about traffic congestion and gridlock. The city of San Francisco was able to “test” these concerns when the freeway was closed for the early demolitions. The predicted gridlock did not materialize.

The inadvertent way that traffic impacts were addressed was key to addressing the potential for negative freeway removal impacts. When the freeway was closed following the earthquake and no major traffic gridlock occurred, the need for mitigation of traffic concerns was minimized.

The Central Freeway was originated on the local level and had no significant regard for national purposes.

The Central freeway demolition and surface boulevard construction is estimated to cost between 25 and 35 million dollars. No significant escalation of cost occurred over the life of the project.

Table 3 Summary of Necessary Conditions for Selected Case Cities

Location - City, State	New Orleans, LA	Boston, MA	Milwaukee, WI	Oakland, CA	San Francisco, CA	San Francisco, CA
Name of Freeway	Claiborne Ave Expressway	Central Artery/Tunnel	Park East Freeway	Cypress Freeway	Embarcadero Freeway	Central Freeway
Interstate Designation	I-10	I-93	I-43	I-880	I-480	I-80 Spur
Year Built/ Opened to Traffic	1968	1959	1971	1957	1959	1959
Year Demolished/ Removed	????	2004	2002	1989	1991	2003
Age of Freeway when Demolished (yrs.)	41 (as of 2009)	43	31	32	32	44
Integrity and Safety Concerns?	No	Yes	Yes	Yes	Yes	Yes
Window of Opportunity?	Yes	Yes	Yes	Yes	Yes	Yes
Decreased Value of Mobility?	Yes	No	Yes	No	Yes	Yes
Power Brokers Value of Freeway Less than other Benefits?	No	No	Yes	Yes	Yes	Yes
Support of Business Enterprises?	No	Yes	Yes	Yes	Yes	NA
Public Entrepreneurship?	No	Yes	Yes	No	Yes	No
“Do No Harm” Principle?	Yes	Yes	Yes	Yes	Yes	Yes
“Mitigated” Negative Impacts?	Yes	Yes	Yes	Yes	Yes	Yes
“Bottom-Up Federalism”?	Yes	Yes	Yes	Yes	Yes.	Yes

Chapter 12 Analysis and Comparison of Cases to New Orleans I-10 Claiborne Expressway

Cross Case Analysis of Necessary Conditions

The proposal to demolish, replace or remove the elevated I-10 Claiborne Expressway is a very complex decision that would require a number of years to complete based on the experiences of other cities. The future of this structure is an issue that will eventually need to be addressed as the structure continues to age and planning with the force of law raise awareness of the desires of the affected communities.

The elevated I-10 structure was constructed in the late 1960s, a time before the passage of such legislation as NEPA (1969), the Clean Air Act (1970), and Executive Orders 12898 (1994) that legally mandates the consideration and input of affected citizens. When the I-10 Claiborne Expressway was constructed, the social and political climate of the United States did not allow the predominantly African-American areas affected to have a voice in the decision making process for the interstate structure. Nor were the impacts to these communities considered to any great extent.

Some support the dismantling, removal or demolition of the elevated structure as reparations of sort for the many years that the affected minority community has endured the dis-amenity of the interstate highway. The draft New Orleans Master Plan states that “removal would right a decades old wrong committed in the name of urban renewal.” (Goody Clancy, Camiros Ltd, GCR Inc, Maning Architects , 2009, p. 11.24) Most all planners, residents and stakeholders agree that a necessary first step in the decision making process would involve feasibility-type studies to further explore the possibilities for the future fate of the I-10 Claiborne Expressway.

In this research, I have presented five case cities that have completed an elevated freeway removal for a segment of the interstate system. The intent of these cases is to allow for a multiple case, cross case analysis of how the decision making process for the I-10 Claiborne Expressway case is progressing compared to the experiences of the case cities that have completed a freeway removal or demolition. The hope is that this information will inform the ongoing process no matter the outcome.

The following sections are a summary of the salient points for each of the “necessary conditions” that were reviewed for all of the case cities including New Orleans I-10 Claiborne Ave. These points are summarized in Table 3. An expanded version of Table 3 is included in Appendix 2.

