Crosstown Boulevard
Social and Community Technical Memorandum

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October 2014

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Summary of Findings

Potential impacts to social and community resources, environmental justice (EJ) populations, and park and recreational facilities were examined for the proposed Crosstown Boulevard Project. The study area is within Downtown Oklahoma City. Four Downtown Business Improvement Districts are partially within the study area: Bricktown (to the east), Core to Shore Area District (to the south), the Film Exchange District, and the Arts District (to the north).

None of the alternatives would result in any residential displacement, and none would disrupt community connectivity by physically dividing communities because they have developed around the existing I-40 right-of-way. Of the four alternatives, Alternative A would be least likely to improve community connectivity because it is the least pedestrian and bicyclist friendly. Alternative D would be considered the most pedestrian and bicyclist friendly based upon design features, operational factors, and pedestrian/bike amenities. None of the alternatives would displace any community facility, and impacts to community facilities would be mostly avoided.

None of the alternatives would result in any business or residential displacements. Although the alternatives would not eliminate direct access to existing businesses in the study area, access would change. Under Alternatives A, B, and C, Western Avenue would be closed north of the Crosstown Boulevard. However, access would be provided from Sheridan Avenue to the new Classen Boulevard.

Since the entire study area is within block groups identified as having a higher percentage of EJ populations than Oklahoma City, any beneficial or adverse impacts from the Crosstown Boulevard would be predominantly borne by minority and low-income populations. Because the majority of Alternatives A, B, C, and D occur within existing transportation right-of-way, and the Crosstown Boulevard involves similar transportation options as the historical use, no adverse effects are expected to EJ populations as compared to non-EJ populations. Alternatives A, B, C, and D would not cause disproportionately high and adverse effects on minority or low-income populations, as defined in Executive Order 12898 and Federal Highway Administration (FHWA) Order 6640.23. No further EJ analysis is required for the Crosstown Boulevard.

None of the publicly owned parks in or near the study area would be affected by the project. As a result, no Section 4(f) impacts are expected as a result of the Crosstown Boulevard Project.

1.0 Introduction

The purpose of this *Social and Community Technical Memorandum* is to identify potential impacts to social and community resources, environmental justice (EJ) populations, and park and recreational facilities resulting from the Crosstown Boulevard Project. The following sections present methodologies of analysis, existing conditions within the study area, and potential impacts of Alternatives A, B, C, and D.

This technical memorandum focuses on the Central Section of the study area, from Klein Avenue to E.K. Gaylord/Shields Boulevard, for determining impacts to social and community resources because this area is where differences in Alternatives A, B, C, and D occur. The West Connection, the portion of the study area from Pennsylvania Avenue to Western Avenue is the same for all of the alternatives. The East Connection of the Crosstown Boulevard was identified and approved during the interchange study for the I-40 Crosstown Expressway Final Environmental Impact Statement/Record of Decision issued in 2002. The East Connection, the area east the Santa Fe Railroad to Lincoln Boulevard that was previously approved, is the same for all of the alternatives. As a result, no other alternative was considered for this section in the new Environmental Assessment for the Crosstown Boulevard Project.

This *Social and Community 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 summarize this technical memorandum, and the full report will be included as an attachment.

2.0 Social and Community Resources

An analysis of social and community impacts was conducted to consider the Crosstown Boulevard's impacts on the social fabric and community cohesion of the surrounding area.

2.1 Methodology

Data were collected from the following sources:

- U.S. Census Bureau
- Association of Central Oklahoma Governments
- Oklahoma Department of Commerce

Data from 2010 and 2012 were used to identify trends in population growth and demographics, ethnicity and race, age distribution, income levels, and employment status. The information was analyzed by census tracts and block groups in the study area and then compared to county and state statistics for comparative purposes. Block groups are a geographical unit used by the U.S. Census Bureau and is the smallest unit for which the bureau publishes sample data. The study area consists of the following census tracts and block groups (Figure 1):

- Census Tract 1034, Block Group 1
- Census Tract 1035, Block Group 1
- Census Tract 1036.01, Block Group 1
- Census Tract 1036.02, Block Group 1
- Census Tract 1037, Block Group 1
- Census Tract 1038, Block Group 1
- Census Tract 1091, Block Group 1

2.2 Population Characteristics

2.2.1 Existing Conditions

The study area covers an approximate area of 463 acres within the urbanized area of the central business district of Oklahoma City (Figure 1). The primary land use within the study area is comprised of commercial and industrial uses, and population statistics reflect these land uses.

Table 1 summarizes demographic characteristics of the study area. For comparative purposes, Oklahoma City and Oklahoma County data are also provided. The block groups within and adjacent to the study area have a total population of 2,886 individuals; of these, nearly 25 percent occur in Census Tract 1036.01, Block Group 1, which is located east of Western

