Crosstown Boulevard
Indirect and Cumulative Effects Technical Memorandum

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August 2014

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Summary of Findings

The indirect and cumulative impacts to land use/development, environmental justice populations, historic districts, and visual character were evaluated for the Crosstown Boulevard in accordance with guidance from the Federal Highway Administration (FHWA) and the Council on Environmental Quality (CEQ). These impacts consider the residual effects, and potential benefits, that would occur outside of the project right-of-way. The area of influence for this analysis was the defined study area. The Crosstown Boulevard is located an urbanized area with predominantly industrial and commercial land uses. Because of its location, this project would not disturb or intersect any natural resources such as wetlands, waters of the United States, and floodplains.

The Metropolitan Area Projects (MAPS) 3 is a capital investment program, created by Oklahoma City, to fund infrastructure improvements that will target redevelopment and revitalize the quality of life throughout downtown, including the area known as Core to Shore. The *Core to Shore Plan: A Redevelopment Framework* (Core to Shore) (Oklahoma City 2008) envisions the Crosstown Boulevard as a "world-class, pedestrian-friendly boulevard." A large portion of the Core to Shore planning area is located within the study area, and the Crosstown Boulevard should provide necessary access and related improvements that accommodate current and planned development.

The study area extends from Pennsylvania Avenue to Byers Avenue. The West Connection is the portion of the study area between Pennsylvania Avenue and Western Avenue, and is the same for all of the alternatives. The East Connection begins at E.K. Gaylord Boulevard where the Crosstown Boulevard would extend east, going under the BNSF Railway and connects to ramps for the new I-40 Crosstown Expressway at approximately Byers Avenue. The East Connection portion of the Crosstown Boulevard is the same for all of the alternatives.

Unless otherwise noted, the evaluation of Alternatives A, B, C, and D used the same methodology. Alternative A was the concept approved in the Record of Decision issued in 2002. For the Environmental Assessment, Alternative A represents the baseline conditions and the remaining alternatives (A, B, and C) were compared to this baseline.

This Crosstown Boulevard would not displace residents or commercial establishments because most of the build alternatives would occur primarily within the existing transportation right-of-way. As such, the Crosstown Boulevard involves similar transportation options as the historical usage. Therefore, there would be no disproportionate or adverse impacts to environmental justice populations within the study area.

The Crosstown Boulevard would support new land development consistent with the Core to Shore Plan and provide improved access for various transportation modes, including walking, bicycling, and transit use. Alternatives A, B, and C, acquire approximately 0.3 acre of land. The indirect impacts would make available an additional 17 to 27 (maximum) acres of right-of-way for potential land development.

The review of the alternatives indicated that the Crosstown Boulevard would not adversely affect historic resources. For the East Connection, the elevated BNSF railway is a contributing element of the Sante Fe Depot Historic District (listed on the National Register of Historic Places in 2013). The Crosstown Boulevard proposes to open a new underpass through the concrete between S. 4th Street and Reno Avenue. On June 13, 2014, the State Historic Preservation Office determined that the construction of the underpass for the Crosstown Boulevard would have no adverse effect on the Sante Fe Historic District.

For visual character, Alternatives A, B, and C is anticipated to have beneficial indirect and cumulative visual effects, while Alternative D would not be expected to have indirect or cumulative visual effects.

1.0 Introduction

The National Environmental Policy Act (NEPA) requires the assessment and disclosure of all reasonably foreseeable effects of transportation projects as part of the environmental analysis process. These effects include direct, indirect, and cumulative impacts. Cumulative impacts, according to 40 Code of Federal Register (CFR) 1580.7, refer to "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions." According to FHWA, a cumulative impact includes the total effect on a natural resource, ecosystem, or human community. Cumulative impacts include the total of all impacts to a particular resource that have occurred, are occurring, and would likely occur as a result from past, present, and future activities or actions of federal, non-federal, public, and private entities (FHWA 2006).

According to 40 CFR 1508.8, indirect impacts, or what also is known as secondary impacts, are project impacts that occur "later in time or farther removed in distance, but are still reasonably foreseeable." They can be viewed as actions often taken by others at a later time because of the presence of the proposed project. FHWA interprets indirect impacts as those impacts caused by another action or actions that have an established relationship or connection to the project (FHWA 2006).

The purpose of this document is to summarize the analysis of potential indirect and cumulative effects[1] associated with the transportation improvement along the Crosstown Boulevard. This includes an assessment of: (1) the economic development, land use, and socioeconomic effects of boulevard-style transportation, and (2) the potential benefits of future growth and economic development along with any adverse effects to local residents associated with long-term impacts from the implementation of the Crosstown Boulevard.

This analysis was developed in accordance with FHWA's *Interim Guidance: Questions and Answers Regarding Indirect and Cumulative Impact Considerations in the National Environmental Policy Act (NEPA) Process* (FHWA 2003) and the CEQ's *Considering Cumulative Effects under the National Environment Policy Act* (CEQ 1997).

This Indirect and Cumulative Impacts Technical Memorandum was developed to support the analysis completed for the Environmental Assessment for the Crosstown Boulevard. The main body of the Environmental Assessment will include a summary of this technical memorandum, and the full report will be included as an attachment.

[1] The terms "effect" and "impact" are used interchangeably in CEQ regulations.

1.1 Regulatory Context

The CEQ defines environmental effects as having three components (40 CFR 1500-1508): direct, indirect, and cumulative effects, as described in the following sections.

1.1.1 Directs Effects

Direct effects are those that are caused by the action and occur at the same time and place (40 CFR 1508.8).