Integrity and Safety

The necessary condition of integrity and safety is consistently present in all five of the case cities that have demolished elevated interstate segments. The three cases in San Francisco and Oakland California were all brought to the fore by damage from the 1989 Loma Prieta earthquake. The earthquake forced the power brokers and the citizens to re-evaluate the need for the expressway in a formal manner.

The Boston Central Artery project was an issue of safety concerns as the Central Artery was designed to carry 75,000 vehicles per day, but was carrying 2 to 3 times its design capacity. Thus, the traffic congestion in the Boston area was said to be the worst in the nation. The Park East freeway was an aging structure (31 years old) in need of \$80 million dollars in repairs.

The New Orleans I-10 Claiborne Ave. structure has not been identified as being in need of significant repairs nor any other safety concerns based on the TIP and other published planning documents.

Window of Opportunity

All five of the case cities were provided a definitive window of opportunity. In San Francisco and Oakland cases it was again the earthquake damage. In Milwaukee, it was the tenure of a very determined mayor. In the Boston case, it was the inclusion of the project in the interstate cost estimate (ICE) program that guaranteed federal funding until the project was complete. This combined with strong representation by the powerful Congressman Thomas Tip O'Neill was a huge advantage for the CA/T project in Boston.

The 2005 damage from Hurricane Katrina appears to have ushered in a new era of thinking for the citizens of New Orleans. The post-Katrina planning regularly expressed a desire to begin study of the proposal to demolish the elevated structure. The post Katrina planning and rebuilding seems to have been a catalytic event much like the San Francisco earthquakes.

Although the I-10 Claiborne Expressway structure was not directly damaged by the hurricane, a window of opportunity for rethinking the status-quo emerged from the post-Katrina community planning. All demolition proposals originated after the 2005 hurricane and appear to have gained momentum as evidenced by the newspaper articles and websites that have written on the subject. It appears that the rebuilding post-Katrina has generated the idea and the Master Plan with the force of law will mandate further inquiry. However, the extent of resources, support and funding that the idea will get in the future remains unknown.

Decreased Value of Mobility

In the Oakland and Boston cases, there do not appear to be any decrease in the value of mobility as the freeway capacity was moved to a tunnel or shifted to another area of the city. The Milwaukee Park East and the San Francisco Embarcadero and Central freeways all demolished and replaced with as lower capacity at-grade boulevards.

The current proposals in New Orleans appears to represent a decrease in the value of mobility as they do not include relocating the freeway capacity, but suggest that the traffic be dispersed to the street grid and other local interstate segments with some modifications.

Power Brokers Value Freeways Less than other Benefits

In all cases except the Boston and Oakland cases, the power brokers wanted the freeway removed to enhance the quality of life of the residents in the area. In San Francisco cases and Milwaukee, there were no plans to restore the freeway capacity in another location of the city.

However, in the Boston case, the freeway was replaced with a freeway tunnel through the city to maintain its growing level of high speed commutes. Similarly, the compromise in Oakland was to relocate the freeway in the industrial area of West Oakland as opposed to the residential area of the city, but still maintain the high level of commuters. It should be noted in both cases that issues related to quality of life, economic development and the environment were addressed.

Both Boston and Oakland created development plans for the parcels of land that were released in the former freeway corridor, thus it is not clear that the value of freeways in Boston and Oakland, was less than other benefits. One might argue that they were equally valued by the powers brokers.

In the New Orleans case, the value of freeways does not appear to be diminished by the powers that be. The freeway removal advocate Bill Borah's commented that "People looked at me like I was crazy." when he mentioned removal of the I-10 Claiborne Ave (Webster, 2009). Thus, it does not appear that the powers that be have fully embraced the idea and are definitely not publicly vocal in support of it. Most opponents of the idea will cite predictions of major traffic congestion as their primary justification. In the San Francisco cases, the predictions of gridlock never materialize during the periods when the freeways were out of service due to earthquake damage. In the Milwaukee, traffic studies eased the concerns regarding gridlock and garnered support of the removal project.

Support of Business Enterprise

Generally, after formal studies or directed persuasion from the powers that be, the business community was actively in support of the freeway removal proposal in Boston, Milwaukee, Oakland and San Francisco Embarcadero. In the Central freeway case, the public was a strong force in the decision making process with Hayes Valley neighborhood leadership. A large role of the business community is not evident. In the Embarcadero case, the Chinatown merchants were vocal in opposition of the demolition.