Figure 1. Study Area

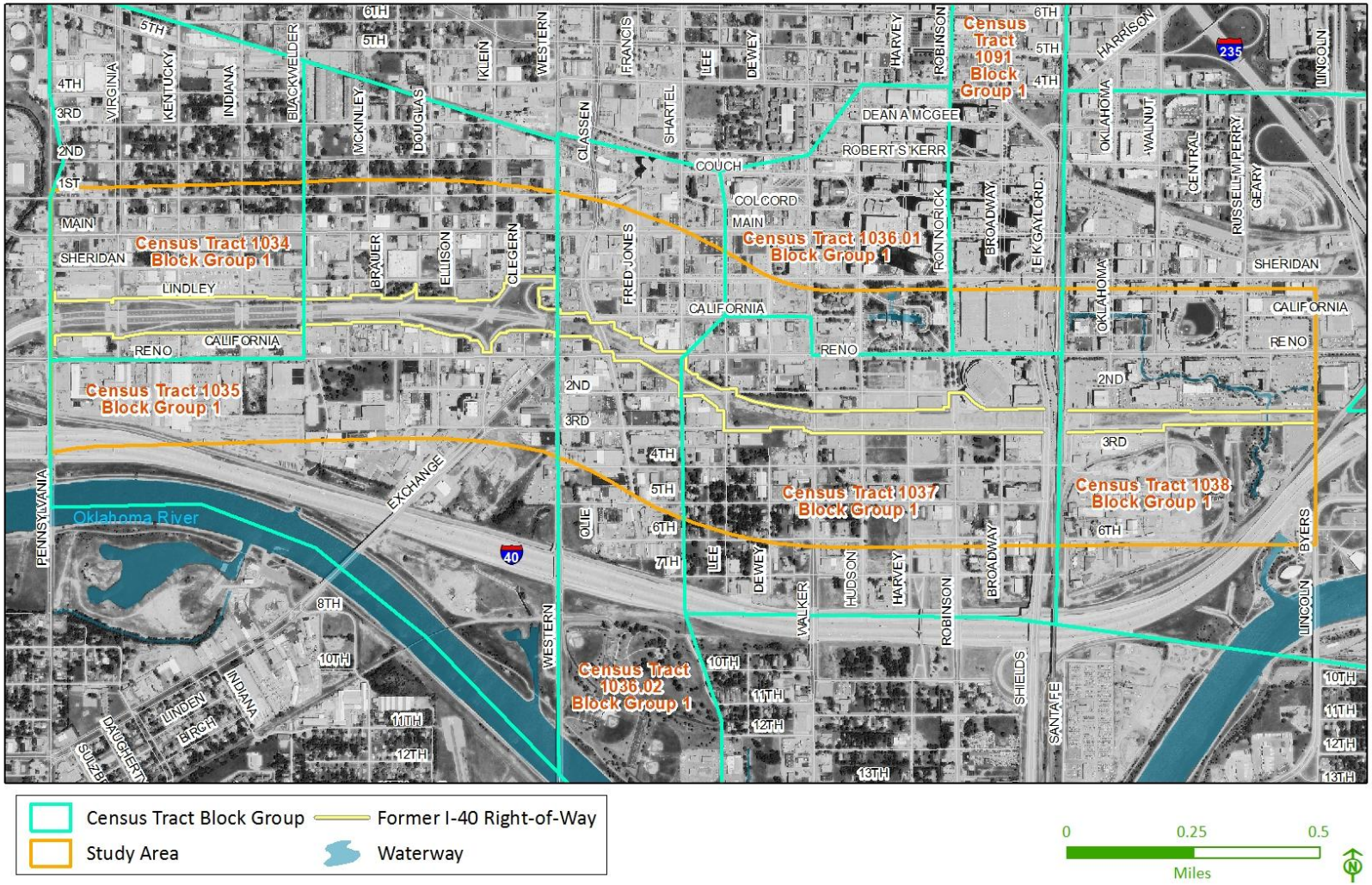


Table 1. Demographic Characteristics (2010)

Area	Total Population	Median Age	Housing Units	Vacant Housing Units (%)	Households	Median Household Income	Unemployment Rate (%)
Oklahoma County	718,633	34.3	322,550	10.1	283,168	$45,082	4.2
Oklahoma City	579,999	34.0	256,930	10.4	226,945	$45,704	4.3
Census Tract 1034 Block Group 1	373	33.8	91	22.8	129	$26,344	1.7
Census Tract 1035 Block Group 1	351	39.9	91	15.4	77	$20,481	8.6
Census Tract 1036.01 Block Group 1	226	30.6	247	32.4	167	$53,625	0.0
Census Tract 1036.02 Block Group 1	704	39.6	33	21.2	26	$21,518	0.0
Census Tract 1037 Block Group 1	514	43.7	76	26.3	56	$27,554	0.0
Census Tract 1038 Block Group 1	467	26.7	461	29.9	323	$58,295	5.5
Census Tract 1091 Block Group 1	251	52.7	161	3.7	155	$6,346	13.9

Sources: Oklahoma Department of Commerce 2013; U.S. Census Bureau 2010

Avenue. The majority of housing units and households are located in the Bricktown entertainment district (Census Tract 1038, Block Group 1). The population in this area has a higher number of housing units (461), households (323), and median income ($58,295) than any other area analyzed. The median household income is also higher than that of Oklahoma City ($45,704) and Oklahoma County ($45,082).

As indicated in Table 1, the unemployment rate within the study area is higher in three block groups than both Oklahoma City and Oklahoma County. Block Group 1, Census Tract 1091 has the highest unemployment rate and the lowest median household income within the study area.

2.2.2 Population Trends and Projections

The total population for the State of Oklahoma and Oklahoma County has increased 8.7 percent and 8.8 percent, respectively, from 2000 to 2010 (Table 2). The total Oklahoma City population grew faster than the state and county at 14.6 percent from 2000 to 2010. Block Group 1, Census Tract 1038 had the largest growth rate from 2000 to 2010, likely attributable to an increase in multifamily and higher-density housing north of the Bricktown area (Table 3). Between 2010 and 2030, population projections indicate slightly slower growth rates than from 2000 to 2010, but are similar when compared to the state, county, and city (Table 2).

Table 2. Population Projection Trends

Area	2000	2010	2020	2030	Change 2000-2010	Change 2010-2020	Change 2010 - 2030
Oklahoma County	660,448	718,633	735,400	765,600	8.8%	2.3%	6.1%
Oklahoma State	3,450,654	3,751,351	3,963,800	4,192,400	8.7%	5.7%	10.5%

Sources: U.S. Census Bureau 2010; Oklahoma Department of Commerce 2013

Table 3. Population Growth and Projection—2012 to 2017 by Block Groups

Area	2000 – 2010 Compound Growth Rate	2012 – 2017 Projection Rate
Census Tract 1034 Block Group 1	-1.68	0.63
Census Tract 1035 Block Group 1	-1.71	0.78
Census Tract 1036.01 Block Group 1	-3.89	1.03
Census Tract 1036.02 Block Group 1	5.0	0.0
Census Tract 1037 Block Group 1	0.94	0.08
Census Tract 1038 Block Group 1	11.66	2.11
Census Tract 1091 Block Group 1	1.7	-0.33

Source: ESRI 2013

Population projections indicate little change over the next five years within the study area (Table 3). The low rate of change likely results from the amount of industrial and commercial uses, rather than the loss of residential uses. Projections obtained from the Greater Oklahoma City Partnership show that the population for Oklahoma City is estimated to be 636,434 by 2017. From 2012 to 2017, the annual population growth rate for Oklahoma City is projected to be 1.34 percent. The block groups within the study area have similar growth rates as Oklahoma City for this five-year period. Population projections also were obtained for Oklahoma City from 2013 to 2018, showing steady growth with an annual population growth rate projected to be 1.44 percent.

2.2.3 Population Impacts

No displacements or relocations are expected from any alternatives or the East or West connections; therefore, direct population loss would not occur from the Crosstown Boulevard. If any displacements do become required, they would be kept to a minimum since all boulevard alternatives would be located within as much existing right-of-way as possible. Only minimal property impacts are expected.

All of the alternatives are primarily located within existing transportation right-of-way and would have minimal impact on the population growth rates of the study area. Population growth trends would be expected to continue with or without the Crosstown Boulevard.