1.1.2 Indirect Effects

Indirect effects are those that are caused by the action and occur later in time or are farther removed in distance but still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to changes in the pattern of land use, population density, or growth rate, as well as related effects on air, water, and other natural systems, including ecosystems (40 CFR 1508.8).

Unlike direct effects, indirect effects involve a chain of cause-and-effect relationships that develop over time and usually occur at a distance from the project location. This makes some indirect effects difficult to predict in a qualitative analysis. Potential indirect effects could include the following:

- Changes in development and land use resulting from improved access
- Increased storm-water runoff resulting from changes in land use and increased development on land surrounding the proposed facility
- Increased sedimentation of wetlands and streams and decreased water quality resulting from future development of land adjacent to the new facility
- Loss of wildlife habitat and decreased habitat value in areas of increased land development spurred by the proposed project
- Impacts to cultural resource sites from development projects on private properties that do not require cultural resource investigations because public funds or permits are not required
- Increased use of parks and recreational areas resulting from more convenient access provided by the new facility
- Stimulation of the local economy from the circulation of construction spending; improved access to employment opportunities, markets, goods, or services such as health and education; and an increased work force related to construction and development stemming from the new facility

1.1.3 Cumulative Effects

Cumulative effects are those impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other

actions. Cumulative impacts can result from individually minor but collectively significant actions occurring over a period of time (40 CFR 1508.7).

Cumulative effects are a result of a project's direct and indirect effects on a particular resource combined with past, present, and future effects of other activities on the resource. The resource can be natural (e.g., species or wetlands), cultural (e.g., archeological sites or historic districts), or social (e.g., community). The result of this analysis is to determine the future health of the resource when all known external factors, or reasonably foreseeable factors, are considered. Cumulative effects are defined as:

Baseline Condition (historical and current)	+	Future Effects (expected projects)	+	Project Impacts (direct and indirect)	=	Cumulative Effects

The key differences between direct, indirect, and cumulative impacts are highlighted in Table 1.

Table 1. Distinctions between Direct, Indirect, and Cumulative Effects

Type of Effect	Direct	Indirect	Cumulative
Nature of effect	Typical/inevitable/ predictable	Reasonably foreseeable/probable	Reasonably foreseeable/ probable
Cause of effect	Project	Project's direct and indirect effects	Project's direct and indirect effects and effects of other activities
Timing of effect	Project construction and implementation	At some future time other than direct effect	In the past, at time of project construction, or in the future
Location of effect	At the project location	Within boundaries of systems affected by the project	Within boundaries of systems affected by the project

Source: National Cooperative Highway Research Program (NCHRP) 1998

2.0 Methodology

The methodology for conducting the indirect and cumulative effects analysis was adapted from the following sources:

- NCHRP Report 466, *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (2002)
- NCHRP 25-25, Task 22, *Forecasting Indirect Land Use Effects of Transportation Projects* (2007)
- American Association of State Highway and Transportation Officials' Practitioner's Handbook, *Assessing Indirect Effects and Cumulative Impacts Under NEPA* (2011)

These guiding documents were selected based on their widespread use in statewide, regional, and local transportation projects. Table 2 describes the methodology for the Crosstown Boulevard project.

Table 2. Indirect and Cumulative Effects Methodology

Indirect Impacts	
Process/Step	Description
Define the study area	Include an area broad enough to encompass the project study area and the area in which the project could cause indirect impacts
Assess the potential for increased accessibility	Discuss the potential of the proposed project to increase accessibility
Assess the potential for induced growth	Discuss the potential of the proposed project to induce growth.
Assess the potential for impacts on sensitive resources	If location of induced growth is known, discuss the level of impact of the proposed project on sensitive resources
Assess potential minimization and mitigation measures	For NEPA compliance, identify and consider reasonable minimization and mitigation strategies

Cumulative Impacts	
Define the resource study area	Include a resource study area broad enough to encompass all potential cumulative impacts if more than one resource is identified
Describe resource conditions and trends	Discuss the health of the resource, current and historical
Summarize effects of the proposed action on key resources	Summarize direct and indirect impacts of the transportation improvement on each resource identified
Describe other actions and their effects on resources	Include other current or reasonably foreseeable projects that may impact the resource
Estimate combined effects on key resources	Discuss aggregate impact of resources based on reasonably foreseeable actions and incremental impacts (direct and indirect) of proposed project
Consider minimization and mitigation	Discuss potential strategies/recommendations for actions by other agencies to address cumulative impact

3.0 Results

3.1 Indirect Effects Analysis

3.1.1 Define the Study Area

Indirect effects differ from the direct effects associated with the construction and operation of the boulevard and would be caused by another action or actions that have an established relationship or connection to the project. The determination of the indirect effects on the area of influence (AOI) was based upon:

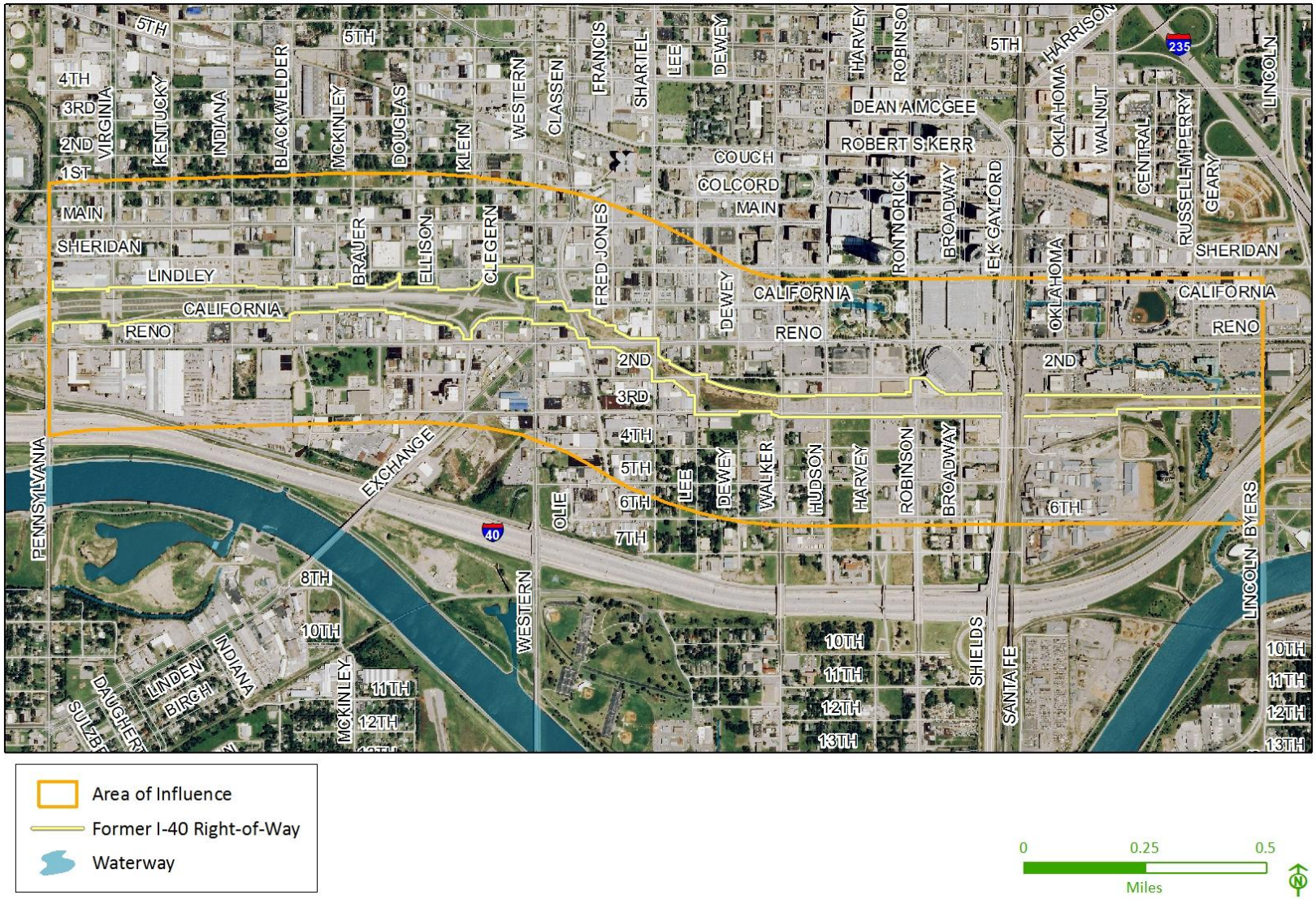
- The new location of the roadway and new access to currently developed properties, primarily within the central business district.
- The impact of other existing, parallel roadways—Main Street to the north and the existing I-40 to the south—in providing access to surrounding residences and businesses would be a factor in estimating the influence of improvements from the boulevard. In other words, the potential of Crosstown Boulevard to provide access to surrounding residences and businesses would be limited by the extent to which the parallel roadways provide similar access.

The AOI is the same as the study area, which extends from Pennsylvania Avenue to Lincoln Boulevard/Byers Avenue to account for any residual impacts beyond the proposed project right-of-way, which is predominately the old I-40 right-of-way. The AOI, shown in Figure 1, covers approximately 463 acres within and near the central business district of Oklahoma City (Association of Central Oklahoma Governments, 2010). The primary land use within the AOI is commercial and industrial uses, comprising approximately 328 acres or 71 percent of the study area (Table 3).

Table 3. Land Use—Area of Influence

Land Use	Area (Acres)	Percent of Total Area
Residential	71	15.3
Commercial/mixed use	189	40.8
Office center	18	3.9
Institutional	25	5.4
Industrial	139	30.0
Parks and open space	21	4.5
Total	463	-

Figure 1. Indirect and Cumulative Impacts Area of Influence



Area of Influence
Former I-40 Right-of-Way
Waterway

0 0.25 0.5
Miles

Indirect effects to environmental resources outside of the proposed boulevard could occur within the AOI. As a result, the indirect effects analysis requires an assessment of potential indirect effects of the project on the AOI's environmental resources.

Environmental resources generally include species or habitat, and valued, unique, unusual, or vulnerable elements of the environment or the human population, including children, the elderly, the disabled, or low-income or minority populations (NCHRP 2002). Based on this assessment and the heavily urbanized study area, the following features were included in the indirect effects analysis:

- Land use/development
- Environmental justice/low-income populations
- Historic districts
- Visual character

As documented below, each of the aforementioned resources plays a unique role in the social, historic, and economic contexts within the AOI.

3.1.2 Assess the Potential for Increased Accessibility

Accessibility through and within downtown, including the Core to Shore area, would increase with Alternatives A–C. Alternatives A–C would enhance mobility by providing an alternative east–west travel option relative to the existing interstate system. Alternative D would improve the local roadway network but would offer no additional access. Alternatives A–C would likely improve connectivity within neighborhoods in the study area and access to support existing businesses. The boulevard would improve overall transportation and circulation to and from the downtown core/central business district.