In the New Orleans case, the support of the business community is not clearly established. To date, there has been little documented public support of the idea from the business community except some support from professionals in the planning community. Absent the inadvertent freeway outages from the San Francisco earthquakes, the detailed traffic studies in Milwaukee were instrumental in garnering the support of the business community. In the New Orleans

case, detailed traffic studies would need to be conducted to garner support from the business community.

Public Entrepreneurship

The theory that most large projects are conceived by public agencies and “sold” to the larger public constituents is evident in three of the five cases. In the Boston, Milwaukee and San Francisco Embarcadero cases influential public officials such as the mayor, the state transportation director and Board of Supervisors. In the Oakland Cypress Freeway and the San Francisco Central freeway cases, the removal idea was largely the imagining of the people of the area. The idea gained momentum and was sold to the public agencies and power structure. In the Oakland case, the people had the early support of influential leaders such as a former transit director, a port executive and a former mayor.

In the New Orleans case, support of public officials has not been vocal or documented outside the planning profession and freeway removal advocates like Mr. Borah, who was actively involved in the defeat of the Riverfront Expressway proposal in the 1960s.

Do No Harm Principle

In every case, the demolition proposal proceeded with a commitment to do no harm to the affected areas and to provide enhancements such as the taking of no homes in Boston, job training programs in Oakland, or addressing predicted traffic congestion and gridlock in San Francisco.

Early in the process, the New Orleans proposal has identified potential impacts in the area of the Pontchartrain Expressway and surface streets that will absorb the rerouted traffic. The initial proposals have committed to minimizing and mitigating any negative impacts due to the anticipated modifications of these infrastructure elements.

Mitigated Negative Impacts

Again, all removal cases included mitigation elements in the demolition proposal. These included redevelopment plans for the parcels released from the freeway corridor and traffic impact studies. The Boston project dedicated nearly a third of its budget to mitigation agreements.

The New Orleans case has acknowledged the potential traffic impacts and the reparations to historical areas that have been negatively impacted by the elevated structure for over 40 years.

Bottom Up Federalism

All projects appear to display “bottom up” federalism whereby projects are undertaken for local purposes but are funded in large part with federal monies. None of the freeway removal cases inclusive of the New Orleans case have any major national significance other than interstate transport. These projects were largely the result of local initiatives and discretion on how the transit in their cities would be developed or redevelop in accordance to federal program rules. There was no major national significance to any of the projects beyond their inclusion in the interstate highway system and their eligibility for federal transportation funding.

Limitations of this Research and Suggestions for Further Research

This research is limited in a number of ways. The proposals for the removal of the I-10 Claiborne Expressway are new and continually evolving. There are only a few cities that have completed the demolition or removal of an elevated expressway segment. However, there are several cities that are considering the freeway removal option. Additional research, comparing the New Orleans decision making process to the current processes in cities such as Akron, OH, Baltimore, MD; Nashville, TN; Rochester, NY; Seattle, WA; and Trenton, NJ have planned or proposed freeway removals (The Preservation Institute, 2008)

Because freeway removal is a new concept and cases are limited, I chose to focus this research on a comparison of I-10 Claiborne Ave to cities that have completed a freeway removal.

However, the Napolitan research identified the Whitehurst freeway in Detroit as a city that decided not to remove an expressway after serious consideration of the option (Napolitan & Zegras, *Shifting Priorities? Removal of Inner City Freeways in the United States*, 2008).

Additional, research on failed attempts to remove an expressway might be warranted.

The impact of the Master Plan recommendations and the charter change that gives it the force of law are not fully known. The Master Plan is expected to be sent to the New Orleans City Council for approval in November of 2009. If approved the elements of the Master Plan are enforceable by law; thus it would seem that further study of the removal option would be forthcoming, when funding is identified. The additional research would need to evaluate traffic modeling and impacts, anticipated cost of future maintenance of the structure, benefits of maintaining the structure and viable alternatives to the removal option.

Post Katrina, the population of New Orleans declined rapidly from 484,674 before the storm to 311,853 in July of 2008 (U.S Census Bureau News, 2009). Similarly, the traffic counts for the I-10 Claiborne Ave. decreased from over 100,000 vehicles per day pre-Katrina to about 60,000 vehicles per day. Traffic studies would need to be conducted to determine the roadway capacity needed for the projected population growths for New Orleans.