2.3 Neighborhoods and Communities

2.3.1 Existing Conditions

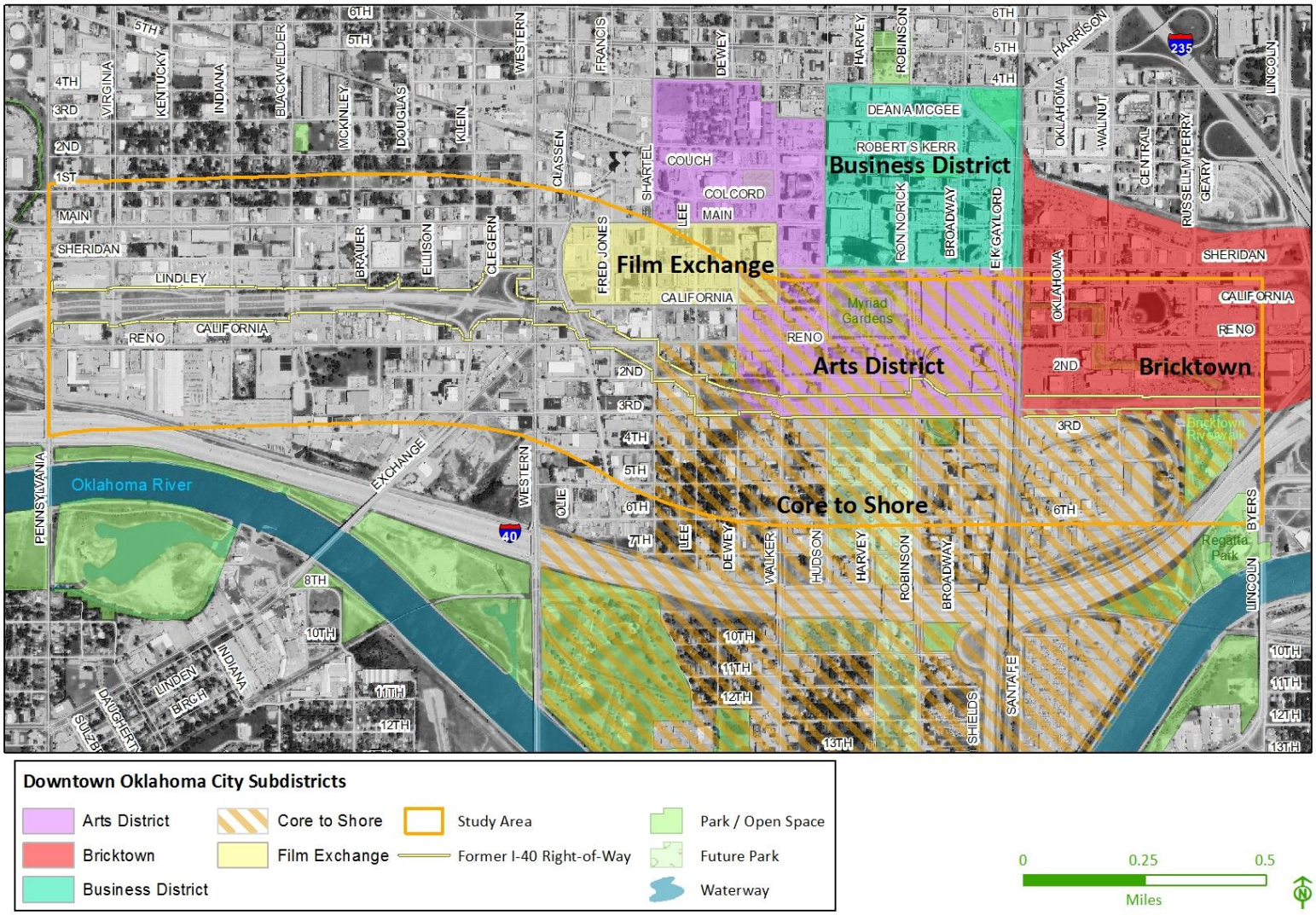
2.3.1.1 Neighborhoods

The study area is located within the southern part of Downtown Oklahoma City, south of the Central Business District. Four downtown subdistricts[1], also defined as Downtown Business Improvement Districts, are partially within the study area: Bricktown (to the east), Core to Shore District (to the south), Film Exchange District (to the northwest), and the Arts District (to the north) (Figure 2).

- Bricktown—Bricktown is an entertainment district. The multiuse district includes retail, residences, restaurants, and offices. This district also includes the Bricktown Ballpark and one-mile canal.

[1] The West Connection is considered part of the downtown Oklahoma City, and not part of any subdistrict.

Figure 2. Downtown Oklahoma City Subdistricts



- Core to Shore—The Core to Shore area is 750 acres of underutilized land between downtown and the shore of the Oklahoma River. The area is planned to be redeveloped following the relocation of the I-40 Crosstown Expressway. Redevelopment efforts include building and connecting residences, parks, and other economic opportunities. With passage of the Metropolitan Area Projects (MAPS) 3 initiative, the city is moving forward with building Central Park, a major component of the Core to Shore Plan that borders the Crosstown Boulevard Project.
- Film Exchange—The Film Exchange is currently home to several film-oriented and design-focused businesses.
- Arts District—The Arts District is home to several cultural destinations, including the Civic Center Music Hall, the Oklahoma City Museum of Art, the Norick Library, and the newly renovated Myriad Botanical Gardens and Crystal Bridge Tropical Conservatory.

2.3.1.2 Community Facilities

Locations of community facilities are shown on the Environmental Constraints Map (Figure 3).

Schools

No schools are currently located within the study area. The John W. Rex Elementary School is currently under construction within the study area and is anticipated to open in August 2014. The school will be located at 500 W. Sheridan Avenue. Schools that could serve residents in the study area include Mark Twain Elementary School, Emerson Middle School, and Willard Alternative Center.

Emergency Services

No fire or police stations are located within the study area. The study area is covered by Fire District 601. The closest fire stations to the study area are Stations 1, 6, 7, and 8.

Police headquarters are located downtown at 701 Colcord Drive. The Will Rogers Patrol Division and the Bricktown Police Station provide services within the study area.