3.1.3 Assess the Potential for Induced Growth

Considerable growth is occurring near the AOI, primarily within the area identified as Core to Shore. Table 4 highlights local plans relevant to the AOI. Oklahoma City undertook the MAPS 3 initiative to bolster economic growth and improve the overall quality of life downtown. Under Alternatives A–D, the current development projects would continue as planned. Therefore, the build alternatives would not cause a change in the location, rate, type, or amount of growth resulting from current development plans and the buildup of the surrounding area.

Table 4. Local Plans within the Area of Influence

Resource	Description
Core to Shore Plan, 2008	*Plan Goals* • Develop a world-class design for a downtown boulevard to be developed along the existing I-40 alignment between Oklahoma and Walker Avenues • Transform the Core to Shore district from an underutilized and economically underperforming area into a powerful venue for economic growth • Create a dense, diverse urban residential community that provides residents with the opportunity to live near work places and walk to other amenities of urban life—recreation, open space, cultural resources, shopping, and entertainment • Connect the downtown core with the Oklahoma River shore through urban design features that are functional, productive, festive, and delightful to users • Mitigate the negative impacts of the new I-40 and minimize the highway's potential to divide the corridor • Take advantage of multiple modes of urban transit, including pedestrian and bicycle transportation, buses, and future fixed guideway transit • Establish land development concepts that complement rather than compete with existing downtown development • Identify appropriate financing options and implementation techniques to carry out the vision
OKC Plan 2000-2020	*Directions for Downtown* • Make downtown an attractive, desirable, and efficient center for business and regional entertainment and cultural activities • Focus the revitalization to support infrastructure (parking and parking management, streets, access, signage, green space, streetscaping, and other amenities and services) • Improve the downtown appearance *Actions for Downtown* • Create a Downtown Appearance Improvement Plan with a focus on property maintenance, streetscaping, increased open space, improved public spaces, litter control, and reduced surface parking lots. • Expand the Urban Design District to include all of downtown • Provide design features in new downtown developments that promote pedestrian activities, such as benches, trees, transit shelters, and plazas

Table 4. Local Plans within the Area of Influence

Resource	Description
OKC Plan 2000-2020	*Directions for Appearance Corridors* • Improve Oklahoma City's appearance and livability *Actions for Appearance Corridors* • Review sign regulations to enhance community appearance and ensure compatibility with other urban design elements while maintaining business viability • Enhance the appearance of major gateways into the city • Develop and implement a Tree Master Plan as a key element in the city's program to enhance the appearance of neighborhoods and business areas • Implement design requirements through appropriate changes to the development regulations of basic zoning districts
OKC Plan 2000-2020	*Directions for Community Appearance* • Improve design of city-constructed projects, bridges, and roadways to enhance aesthetics and landscaping by requiring design review by a citizen/professional committee of the aesthetics of all public projects • Require landscaping for public and private improvements with on-going requirements for maintenance, watering, and replanting of dead plant material • Improve the appearance along city gateways by restricting sign clutter and strong continual enforcement of specific development and construction standards for new private development • Promote pedestrian travel by building sidewalks and trails • Encourage the protection of the city's natural assets, including open vistas, views of streams and rivers, wooded areas, scenic terrain, wildlife habitat, creeks, and wetlands; enhance the popular image of the prairie as a unique place of beauty *Actions for Community Appearance* • Establish capital programs for corridor landscaping and streetscape beautification of existing boulevards throughout the city and along selected roadways leading into downtown/Bricktown, the Capitol Area, the fairgrounds, northeast tourist attractions and Capitol Hill, and from the airport, as well as future roadwork and extensions • Develop appropriate sign standards for new interstate highway segments • Establish capital programs for enhancing the appearance of major street intersections throughout the developed city with landscaping and sidewalks • Develop comprehensive design guidelines for all elements of city capital projects to include streetscapes, sidewalks along both sides of all streets and bridges, variations in paving materials, street furniture and amenities, bus stops, street lighting, traffic signals and signage, landscaping installation and maintenance, and attractive bridge design

3.1.4 Assess the Potential for Impacts on Sensitive Resources

3.1.4.1 Land Use and Development

Indirect effects commonly occur because of changes in land use. When a transportation corridor is constructed, an indirect impact could occur when the project induces other types of land development because of increased or new access. New development can alter the landscape, increase impervious cover, modify species composition of any remaining habitats, and introduce fertilizers and anthropogenic chemicals into the biotic system.

To examine potential induced growth impacts, indirect land use effects were evaluated using the following guidelines of NCHRP Report 25-25, Task 22, *Forecasting Indirect Land Use Effects on Transportation Projects* (NCHRP 2007). Transportation improvements often reduce the time-cost of travel, increasing the attractiveness of surrounding land for development. Development of vacant land, or redevelopment to more intensive uses, is a common consequence of roadway projects. Of the six land use forecasting tools provided in NCHRP Report 25-25 (Task 22), the "Planning Judgment" forecasting approach was used as the framework for the analysis. Using "good planning judgment," the seven measures within Task 22 identify indirect land use changes that result from transportation improvements. These variables or measures of indirect land use effects are as follows:

- Change in accessibility: This can be the most important variable. The key measures are average trip time, volumes, and mobility.
- Change in property value: Changes in property and land value are likely to influence land use and development.
- Expected growth: Expected population and employment growth rates for an area can indicate where development is likely to occur:
- Relationship between supply and demand: The more limited the supply is relative to demand, the more likely improved access would increase the probability of development.
- Availability of non-transportation services: Access alone is not sufficient to trigger development; other key public facilities, such as sewer and water, often must be available to the affected area at a reasonable cost. If this is the case, improvements in access are more likely to facilitate land-use change.
- Other land development market factors: These include determining recent growth trends, expert prognosis regarding growth, area expectations, and/or the probability of development with improved accessibility.
- Public policy: Whether public policymakers can clearly resist pressure for development or if the policies can be bent or broken allowing for land use change.