This research did not address cost implications of the case cities compared to the I-10 Claiborne Ave. as cost projections would be difficult given the scope of this research and the limited details regarding the proposed removal options. A detailed study of the cost versus benefits of the I-10 structure would be a factor in deciding whether the structure should remain in place or be demolished. Potential funding sources would need to be identified particularly because transportation plans that allocate funding are fiscally constrained.

Chapter 13 Conclusions

In conclusion, the necessary conditions for this research were compiled from relevant theory on large public projects (i.e. mega projects) and freeway removals. These conditions are

- Integrity and safety concerns
- A Window of Opportunity
- Decreased Value of Mobility
- Power Brokers Value Freeways Less and Other Benefits More
- Support of Business Community
- Public Entrepreneurship
- Do No Harm Principle
- Mitigation of Negative Impacts
- Bottom Up Federalism

All conditions were present in the majority of the selected case cities and were unanimously consistent across all cases for some conditions (See Table 3). Thus, these conditions, extracted from the relevant literature, appear to have applicability to my research question regarding the conditions necessary to reach a decision to remove an elevated expressway in an urban area.

The current decision making process for the New Orleans I-10 Claiborne Expressway generally complies with the necessary conditions in a manner similar to the case cities. This suggests that further inquiry of the removal option is warranted. The necessary conditions that are not yet evident in New Orleans are 1) definitive integrity and safety concerns for the structure, 2) power

brokers value of freeways reduced, 3) documented support from business interest and 4) public entrepreneurship. These conditions were present in the majority of the removal case cities.

The condition of a defined concern for the integrity and safety of the elevated structure is common to all removal case cities, but is not present in the New Orleans case. In the Milwaukee case, it was more economical to demolish the underutilized spur than to perform the required maintenance. In the San Francisco and Oakland cases, earthquake damage forced a discussion of the future of the expressway. In Boston, severe traffic concerns from exceeding roadway capacity were the justification for a review of alternatives. Based on this unanimous consensus in all cases, integrity and safety concerns must be identified for the I-10 Claiborne Expressway removal proposal to obtain further consideration.

The condition of power brokers value of freeways is not present in the Boston case but is evident in all other cases. The grand scale of the Boston case may render it an exception to the “typical” freeway removal case. Based on the other cases, the I-10 Claiborne Expressway removal decision would more likely be implemented with support of a decreased value for freeways and an increase in the value of economic development potential of the area.

The condition of support from the business community is present in all cases, but is not clear in the San Francisco Central Freeway case where multiple ballot box initiatives prevailed in implementing the will of the people. Active solicitation of the support of the business community bolstered by traffic and mitigation studies, job training and contracting opportunities for local business were instrumental in the case cities of Boston, Milwaukee, San Francisco Embarcadero and Oakland. The business community does not appear to be vocal in its support of the I-10 Claiborne Expressway. The I-10 Claiborne Expressway proposal would need to

emulate these efforts with the business community to receive serious consideration of the idea to remove the elevated structure. The Master Plan with the force of law, if approved in November 2009 could provide a legal instrument similar to the ballot box initiatives in the San Francisco Central Freeway case.

The condition of public entrepreneurship where a project is conceived by public agencies or elected officials and “sold” to the constituents is not evident in two of the five cases, Oakland Cypress Freeway and San Francisco Central Freeway. This condition is also not present in New Orleans as the idea for removal of the I-10 Claiborne Expressway appears to have originated by the people of the area during their participation in the planning process. This may have implications for further research as the Oakland Cypress Freeway and the San Francisco Central Freeway are located in areas with large populations of minorities and poor people similar to the city of New Orleans. The persistent efforts of neighborhood leaders, constituents and residents have resulted in removal of elevated freeway structures.

The I-10 Claiborne Expressway is proceeding according to the identified necessary conditions with the exception of the four conditions described above. The process must address these conditions and continue to advance compliance with the conditions that are appear to be evident at this stage in the decision making process.