Healthcare Facilities

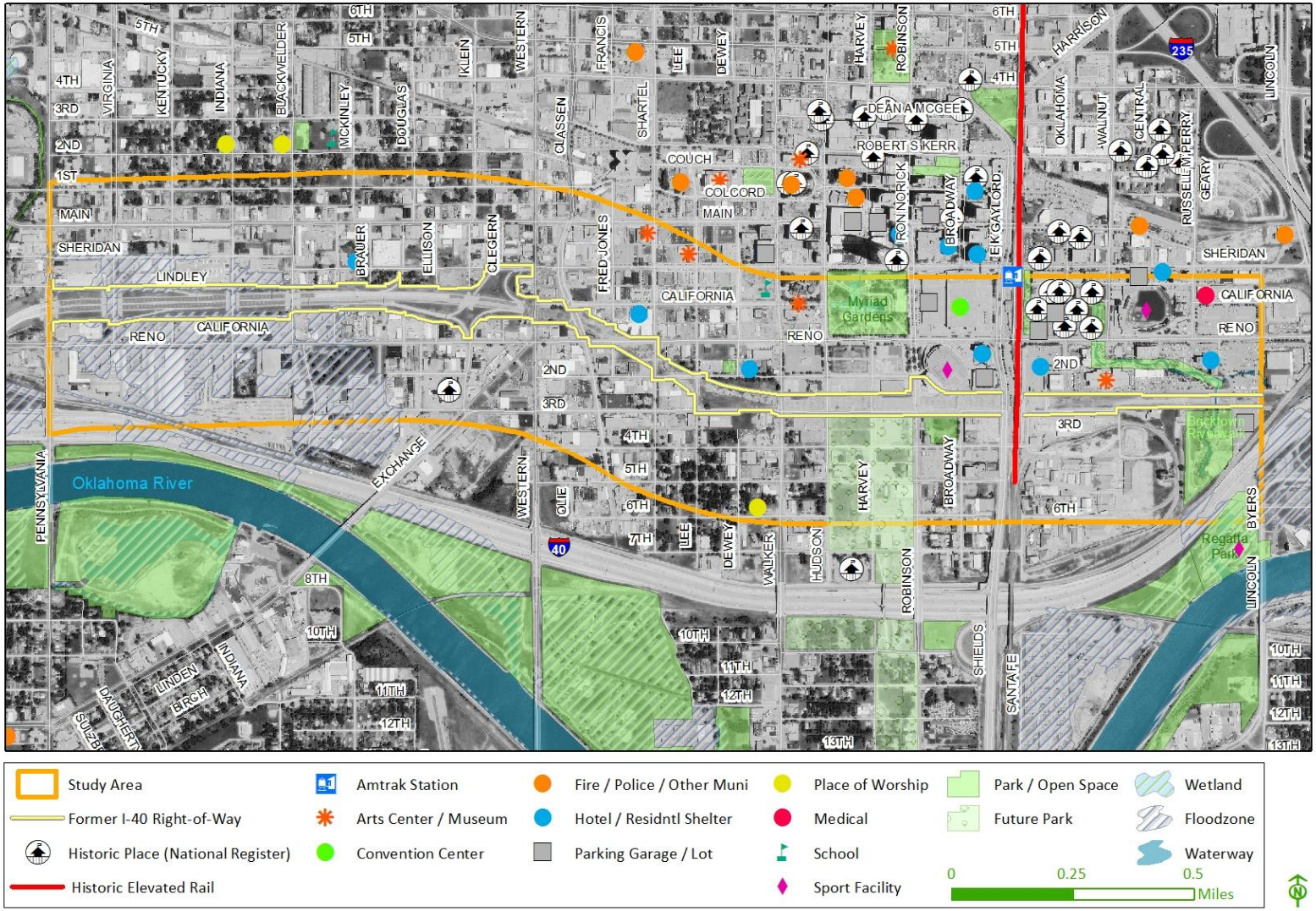
No healthcare facilities are located within the study area. St. Anthony Hospital is approximately 0.75 mile north of the study area on S.W. 9th Street. The University of Oklahoma Medical Center is located approximately 0.80 mile northeast of the study area on the east side of I-235.

Community Resources

Other community facilities and services within the study area, as shown in Figure 3, include the following:

- Jesus House located at 1335 W. Sheridan Avenue, a homeless shelter, soup kitchen, and clothing and furniture ministry

Figure 3. Environmental Constraints



- City Rescue Mission located at 800 W. California Avenue, which provides social services for the homeless and near homeless
- Oklahoma Halfway House located at 517 S.W. 2nd Street, which provides social services to the homeless and near homeless
- Goodwill Industries of Central Oklahoma located at 316 S. Blackwelder Avenue, which includes a retail store and a career development center
- Salvation Army Center located at 503 S. Hudson Avenue, which provides a retail store

2.3.2 Neighborhoods and Community Cohesion Impacts

2.3.2.1 Neighborhoods and Community Characteristics

With the existing conditions, there would be no change to neighborhoods or community cohesion as a result of this project. None of the alternatives would disrupt existing neighborhoods and communities because Downtown Oklahoma City and the existing residences, businesses, and other community facilities in the study area have developed around the existing I-40 right-of-way and the approximately 8,900-foot structure that served as a physical barrier. The Crosstown Boulevard would not impact community cohesion from Pennsylvania to Western Avenue or in the Bricktown area since the existing conditions would remain unchanged for all of the alternatives. The project is not expected to have an adverse effect on air quality in the study area and, therefore, would not have a negative impact to residences and users of businesses in the area. Information related to bicycle and pedestrian impacts is described in further detail in the *Crosstown Boulevard Bicycle and Pedestrian Technical Memorandum* (Parsons Brinckerhoff 2014c) and briefly summarized below.

A *Traffic Operational Analysis* (Traffic Engineering Consultants, Inc. 2014) was completed to assess the capacity that the existing conditions and alternatives can accommodate. The effects of poor level of service (LOS) in the area would be lower speeds and increased travel times, less freedom to maneuver, more traffic interruptions, and a lower feeling of safety and comfort while traveling by vehicle. The effects of traffic on community connectivity are described in the following paragraphs.

Alternative A

While Alternative A does not disrupt existing communities, it also does not promote improved community connectivity between existing neighborhoods. This is because it would use a wider road than Alternatives B, C, and D, which would make connections between the Core to Shore area and the Arts District and central business district more difficult. The wider road would act as a perceived barrier to bicyclists and pedestrians. In addition, under Alternative A, intersections would take an average pedestrian at least 30 seconds to cross. Alternative A would result in three intersections on Reno Avenue with poor LOS in 2015, thus reducing the ease of access to and from the community by motor vehicle at these intersections. Poor vehicle LOS would not have an effect on accessibility for pedestrians and disabled persons that are crossing at signalized intersections since the timing of signals are not dependent on LOS. Bicyclists riding in traffic would experience the same poor LOS conditions as motor vehicles. While

Alternative A would not disrupt existing communities, it would provide the least amount of benefits for community cohesion among the alternatives.