The predominant land use along the proposed boulevard is comprised primarily of commercial and industrial uses. For additional information on land use composition, refer to section on *Land Use Impacts*.

3.1.4.2 Environmental Justice/Low-Income Population

A high concentration of minority and low-income populations reside within the AOI. The build alternatives would not have an adverse impact on the environmental justice population. In fact, it is anticipated that improved access and mobility of the Crosstown Boulevard would create economic opportunities that could lead to higher income potential for all residents within the area. Conversely, redevelopment of the proposed boulevard could catalyze additional development, which could contribute to higher residential and commercial property values.

Changes in travel patterns and access associated with a transportation project typically drive socioeconomic impacts. Minority and low-income populations residing within the AOI could experience some form of minor adverse impact as a result of an increase in residential property tax values from induced development.

3.1.4.3 Historic Districts

Eight historic districts are located within the AOI (Table 5). ODOT conducted a review of historic resources for the Crosstown Boulevard. The review of the alternatives indicated that the project would not adversely affect historic resources. For the East Connection, the elevated BNSF railway is a contributing element of the Sante Fe Depot Historic District that was listed on the National Register of Historic Places in 2013. The Crosstown Boulevard proposes to open a new underpass through the concrete between S. 4th Street and Reno Avenue. On June 13, 2014, the Oklahoma State Historic Preservation Office determined that the construction of the underpass for the Crosstown Boulevard would have no adverse effect on the Sante Fe Historic District.

Table 5. Historic Districts within Area of Influence

Film Exchange	An area composed of smaller Art Deco buildings used primarily for film distribution
Main Street Commercial	A concentration of commercial buildings from early Oklahoma City history
Riverside Neighborhood	A primarily residential neighborhood dating from 1905 that contains numerous homes of Folk Victorian, National Folk, bungalow styles, churches, and neighborhood grocery stores
Willard-Colcord	A working-class neighborhood between the Rock Island Railroad Industrial District and the West Main Industrial District that is characterized by modest bungalows and Folk Victorian houses
Farmers Market	Commercial buildings built in the Mission/Spanish Colonial revival style
Bricktown	Concentration of large red-brick industrial and commercial buildings that were the hub of commercial distribution activity in the region
Southwest 3rd Street Industrial	Industrial area just north of the Riverside Neighborhood dating from the 1920s and includes C.C. Cooke, the largest manufacturer of copper roofing in the United States
Sante Fe Depot Historic District	Train station is Art Deco structure located in downtown Oklahoma City

3.1.4.4 Visual Character

Since the first MAPS capital improvement program was developed in 1991, Oklahoma City has invested tremendous efforts in the redevelopment of the downtown core. Current planning efforts through the MAPS 3 program focus on the redevelopment of an area that includes the project's visual impact area. The planned redevelopment includes commercial and residential uses, improved streetscapes and transportation connectivity, and parks and recreational facilities.

Overall, Alternatives A, B, and C would provide an investment in the area's transportation system and improve the former I-40 right-of-way in the visual impact area. These improvements could help facilitate redevelopment of te area in accordance with Oklahoma City's future vision. Therefore, Alternatives A, B, and C would be expected to have beneficial indirect visual effects.

With Alternative D, the former I-40 right-of-way redevelop based on Oklahoma City land use and zoning policies Adjacent to the former I-40 right-of-way, the visual character and quality would be expected to improve as the area is redeveloped consistent with Oklahoma City's vision for future land use. As a result, Alternative D would not induce improved visual effects and, therefore, would not have indirect visual effects.

3.1.5 Assess Potential Minimization and Mitigation Measures

Land planning and development regulation are under the jurisdiction of Oklahoma City. The AOI falls within the Oklahoma City's planning efforts, including MAPS 3, to revitalize and spur development in the study area. Oklahoma City would manage any indirect impacts associated with growth within the AOI, including impacts related to future development or redevelopment. In addition, the proposed boulevard would support area residences and businesses by enhancing alternative transportation modes that encourage nonmotorized (biking/walking) mobility and transit use.

The Oklahoma City Zoning and Planning Code consists of regulations, including the Scenic Overlay Design District (Oklahoma City 2012), to protect and encourage investment by property owners, developers, and the city along the Oklahoma River. These regulations form the framework for future infill and redevelopment opportunities that are included within the Crosstown Boulevard AOI. Table 6 summarizes these regulations.

Based upon the above, indirect effects from the boulevard are not expected to be adverse within the AOI because changes in access are anticipated to have a beneficial effect as a result of improved east–west mobility, provision of an alternative to the existing I-40 expressway, and the proposed project's consistency with planning and zoning regulations.