Based on the findings in this research, the I-10 Claiborne Expressway removal proposal has the potential to become a viable option for the future of the elevated structure. Compliance with the missing necessary conditions will be critical to the advancement of the removal alternative particularly the commitment of the business community and the values of local power brokers. The I-10 Claiborne Expressway case must also quantify the safety and integrity concerns that

would justify the removal option. A fully functioning interstate is not likely to be removed without evidence that the cost of maintaining the structure exceeding the benefit of the structure. All removal proposals request that a feasibility study be conducted as a first step in the process. These studies will generate the data and information regarding the traffic impacts, cost versus benefits, and economic development potential of the removal alternative for the aging structure. Technical reports and studies were instrumental in obtaining the support of the business community and when combined with community support offers a broad base support for the removal alternative. The environmental justice and socio-economic impacts must be clearly established in the context of the NEPA legislation and Executive Order No. 12898 and other legislation that is protective of minority and low income populations.

Finally, the I-10 Claiborne Expressway removal will be a lengthy process based on the experiences of other cities. However, the decision making process will need to give serious consideration to the removal alternative in any decisions involving future funding for maintaining the aging elevated expressway. This sentiment is clearly expressed by Dr. Wright when she stated, “Who would not want that big ugly thing down!” and she further states that many issues such as gentrification, and traffic impacts will need to be addressed in the process (Wright, Director Deep South Center for Environmental Justice, 2009).

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Appendix 1 Glossary of Terms

Keyword	Acronym	Definition
American Association of State Highway and Transportation Officials	AASHTO	A nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail, and water. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system.
at-grade boulevard		A boulevard that is not elevated.
Average Annual Daily Traffic	AADT	The total volume of traffic on a highway segment for one year, divided by the number of days in the year. (Federal Highway Administration)
Central Artery/ Tunnel Project	CA/T	The comprehensive project to replace the elevated central artery (Interstate 93) with a below grade tunnel. Also included several other major projects and is known as the “Big Dig”
Clean Air Act Amendments of 1990	CAAA	The original Clean Air Act was passed in 1963, but the national air pollution control program is actually based on the 1970 version of the law. The 1990 Clean Air Act Amendments are the most far-reaching revisions of the 1970 law. The 1990 Clean Air Act is the most recent version of the 1970 version of the law. The 1990 amendments made major changes in the Clean Air Act. (Federal Highway Administration)
Congress of New Urbanism	CNU	Chicago based, national organization that promotes walkable neighborhoods. (Cohen, 2008)
deconstruction		Removal by demolition or dismantling of a roadway segment.
elevated expressway		An expressway that is suspended above grade with a clearance suitable for passage of traffic and pedestrians underneath.

Keyword	Acronym	Definition
environmental impact statement	EIS	A development review document required of federal projects under the National Environmental Policy Act to assess potential environmental impacts. (Daniels, 2003, p. 457)
environmental justice		Ensuring that the effects of transportation planning and projects are appropriately and fairly spread throughout the communities of all people who live in and visit an area. (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 163)
Equity		Derived from a concept of social justice. It represents a belief that there basic needs that should be fulfilled; that burdens and rewards should not be spread to divergently across the community, and that policy should be directed with impartiality, fairness and justice towards those ends. (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 164)
Executive Order No. 12898		Order signed by President Clinton on February 11, 1994. Requires federal agencies to the greatest extent practicable and as permitted by law, to achieve environmental justice by identifying and addressing disproportionately high and adverse human health and environmental effects, including interrelated social and economic effects, of their programs, policies, and activities on minority and low income populations. (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 80)
Expressway		A controlled access, divided arterial highway for through traffic, the intersections of which are usually separated from other roadways by differing grades. (Federal Highway Administration)
Federal Highway Administration	FHWA	a major agency of the U.S. Department of Transportation (DOT). As a cabinet-level organization of the Executive Branch of the U.S. Government, the DOT is led by a presidential appointee-the Secretary of Transportation. The top-level official at FHWA is the Administrator, who reports directly to the Secretary of Transportation. FHWA is headquartered in Washington, DC, with field offices in every State, the District of Columbia, and Puerto Rico. FHWA is charged with the broad responsibility of ensuring that America's roads and highways continue to be the safest and most technologically up-to-date. (Federal Highway Administration)