Alternative B

Alternative B would not disrupt existing communities and community cohesion because the Boulevard would be located along the Core to Shore and Arts District boundaries. Alternative B would improve connectivity through the study area compared to existing conditions. Alternative B would have a six-lane boulevard configuration from Western Avenue to Shartel Avenue and then would narrow to four lanes. In addition to the four-lane configuration, Alternative B would accommodate bicycle and pedestrian facilities, and parking between Walker Avenue and E.K. Gaylord Boulevard. The sidewalks would benefit pedestrian activity in the Core to Shore area and the Arts District, as well as neighborhood connectivity.

From a traffic standpoint, Alternative B would result in four intersections on the Crosstown Boulevard with poor LOS in 2015, thus reducing ease of vehicular travel between the districts in downtown. Poor vehicle LOS would not have an effect on accessibility for pedestrians that are crossing at signalized intersections since the timing of signals are not dependent on LOS. Bicyclists utilizing bicycle facilities would likely have better accessibility than motor vehicles with poor LOS.

Alternative C

Alternative C would not disrupt existing communities because the Boulevard would be located along the Core to Shore and Arts District boundaries. Alternative C would be a four-lane boulevard with medians, separate left-turn lanes, parking, and accommodations for bicyclists between Klein Avenue and E.K. Gaylord Boulevard. Compared to the baseline condition, Alternative C could improve the sense of community between the Core to Shore area and the Arts District. Sidewalks and parking along most of the alignment could create a comfortable street for users within the community. Between Hudson and Robinson Avenues, a pedestrian could traverse Alternative C in approximately 20 seconds.

Alternative C presents challenges, however, including the 80-foot crossing distance at the Walker Avenue intersection. The second challenge would be the reconfiguration at Shartel Avenue and Lee Avenue that could create a conflict between pedestrians and turning traffic. Lastly, closing Second Street and Classen Boulevard would result in additional disruptions to connectivity and create a change in direct access, requiring users to use other roads in the community.

Alternative C would result in poor LOS in 2015 at four intersections in the study area. However, Alternative C would provide additional access to the downtown area at Lee Avenue compared to Alternatives A and B. Bicyclists riding in traffic would experience the same poor LOS conditions as motor vehicles.

Alternative D

Alternative D would improve community connectivity compared to existing conditions by bringing back the city grid system using as much existing street geometry in place as possible. Alternative D also would provide the greatest community connectivity of the alternatives. Pedestrians would be accommodated on new sidewalks along California Avenue and on S.W. 3rd Street. The posted speed limit (25 mile per hour [mph] or 30 mph on designated streets) would remain as is, and cross streets would remain open. Bicyclists would be able to ride on these streets, or other low-volume or bicycle-friendly streets, thus improving the sense of community.

Although Alternative D would provide greater community connectivity, it would result in more intersections with poor LOS in 2015 because there would be no new capacity in the downtown area. Motor vehicle traffic would be slowed because of the 25 mph speed limit, but this could create conditions comfortable for pedestrians and bicyclists to move throughout the community. The Oklahoma City street grid network would be intact, and north-south access would be maintained. Additionally, since motor vehicle traffic would be slowed to a 25mph speed limit and have frequent stops, vehicle exhaust gases could create less than ideal concentrations for pedestrians and bicyclists. Further details of effects to air quality are in the *Crosstown Boulevard Air Quality Technical Memorandum* (Parsons Brinckerhoff 2014b).

2.3.2.2 Community Facility Impacts

Most of the alternatives are located within existing transportation right-of-way. For this reason, impacts to community facilities, as described below, generally would be avoided. None of the alternatives would displace any community facility. Parks and recreational facilities are described in Section 4.0. With the baseline conditions, there would be no change to community facilities as a result of this project.

Schools

The west and east connections would not impact any schools or change access to schools. No physical impacts from the alternatives would be expected for the John W. Rex Elementary School at 500 W. Sheridan Avenue. Access to and from the school by way of the Crosstown Boulevard would be direct for all alternatives at Walker Avenue. Alternative D would also provide additional access routes through the grid system. Access for students walking or bicycling to school would be the same for all alternatives since the configuration of the intersections at the school will remain as it is currently.

Emergency Services

With the existing conditions throughout the full Crosstown Boulevard, access would not change for emergency services (police, fire, and ambulance) to the study area. Response times may increase when utilizing existing intersections with poor LOS in the future in the Central section, from Klein Avenue to E.K. Gaylord/Shields Boulevard. Alternatives A, B, and C likely would decrease response times from existing conditions because access to and from the area would be

improved and capacity would be added to the existing transportation system. Alternative D likely would not improve travel times because access to/from the interstate system would be limited to two locations near the area and this alternative would not provide for additional capacity in the downtown area. Alternative D also would have more intersections with unacceptable LOS for 2015 compared to Alternatives A, B, and C.

Healthcare Facilities

No healthcare facilities would be affected by any of the alternatives.

Community Resources

Community resources would not be displaced or see a change in access with the existing conditions. Between Pennsylvania Avenue and Byers Avenue, none of the alternatives would displace community facilities. Increased connections to the area from Alternatives A, B, and C likely would improve overall access to these community resources.

Some community facilities could experience higher noise impacts as a result of the Boulevard, which could affect the experience of the user. Noise measurements at the City Rescue Mission and at the Oklahoma Halfway House were estimated for each of the alternatives. Under existing conditions, the sound levels specified in the Oklahoma Department of Transportation (ODOT) Noise Policy are within an acceptable threshold for both the City Rescue Mission and the Oklahoma Halfway House.

Under all of the alternatives, this threshold would be exceeded at the City Rescue Mission, but noise changes would be imperceptible[2] for Alternatives A, B, and D (noise predictions would change less than 3 decibels). For Alternative C, the noise predications for this site would change by almost 5 decibels. Although the noise impacts would exceed the ODOT Noise Policy for all of the alternatives, noise abatement was not recommended at the City Rescue Mission.

The noise levels at the Oklahoma Halfway House will be within an acceptable range in accordance with the ODOT Noise Policy in the future, with and without the boulevard. For detailed information, refer to the *Crosstown Boulevard Noise Analysis Technical Report* (Parsons Brinckerhoff 2014a). Overall, the noise impacts of the alternatives would not have an effect that would reduce or hinder the use of these community facilities in the study area.

[2] Sound from highway traffic is generated primarily from a vehicle's tires, engine, and exhaust. It is commonly measured in decibels (dB) that are logarithmic units and do not add arithmetically such as the more common linear units. For example, two trucks producing 90 dB each combine to produce 93 dB, not 180 dB. In other words, a doubling of the noise sources produces only a 3-dB increase in the sound pressure level. Studies have shown that this increase is slightly perceptible by the human ear.