Table 6. Planning and Zoning Regulations within Study Area

Resource	Description
OKC Plan 2000-2020	*Directions for Downtown* • Make downtown an attractive, desirable, and efficient center for business and regional entertainment and cultural activities • Focus the revitalization to support infrastructure (parking and parking management, streets, access, signage, green space, streetscaping, and other amenities and services) • Improve downtown appearance *Actions for Downtown* • Create a Downtown Appearance Improvement Plan that focuses on property maintenance, streetscaping, increased open space, improved public spaces, litter control, and reduced surface parking lots • Expand the Urban Design District to include all of downtown • Provide design features in new downtown developments that promote pedestrian activities, such as benches, trees, transit shelters, and plazas
Municipal Code, 2010, Chapter 59 Zoning § 59-7200 Downtown Design Districts	• Promote the development and redevelopment of the downtown area in a manner consistent with the unique and diverse design elements and urban character of the Downtown districts • Create a network of pleasant, safe, and connected public spaces and pedestrian amenities in the downtown area • Require a downtown design review Certificate of Approval for all projects, public and private, located in the DBD, DTD-1, and DTD-2 Districts.
Municipal Code, 2010, Chapter 59 Zoning 7200. Downtown Business District (DBD)	• Support diverse forms of business and residential activity, including mixed-uses in a single building, within the central area of the city • Promote the development and redevelopment of the downtown area in a manner consistent with the unique and diverse design elements and urban character of the downtown district • Ensure that uses are compatible with the commercial, cultural, historical, and governmental significance of downtown • Promote downtown as a vital mixed-use area • Create a network of pleasant, safe, and connected public spaces and pedestrian amenities • Enhance existing structures and circulation patterns • Preserve and restore historic features

Municipal Code, 2010, Chapter 59 Zoning 7200.4. Downtown Transitional District, General (DTD-2)	• Promote a high quality mix of commercial, office, residential, and industrial uses, including mixed-uses in a single building, for areas adjacent the DBD • Promote development and redevelopment of areas adjacent to the DBD in a manner consistent with the unique and diverse design elements of the area • Ensure areas adjacent to the DBD contain land uses compatible with commercial, residential, and cultural significance of the central city • Create a network of pleasant public spaces and pedestrian amenities • Enhance existing structures and circulation patterns • Preserve and restore historic features • Preserve the cultural significance of the central city • Promote areas adjacent to the DBD as dense, urban and mixed-use neighborhoods
Municipal Code 2012, Chapter 59-13500 Scenic River Overlay Design Districts, 13500.9 Farmers Market District	• Preserve the historic Farmers Market building as the focal point of the District • Establish the Farmers Market District as a destination that meets the day-to-day service needs of district residents and residents of the nearby Downtown and Bricktown neighborhoods • Encourage a mix of complementary commercial, retail, and residential infill and redevelopment to enhance the long-term viability and vitality of the Farmers Market District
Municipal Code 2012, Chapter 59-13500 Scenic River Overlay Design Districts, 13500.11 Regatta District	• Establish the Regatta District as a mixed-use neighborhood that supports a variety of high-density housing, riverfront events and recreational opportunities, and supporting retail and commercial uses • Establish a variety of settings for outdoor events of varying sizes along the River • Establish development within the Regatta District that contributes to the vitality of Downtown, Bricktown, and the district

3.2 Cumulative Effects Analysis

3.2.1 Define the Resource Study Area

The purpose of the cumulative effects analysis is to view the direct and indirect impacts of the project within the larger context of past, present, and future activities that are independent of the proposed project but that are likely to affect the same resources in the future. This approach allows decision-makers to evaluate the incremental impact of the alternatives in light of the overall health and abundance of selected resources.

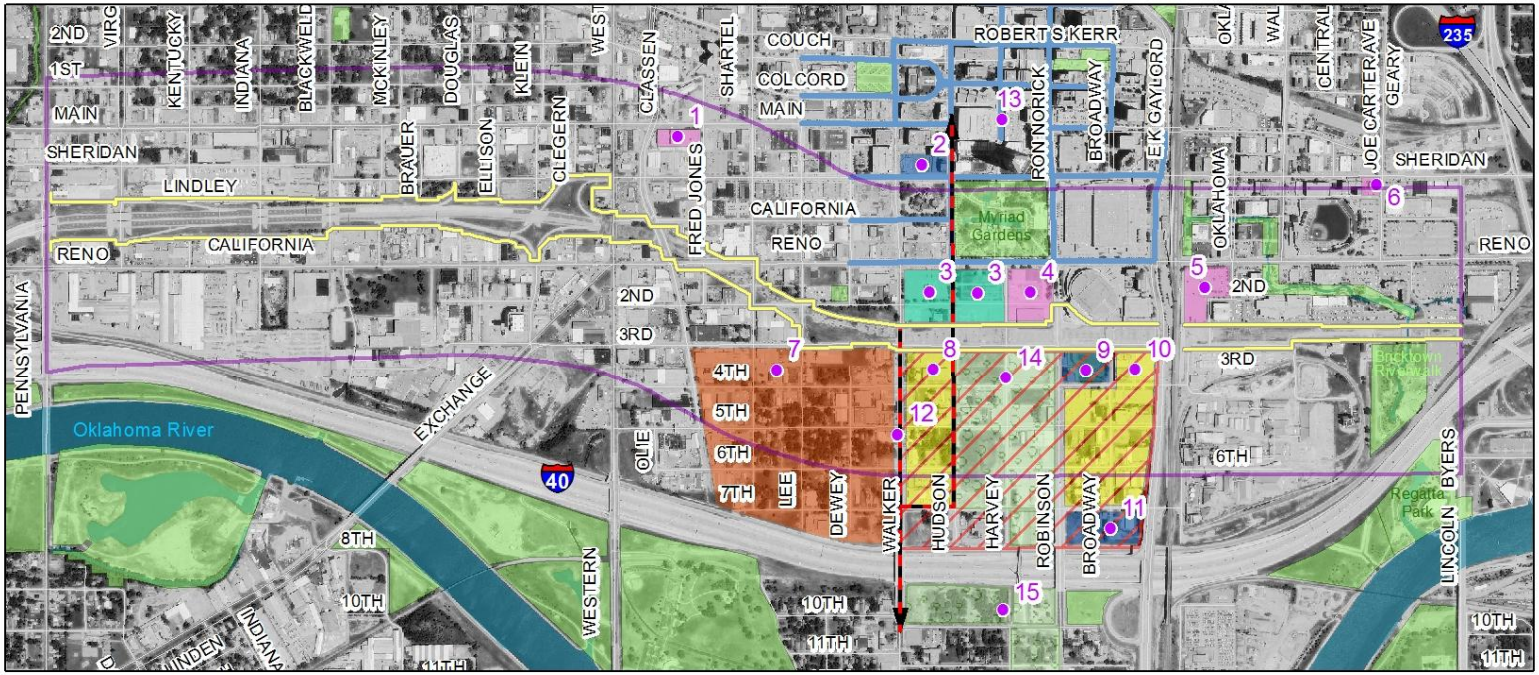
The cumulative effect analysis focuses on: (1) those resources significantly affected by the project and (2) resources currently in poor or declining health or at risk even if project impacts are relatively small (less than significant). The resources included in this cumulative effects analysis include land use/development and environmental justice communities. The geographic area depicting the resource study area (RSA) for each resource is defined as the indirect effects AOI (Figure 2) since it sufficiently encompasses the area in which project-related land and socioeconomic impacts would likely occur and would affect surrounding residences and the community.