Keyword	Acronym	Definition
freeway		A limited-access roadway free of such obstructions as traffic lights and railroad closings. The term may also refer to toll -free highway, but some freeways do charge motorists, making some freeways toll-ways. (McNichol, 2003, p. 66)
freeway		A divided arterial highway designed for the unimpeded flow of large traffic volumes. Access to a freeway is rigorously controlled and intersection grade separations are required. (Federal Highway Administration)
freeway air pollution shed	FAPS	A 330 feet buffer from roadways with a minimum of 100,000 vehicles per day. (Bae, Sandlin, & Bassok, 2007)
gentrification		White higher-income people moving into predominantly minority and lower-income neighborhoods, fixing up houses, and driving minorities and lower-income people out because of rising housing prices. New businesses that cater to the new population often follow. (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 166)
highway		Is any road, street, parkway, or freeway/expressway that includes rights-of-way, bridges, railroad-highway crossings, tunnels, drainage structures, signs, guardrail, and protective structures in connection with highways. The highway further includes that portion of any interstate or international bridge or tunnel and the approaches thereto (23 U.S.C. 101a). (Federal Highway Administration)
induced demand		Additions to highways that cause travel to increase. (Parthasarathi, Levinson, & Karamalapati, 2003, p. 1135)
Intermodal Surface Transportation Efficiency Act (1991)	ISTEA	Established regional transportation planning through Metropolitan Planning Organizations. Provided \$155 billion in transportation funding. (Daniels, 2003, p. 459)
interstate highway (freeway or expressway)		A divided arterial highway for through traffic with full or partial control of access and grade separations at major intersections. (Federal Highway Administration)
interstate highway system		The system of highways that connects the principal metropolitan areas, cities, and industrial centers of the United States. Also connects the US to internationally significant routes in Canada and Mexico.

Keyword	Acronym	Definition
Lambert Plan		The New Orleans Neighborhoods Rebuilding Plan (NOLANRP), but is commonly given the eponymous title the “Lambert Plan”. The funding for this process came from \$2.9 million in leftover CDBG funds for an earlier, pre-Katrina project. Miami-based housing consultant Paul Lambert and Sheila Danzey of New Orleans drew up plans for 46 Orleans Parish neighborhoods that were significantly flooded by Katrina. (NOLAPLans.com, 2006)
mega-project		initiatives that are physical, very expensive, and public. More specifically, mega-projects involve the creation of structures, equipment, prepared development sites, or some combination thereof. They cost at least \$250 million in inflation-adjusted year 2002 dollars. . . . Mega-projects are a fundamentally an expression of public authority. (Altshuler & Luberoff, 2003, p. 2)
metropolitan planning organization	MPO	1) Regional policy body, required in urbanized areas with populations over 50,000, and designated by local officials and the governor of the state. Responsible in cooperation with the state and other transportation providers for carrying out the metropolitan transportation planning requirements of federal highway and transit legislation. 2) Formed in cooperation with the state, develops transportation plans and programs for the metropolitan area. For each urbanized area, a Metropolitan Planning Organization (MPO) must be designated by agreement between the Governor and local units of government representing 75% of the affected population (in the metropolitan area), including the central cities or cities as defined by the Bureau of the Census, or in accordance with procedures established by applicable State or local law (23 U.S.C. 134(b)(1)/Federal Transit Act of 1991 Sec. 8(b)(1)). (Federal Highway Administration)
Metropolitan Transportation Plan	MTP	The official intermodal transportation plan that is developed and adopted through the metropolitan transportation planning process for the metropolitan planning area, in accordance with 23 U.S.C. 134, 23 USC 135 and 49 U.S.C. 5303. (Federal Highway Administration)

Keyword	Acronym	Definition
mitigation		Making changes to a transportation project that will correct, eliminate, or alleviate aspects that have disproportionate adverse effects on protected demographic groups or communities. (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 184)
National Environmental Policy Act	NEPA	Established a national environmental policy requiring that any project using federal funding or requiring federal approval, including transportation projects, examine the effects of proposed and alternative choices on the environment before a federal decision is made. (Federal Highway Administration)
neutral ground		Local phrase used in New Orleans to refer to the median in a roadway.
new urbanism		a set of neotraditional design and development principles featuring a human scale, walkability, mass transit, greenspace, attractive buildings and neighborhoods. (Daniels, 2003, p. 461)
“no-build” alternative		
reduced demand		Removal of freeways causing a reduction in traffic demand or “traffic evaporation” (Siegel, 2007)
Regional Planning Commission	RPC	The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes, is a 26-member board of local elected officials and citizen members, appointed to represent on regional issues. The RPC is the legal entity mandated to promote the general welfare and prosperity of the entire region. The RPC was created in 1962 by the Louisiana state legislature and local governing body authorization. The RPC is one of eight regional planning bodies in the state established to fulfill federal and state requirements for regional comprehensive and economic development planning. The RPC is the metropolitan planning organization for the region. (New Orleans Regional Planning Commission, 2009)