2.4 Employment and Entertainment Centers

2.4.1 Existing Conditions

The study area is just south of the central business district, and small businesses and industries are scattered throughout the area. Businesses vary and include restaurants, retail stores, industry, community services, and convenience stores, among others.

Bricktown is an area that provides for the retail, entertainment, and tourism industries. Several dining and nighttime establishments, a movie theater, retail stores, office spaces, and hotels are located within this area.

Major employers in Downtown Oklahoma City include Devon Energy, the city of Oklahoma, Sonic Corp., SSM Healthcare, University of Oklahoma Health Science Center, OGE Energy, and AT&T. Of the seven major employers, only one, Sonic Corp., is within the study area (Table 4). Devon Energy, the city of Oklahoma, OGE Energy, and AT&T are located within the central business district just north of the study area. It is expected that employees of these major employers are commuting from around the region. Since the residential population within the study area is minimal, it is assumed that the majority of employees at these downtown businesses are not commuting from the study area and do not represent the employment traffic for major employers.

Table 4. Downtown Oklahoma City Major Employers

Major Employers	Number of Employees (2013)
Devon Energy	3,100
City of Oklahoma	4,500
Sonic Corporation	2,000
SSM Healthcare of Oklahoma, Inc.	2,900
University of Oklahoma Health Science Center	4,200
OGE Energy	3,450
AT&T	3,000

Source: Greater Oklahoma City Economic Development 2013

Bricktown is estimated to be the top visitor attraction in Downtown Oklahoma City, with approximately 6 million annual visitors. Chesapeake Energy Arena and Myriad Botanical Gardens both had more than 1 million visitors each in 2012. The Cox Convention Center and Choctaw Ballpark also were in the top 15 visitor attractions in 2012 (Oklahoma City MAPS 3 Market Analysis, 2013).

2.4.2 Employment and Entertainment Centers Impacts

Economic impacts occur from changes in access or displacements of businesses. For this project, none of the alternatives would displace any businesses within the study area.

Access within the West Connection and East Connections would not change as a result of the Crosstown Boulevard because the existing conditions would remain the same. Direct access into downtown, existing businesses, and points of interest would not be eliminated in either the West Connection or the East Connection. Within the Central Section, the alternatives would not eliminate direct access to existing businesses in the study area, direct access would change, as shown in Figure 4 and Figure 5. However, since driveways will not be permitted along the Crosstown Boulevard, the driveway to a Goodwill Industries warehouse will need to be relocated to Hudson Avenue to maintain access with Alternatives A, B, and C. Additionally, the driveway to OGE will need to be relocated to 4th Street to maintain direct access with Alternatives A, B, and C. Under Alternatives A and B, Lee Avenue would be closed at the boulevard. Access south of the Crosstown Boulevard would occur via SW 2nd Street, Walker Avenue, and SW 4th Street. With the closure of Lee Avenue, access north of the boulevard would occur via SW 3rd Street and Walker Avenue. The access changes for Alternatives A and B are identical (Figure 4).

For Alternatives A, B, and C, Western Avenue would be closed north of the boulevard. Business patrons to the China Queen Express and future patrons to the currently (2013) abandoned industrial building/garage would have to travel from Sheridan Avenue to the new Classen Boulevard to have access south of the boulevard. New access would be provided from the realigned Classen Boulevard for the McDonalds Restaurant, but the realignment would affect approximately 12 parking spaces from the overflow parking area south of the building.

For Alternative C, Exchange Avenue would be closed between 3rd Street and Reno Avenue; the Conoco Station would have right-in/right-out only to Reno Avenue; and Classen Boulevard would be closed between Reno Avenue and the new Western Avenue (Figure 5). Access to the north would be provided by Classen Boulevard and the new Western Avenue. Access to the Bricktown Plaza would change to right-in/right-out only to Reno Avenue, and Francis would be right-in/right-out onto Reno Avenue with access to the Crosstown Boulevard. No access would be allowed from the boulevard to Francis. Finally, for Alternative C, Ozarka employee parking is on the corner of Lee Avenue and SW 2nd Street (Figure 5). The at-grade nature of Alternative C raised concerns from employees because they would have to cross a four-lane road. Oklahoma City has committed to relocating employee parking as part of the project if this alternative is selected.

Travel times to employment and entertainment centers would be slower for Alternative D when compared to Alternatives A, B, and C. The slower speed limit and lack of improved capacity result in poor LOS at several intersections with Alternative D.