The build alternatives would not result in any impacts to existing wetlands, streams, or floodplains; therefore, no impacts are anticipated.

3.2.2 Describe Resource Conditions and Trends

Examining the current health and historical context of each resource is necessary to establish a baseline for determining the impacts of the proposed project and other reasonable foreseeable actions on the resource. For each resource, the historical activities, the resources' response to those activities, and the impacts (direct and indirect) along with resiliency of the resource were considered.

Figure 2. Current and Reasonably Foreseeable Projects in the Area of Influence



Map #	Project Name or Future Planned Development	Map #	Project Name or Future Planned Development
Commercial, Industrial, and Residential			
1	Fred Jones Hotel	7	Medium-density residential use with ground level restaurants at key intersections
2	OG&E corporate headquarters		
3	Convention Center	8	High-density residential use
4	Hotel	9	Higher-density office use
5	Bricktown parking garage and hotel	10	Medium-density loft residential use
6	Bricktown hotel	11	Office use
Transportation		**Park**	
12	Streetcar	14	Upper Park
13	Project180 streetscape improvements	15	Lower Park

3.2.2.1 Land Use/Development

Land use and development information was obtained from the Association of Central Oklahoma Governments and Oklahoma City, as well as meetings with stakeholders and developers. For historical context, the following paragraphs summarize development activity within the RSA according to the *OKC Plan 2000-2020* (Oklahoma City 2000):

> *Oklahoma City's downtown, like downtowns throughout the nation, experienced a decline in economic vitality in the period following World War II. A number of factors contributed to this decline—plentiful land available for development at the City's periphery, flat terrain with an absence of natural geographical boundaries, school desegregation, increased reliance on the automobile, an improved middle class standard of living, and competition from adjoining cities.*
>
> *In an effort to redress the decline of downtown Oklahoma City, over a thousand buildings were torn down between the 1960s and the 1980s to create a platform for renewal. This renaissance effort had been only partially realized when the oil bust of the early 1980s hit, sending downtown into an economic tailspin. In order to reverse the trend of decline, voters, in 1993, approved a series of bold new construction and refurbishment projects, collectively referred to as MAPS (Metropolitan Area Projects). The 1995 bombing of the Alfred P. Murrah Federal Building interrupted the momentum for renewal, but with the completion of the first MAPS projects and the finalization of bombing repairs and reconstruction, investment interest in downtown is resurging.*

3.2.2.2 Environmental Justice Community

The Crosstown Boulevard area contains a large presence of minority/low-income populations. The build alternatives would not displace any environmental justice populations residing within the RSA. The former I-40 Crosstown Expressway project resulted in a displacement of 60 residences.

3.2.2.3 Visual Character

Since the first MAPS capital improvement program was developed in 1991, Oklahoma City has invested tremendous efforts in redevelopment of the downtown core. Current planning efforts through the MAPS 3 program focus on redevelopment of an area that is part of the cumulative effects study area. The planned redevelopment includes commercial and residential uses, improved streetscapes and transportation connectivity, and parks and recreational facilities.

3.2.3 Summarize Effects of the Proposed Action on Key Resources

3.2.3.1 Land Use/Development

Alternatives A, B, and C would have the greatest impact on land use as each would require the most right-of-way to accommodate the realignment of Western Avenue at Classen Boulevard and Sheridan. In addition, these three alternatives only would require strip

right-of-way in one location on Robinson Avenue. Alternative D only would require the strip right-of-way. No other land uses are anticipated to be directly impacted by the project.

Right-of-way impacts would occur in the area where Western Avenue would be realigned with Classen Boulevard; thereby, improving traffic flow along Western Avenue. Approximately 0.3 acre of impacts on commercial land use would occur at Classen Boulevard under Alternatives A, B, and C. Strip right-of-way could be required on Robinson Avenue, north of the boulevard where the roadway would tie back into the existing street network. The strip right-of-way anticipated on Robinson Avenue would affect land that is currently a parking lot and identified for future public/ institutional land use.

It is estimated that the build alternatives could indirectly result in approximately 17 (Alternatives A, B, C) to 27 acres (Alternative D) (maximum) of new development opportunities because some of the old I-40 right-of-way may not be needed for transportation purposes following construction of the Crosstown Boulevard. The acreage available for redevelopment will be determined during final design in coordination with FHWA, ODOT, and the city of Oklahoma City. This indirect land use impact would be attributable to the proposed project and would increase mobility and enhance development opportunities within the project RSA.