Keyword	Acronym	Definition
Regional Transportation Plan	RTP	A 20-year plan drafted by a Metropolitan Planning Organization that must be consistent with both the state transportation improvement plan and state air quality improvement plan. (Daniels, 2003, p. 462)
Expressway removal		To demolish or remove a highway from its current location without rebuilding in the same location.
Safe Accountable Flexible and Efficient Transportation Equity Act - A Legacy for Users	SAFETE A-LU	Legislation approved by the US Congress in 1005, renewing the nation's highway and public transportation laws at a cost of \$286 billion over six years. (Sanchez, Brennan, Ma, & Stoltz, 2007, p. 88)
smart growth		A set of planning design principles, regulations, and financial incentives intended to combat sprawl by promoting more compact development and preserving farmlands, forestlands, and natural areas. (Federal Highway Administration)
sustainability		durable; a manageable condition over the long run. (Daniels, 2003, p. 463)
transportation enhancement activities	TE	Provides funds to the States for safe bicycle and pedestrian facilities, scenic routes, beautification, restoring historic buildings, renovating streetscapes, or providing transportation museums and visitors centers. 23 U.S.C. 101(a) and 133(b)(8). (Federal Highway Administration)
Transportation Equity Act of the 21st Century (1997)	TEA-21	An act that provided more than \$200 billion in federal transportation funding. (Daniels, 2003, p. 461)
Transportation Improvement Plan	TIP	A three-year plan, which is essentially an update of the Regional Transportation Plan, required under the Intermodal Surface Transportation Efficiency Act. (Daniels, 2003, p. 464)
Unified New Orleans Plan	UNOP	A fourth planning process (post-Katrina) designed to avoid the pitfalls of ESF-14, the Mayor's already stymied BNOB, and the Lambert Plan. (NOLAPlans.com, 2007)

Keyword	Acronym	Definition
Unified Planning Work Program	UPWP	A document that describes all federally funded transportation studies being conducted within the greater New Orleans Transportation Study Area during the fiscal year period from July 1 to June 30 (Regional Planning Commission UPWP, 2008)
United States Department of Transportation	USDOT	Establishes the nation's overall transportation policy. Under its umbrella there are ten administrations whose jurisdictions include highway planning, development and construction; urban mass transit; railroads; aviation; and the safety of waterways, ports, highways, and oil and gas pipelines. The Department of Transportation (DOT) was established by act of October 15, 1966, as amended (49 U.S.C. 102 and 102 note), "to assure the coordinated, effective administration of the transportation programs of the Federal Government" and to develop "national transportation policies and programs conducive to the provision of fast, safe, efficient, and convenient transportation at the lowest cost consistent therewith." (Federal Highway Administration)
urbanized areas	UZAs	Area that contains a city of 50,000 or more population plus incorporated surrounding areas meeting size or density criteria as defined by the U.S. Census. (Federal Highway Administration)

Appendix 2 Summary of Necessary Conditions (Expanded Table 3)