Figure 4. Access Changes for Alternatives A and B

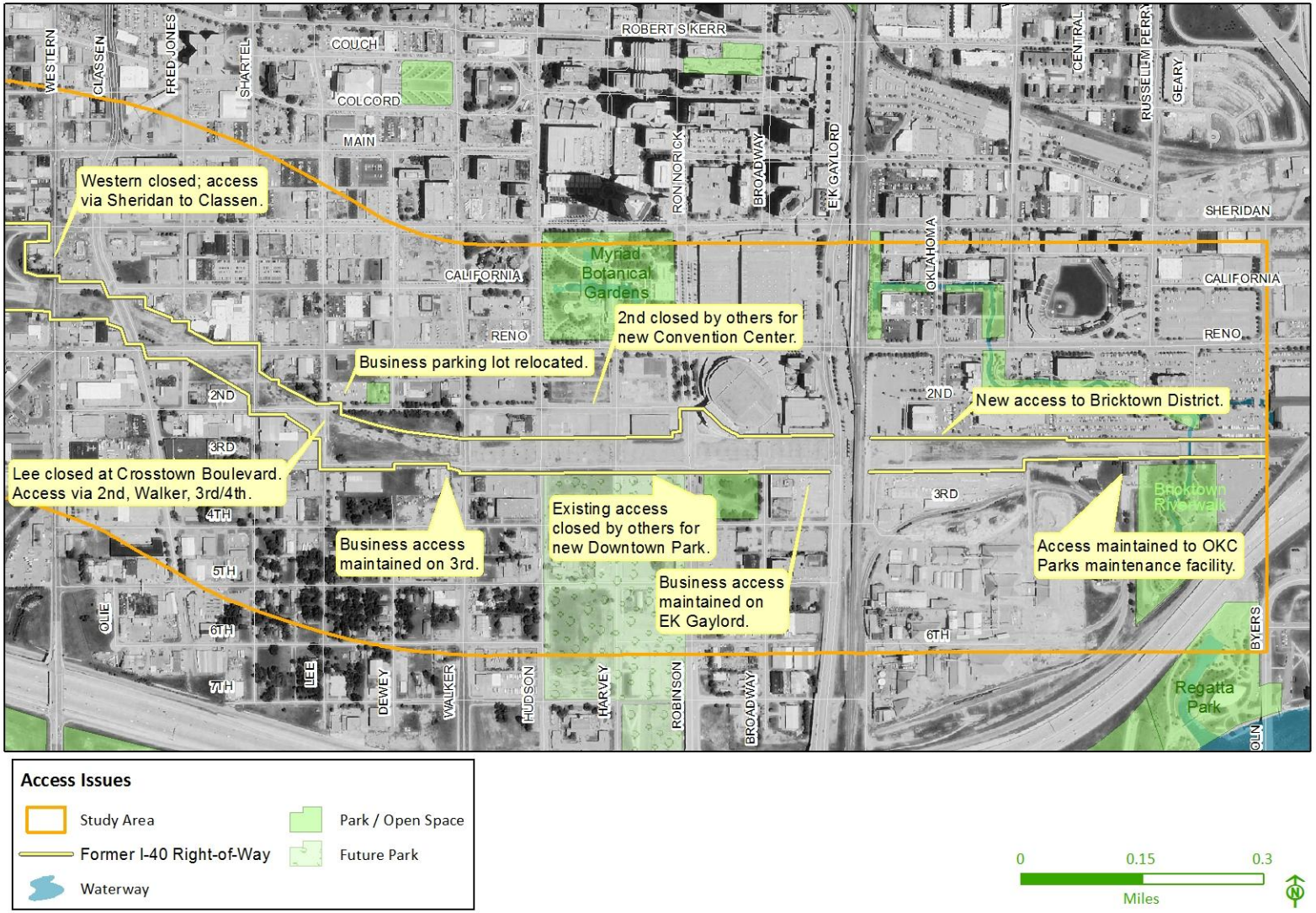
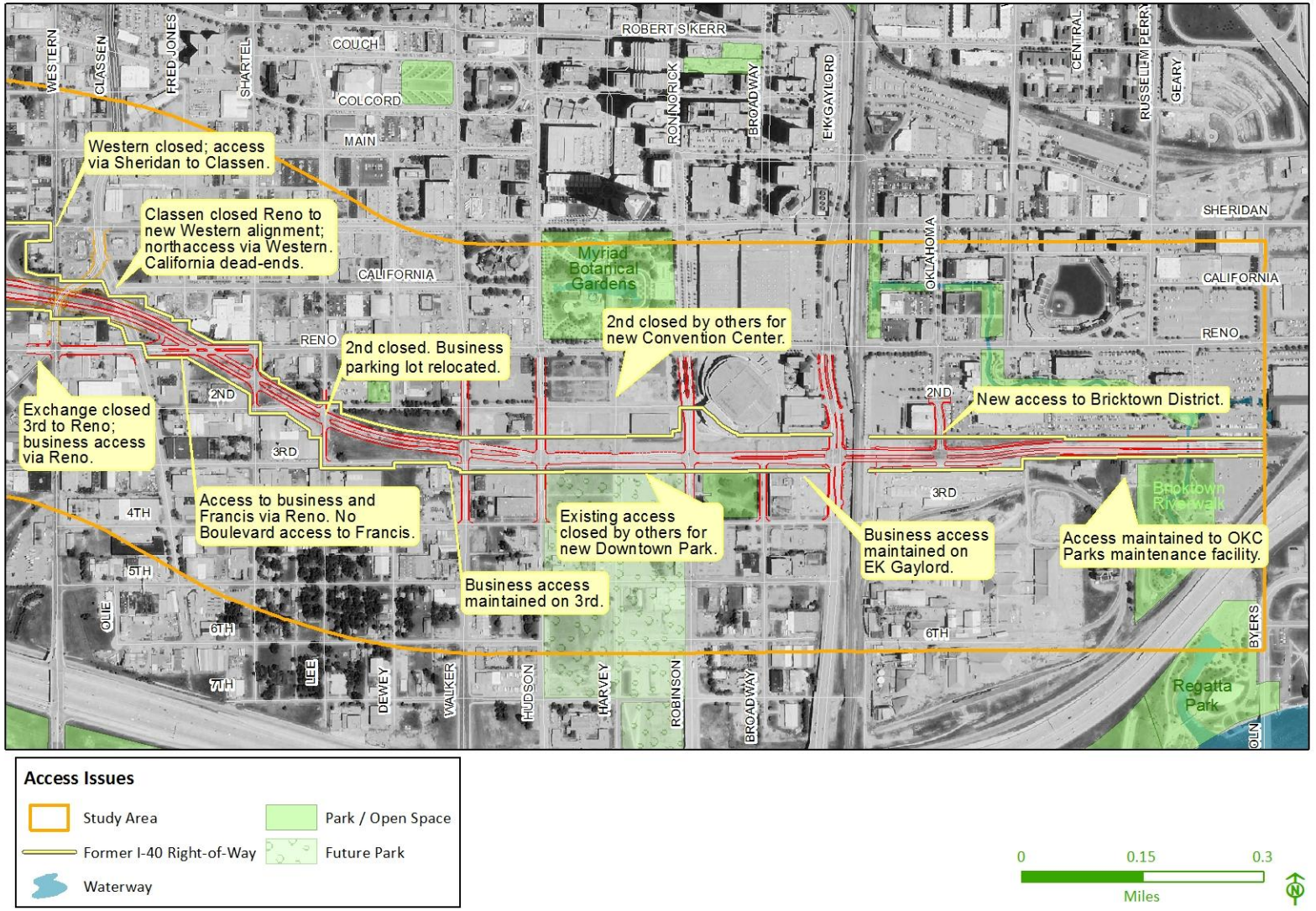


Figure 5. Access Changes for Alternative C



3.0 Environmental Justice

3.1 Regulatory Setting

All federal agencies must comply with Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Bill Clinton on February 11, 1994. The Executive Order states that, "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Pursuant to the Executive Order, the FHWA adopted FHWA Order 6640.23, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, on December 2, 1998. As per FHWA Order 6640.23, a disproportionately high and adverse effect on a minority or low-income population means the adverse effect is predominantly borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population.