3.2.3.2 Environmental Justice Community

FHWA Order 6640.23 states that the regulatory agencies shall avoid disproportionately high and adverse impacts on minority and/or low-income populations by "…proposing measures to avoid, minimize and/or mitigate disproportionately high and adverse environmental health effects and interrelated social and economic effects, and providing offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by FHWA programs, policies, and activities…" The direct impacts associated with the environmental justice community RSA would not result in displacements or relocations under any of the build alternatives. With the exception of Alternative D, each alternative would be constructed primarily within the former I-40 right-of-way.

Conversely, the benefits of the boulevard would lead to improved system linkage and access, in addition to improved mobility that would otherwise not occur under the existing conditions. These benefits would facilitate the transition within the RSA to a more pedestrian and transit-friendly environment as suggested by the Core to Shore Plan and MAPS 3 program, which is designed to increase economic growth and improve the overall quality of life in downtown Oklahoma City. As part of the MAPS 3 efforts, strong planning and policy emphasis on urban design and appearance that improves livability downtown, leverages public investment, increases property values, and improvise pedestrian access downtown.

3.2.3.3 Visual Character

With Alternatives A, B, and C the incremental effect of this project in combination with other past, present, and reasonably foreseeable projects to visual resources and visual quality would include the following:

- Reduce visual encroachments, such as overhead utilities, street light poles, debris, and signage
- Increase vegetation by providing an opportunity to lacape public rights-of-way
- Establish a cohesive urban design, including streetscape elements such as signage, traffic signal poles, street lighting, and street furniture
- Increase vertical development as more multi-level buildings are constructed
- Increase light and glare from use of the street and adjacent development, and increase nighttime brightness across the landscape

These cumulative effects would improve the visual character and quality of the cumulative effects study area. Viewer groups would be expected to have a moderate-to-high response to these beneficial changes in the visual environment.

With Alternative D, the former I-40 right-of-way would likely develop based upon Oklahoma City land use and zoning guidelines.. The acreage available for redevelopment will be determined during final design in coordination with FHWA, ODOT, and the Oklahoma City. However, as a result of this project, there would be very minor changes to the existing visual character or quality. Therefore, in combination with other past, present, and reasonably foreseeable projects, Alternative D would not contribute to cumulative effects to visual resources.

3.2.4 Describe Other Actions and Their Effects on Resources

Reasonably foreseeable projects that could contribute to the proposed project's cumulative impacts include local or regional transportation projects, statewide transportation projects, locally funded transportation projects, and non-transportation projects such as commercial and residential development.

Oklahoma City's MAPS 3 program will provide funding for several improvements within the Core to Shore area; an estimated 750 acres will undergo land development or redevelopment. Further, as part of the MAPS 3 program, the proposed streetcar project is anticipated to connect elements of MAPS 3 and serve the downtown area. These improvements will contribute to leveraging investment opportunities for residential, office, and retail establishments. Figure 2 shows projects that are currently under development or planned within the Crosstown Boulevard RSA.

3.2.5 Estimate Combined Effects on Key Resources

Table 7 summarizes the results of the cumulative impacts assessment for the proposed boulevard as documented throughout this section (Section 3.2, Cumulative Effects Analysis).

Table 7. Results of Cumulative Impact Assessment

Resource	Status/ Viability	Direct Impacts	Indirect Impacts	Cumulative Impacts
Land Use/ Development	Stable	Construction would occur primarily within the former I-40 right-of-way. Alternatives A, B, and C would require 0.3 acre of land converted to right-of-way. Alternative D would have no direct impact on land use and development.	Moderate likelihood of induced development converting 17 to 27 acres of land (depending on preferred alternative). This development would be consistent with the city's redevelopment efforts. No induced impact under the existing conditions.	Land development would occur with or without the project. More potential for land development occurs with Alternative D because the old I-40 right-of-way would not be used for transportation purposes.
Environmental Justice Population	Stable	The build alternatives would have no disproportionate or adverse impacts to environmental justice populations compared to non-environmental justice populations.	Indirect impacts include an increase in improved pedestrian bike, and transit accessibility with Alternatives A–C. Induced development along corridor could result in higher property taxes.	Increase in accessibility would lead to additional economic opportunities for environmental justice populations.
Visual Character	Stable	Alternatives A, B, and C would have a positive effect on the visual environment. Alternative D would have little effect on the visual environment.	Indirect impacts include the facilitation of redevelopment of the area in accordance with the city's vision for Alternatives A–C. Alternative D would have no indirect effect.	Alternatives A–C could reduce visual encroachments and establish a cohesive urban streetscape design. Alternative D would have no cumulative effect.

3.2.6 Consider Minimization and Mitigation

Land use planning and development regulation within the AOI are under the jurisdiction of Oklahoma City. The proposed boulevard is consistent with the revitalization and redevelopment efforts as described and documented in the forthcoming planokc (comprehensive plan), MAPS 3 program, and the Core to Shore Plan. Land development, specifically redevelopment, are anticipated in the RSA with or without the proposed project. Whatever land development mitigation needed in the future would not be expected to differ markedly under any of the build alternatives.

As examined in the *Cumulative Effects Analysis* section, the proposed boulevard project would not result in disproportionately high and adverse effects on minority and low-income populations; therefore, in accordance with Executive Order 12898, mitigation associated with environmental justice population is not currently proposed.

As examined in the *Cumulative Effects Analysis* section, with all four build alternatives there is no need to provide mitigation for the potential cumulative effects to visual character.

4.0 References

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