Location - City, State	New Orleans, LA	Boston, MA	Milwaukee, WI	Oakland, CA	San Francisco, CA	San Francisco, CA
Name of Freeway	Claiborne Ave Expressway	Central Artery/Tunnel	Park East Freeway	Cypress Freeway	Embarcadero Freeway	Central Freeway
Interstate Designation	I-10	I-93	I-43	I-880	I-480	I-80 Spur
Year Built/ Opened to Traffic	1968	1959	1971	1957	1959	1959
Year Demolished/ Removed	????	2004	2002	1989	1991	2003
Age of Freeway when Demolished (yrs.)	41 (as of 2009)	43	31	32	32	44
Integrity and Safety Concerns?	No. Imminent integrity and safety concerns not present.	Yes. Traffic congestion and accident data. Exceeded design capacity.	Yes. Aging structure. Needed \$80 million in repairs. No imminent concerns.	Yes. Damaged by earthquake	Yes. Damaged by earthquake	Yes. Damaged by earthquake
Window of Opportunity?	Yes. Post Hurricane Katrina proposal appears among new era of hope.	Yes. Generous interstate funding. Inclusion in ICE guaranteed federal funding that no longer exists.	Yes. Tenure of Mayor Norquist.	Yes. Earthquake	Yes. Earthquake	Yes. Earthquake
Decreased Value of Mobility?	Yes. Demolition proposal will not replace the I-10 in another location. Although, will need to expand Pontchartrain Expwy.	No. No decrease in value of mobility. Increased interstate capacity.	Yes. Mayor & others wanted economic growth and downtown revitalized.	No. The freeway replaced. No decreased value of mobility.	Yes. Freeway replaced with multi-modal boulevard.	Yes. Partial demolition after quake empowered residents with value other issues such as economic development and quality of life.

Location - City, State	New Orleans, LA	Boston, MA	Milwaukee, WI	Oakland, CA	San Francisco, CA	San Francisco, CA
Name of Freeway	Claiborne Ave Expressway	Central Artery/Tunnel	Park East Freeway	Cypress Freeway	Embarcadero Freeway	Central Freeway
Power Brokers Value of Freeway Less than other Benefits?	No. Power brokers are not driving this effort. Idea appears to be driven by public and planning community.	No. Freeway replaced with larger underground structure.	Yes. Mayor & others lead effort fueled by positive outcomes in other city that removed freeways.	Yes. Freeway rerouted to more industrial area to allow for other uses and benefits to community.	Yes. Value of waterfront & its economic potential.	Yes. Power brokers valued will of people who began to value issues other than mobility.
Support of Business Enterprises?	No. Business leaders not currently promoting the demolition idea.	Yes, Salvucci sold idea to businesses.	Yes. Business community supported idea after report concluded minimal negative traffic impacts expected.	Yes. Local business community awarded contracts and direct access to Port.	Yes. Except Chinatown merchants who wanted to keep the freeway.	NA. Walkup, Leavitt & Hayes Valley Area supported demolition. Role of business community not as clearly defined.
Public Entrepreneurship?	No. Community planning originated removal idea. Not officially supported or spearheaded by public entities.	Yes, Idea conceived by public officials and sold to constituents.	Yes. Idea conceived by public officials and sold to constituents.	No. Community organized immediately forced public entity to consider alternatives.	Yes. Public officials supported demolition as early as 1985, but citizens rejected at ballot box.	No. Idea spearheaded by neighborhood leaders.
“Do No Harm” Principle?	Yes. All proposals identify need to minimize impacts to communities in area of rerouted traffic.	Yes, Committed to no homes displaced and kept city open during construction years.	Yes. Traffic was major concern. Two studies showed impacts to be minimal.	Yes. Job training and other economic benefits to local community.	Yes. Freeway closure due to earthquake inadvertently answered congestion concerns. No gridlock occurred.	Yes. Freeway closure due to earthquake inadvertently answered congestion concerns. No gridlock occurred.

Location - City, State	New Orleans, LA	Boston, MA	Milwaukee, WI	Oakland, CA	San Francisco, CA	San Francisco, CA
Name of Freeway	Claiborne Ave Expressway	Central Artery/Tunnel	Park East Freeway	Cypress Freeway	Embarcadero Freeway	Central Freeway
“Mitigated” Negative Impacts?	Yes. All proposals acknowledge the need to consider the impacts to communities affected by traffic reroute as well as reparations to historical areas impacted by original I-10 structure.	Yes. Mitigation agreements were nearly one-third of project budget.	Yes. EIS and other studies found impacts minimal.	Yes. New industrial alignment. Replaced with Mandela Parkway to mitigate years of negative impacts to the minority community.	Yes. Major traffic impacts did not occur when freeway was out of service. No additional mitigation needed. Removal option most economical option.	Yes. Major traffic impacts did not occur when freeway was out of service. No additional mitigation needed.
“Bottom-Up Federalism”?	Yes, the project was of no national significance.	Yes, the project was of no national significance.	Yes, the project was of no national significance.	Yes, the project was of no national significance.	Yes, the project was of no national significance.	Yes, the project was of no national significance.

Vita

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