Environmental justice (EJ) addresses minority populations that belong to any of the following racial and ethnic groups: Black or African American; Hispanic or Latino; Asian; American Indian or Alaskan Native; and Native Hawaiian or Other Pacific Islander. EJ addresses low-income populations, which include persons whose household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

In terms of transportation policy, EJ contains three fundamental principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- To ensure full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

3.2 Methodology

FHWA's 2011 Guidance on Environmental Justice under the National Environmental Policy Act lists the principles that should be used for addressing environmental justice. Three of the principles used in this analysis included identifying minority and low-income populations; explaining coordination, access to information, and participation; and identifying disproportionately high and adverse effects.

The 2010 U.S. Census data were used to identify minority populations and populations living below the poverty line. The 2010 poverty threshold for a single householder was $11,139, $14,218 for a two-person household, and $22,314 for a four-person household (U.S. Census Bureau, 2010). Data were collected for census tracts and block groups for minority populations. The American Community Survey five-year data were collected for populations below the poverty level. The study area was than compared to the city percentages of the same populations. Block groups with a percentage of minority or low-income populations above the Oklahoma City percentages were noted as potential environmental justice areas.

3.3 Existing Conditions: Environmental Justice Populations

Based upon the analysis of demographic data, a high concentration of EJ populations resides within the study area (Figure 6 and Figure 7). Table 5 shows that four of the seven block groups within the study area have a higher percentage of minority populations than Oklahoma City. Table 6 shows that five of the seven block groups within the study area have a higher percentage of persons below the poverty level than Oklahoma City or Oklahoma County.

3.4 Environmental Justice Impacts

As per FHWA Order 6640.23, a disproportionately high and adverse effect on a minority or low income population means the adverse effect is predominantly borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population.

Because the entire study area lies within block groups identified as having a higher percentage of EJ populations when compared to Oklahoma City, any beneficial or adverse impacts would be predominantly borne by minority and low-income populations. With the existing conditions, there would be no change to EJ populations as a result of this project and, therefore, no disproportionately high and adverse effects on minority or low-income populations. Based on the following discussion and analysis, Alternatives A, B, C, and D would not cause disproportionately high and adverse effects on minority or low-income populations according to the provisions of Executive Order 12898 and FHWA Order 6640.23.

The alternatives would have similar impacts to both minority and low-income populations because each alternative is predominately located in existing transportation right-of-way. The alternatives vary in the number of lanes, the configuration of access points, and grade separation. While Alternative D would not be constructed within the former I-40 right-of-way between Western Avenue and E.K. Gaylord Boulevard, this alternative still would use existing transportation right-of-way in downtown. Since the majority of work would occur within existing transportation right-of-way, including Alternative D, and the Crosstown Boulevard would involve similar transportation options as the historical use, no disproportionate and adverse effects are expected to EJ populations as compared to non-EJ populations.

Figure 6. Minority Populations by Census Block Group (2010)

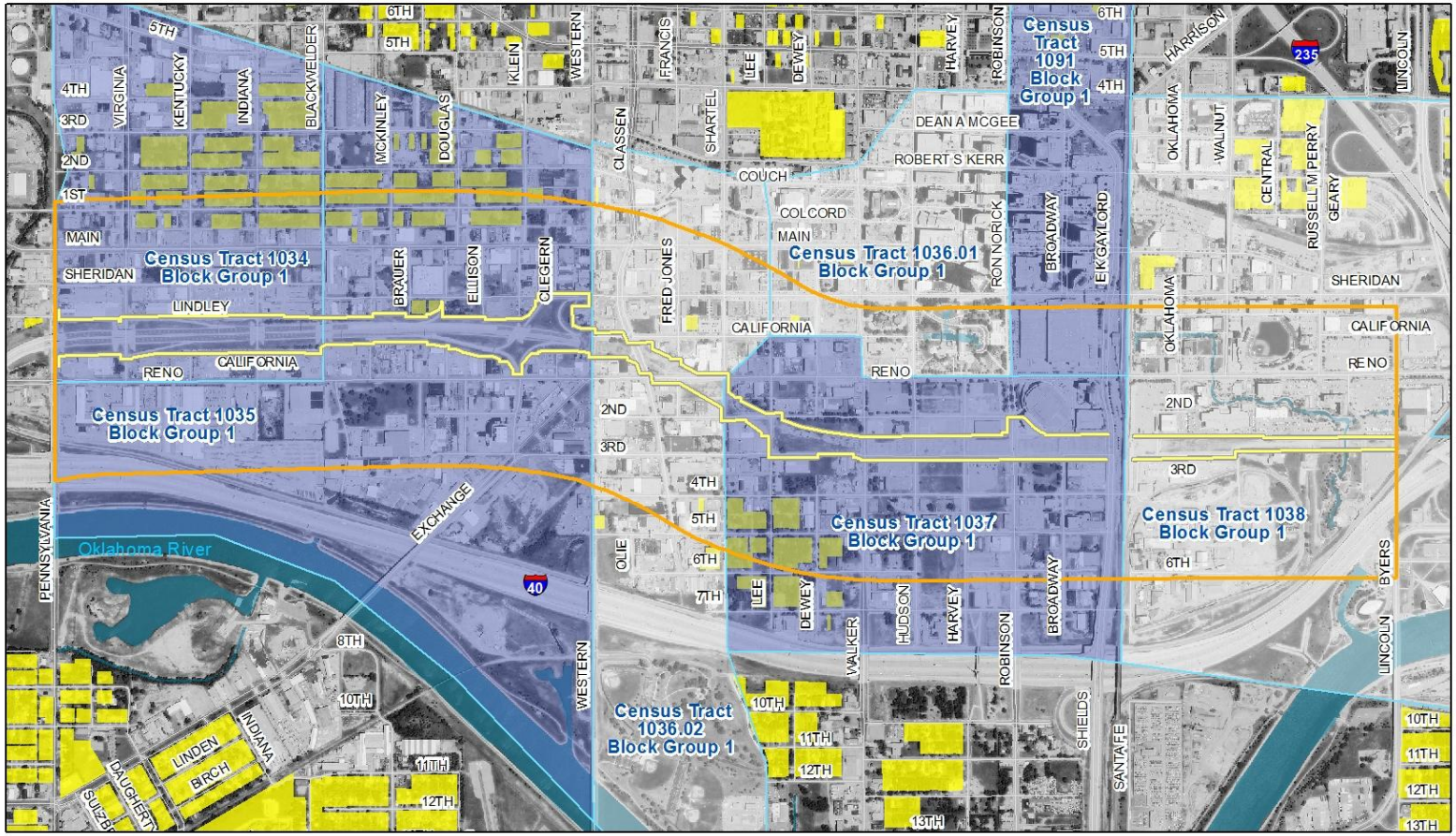


Figure 7. Low-Income Population by Census Block Group (2012)

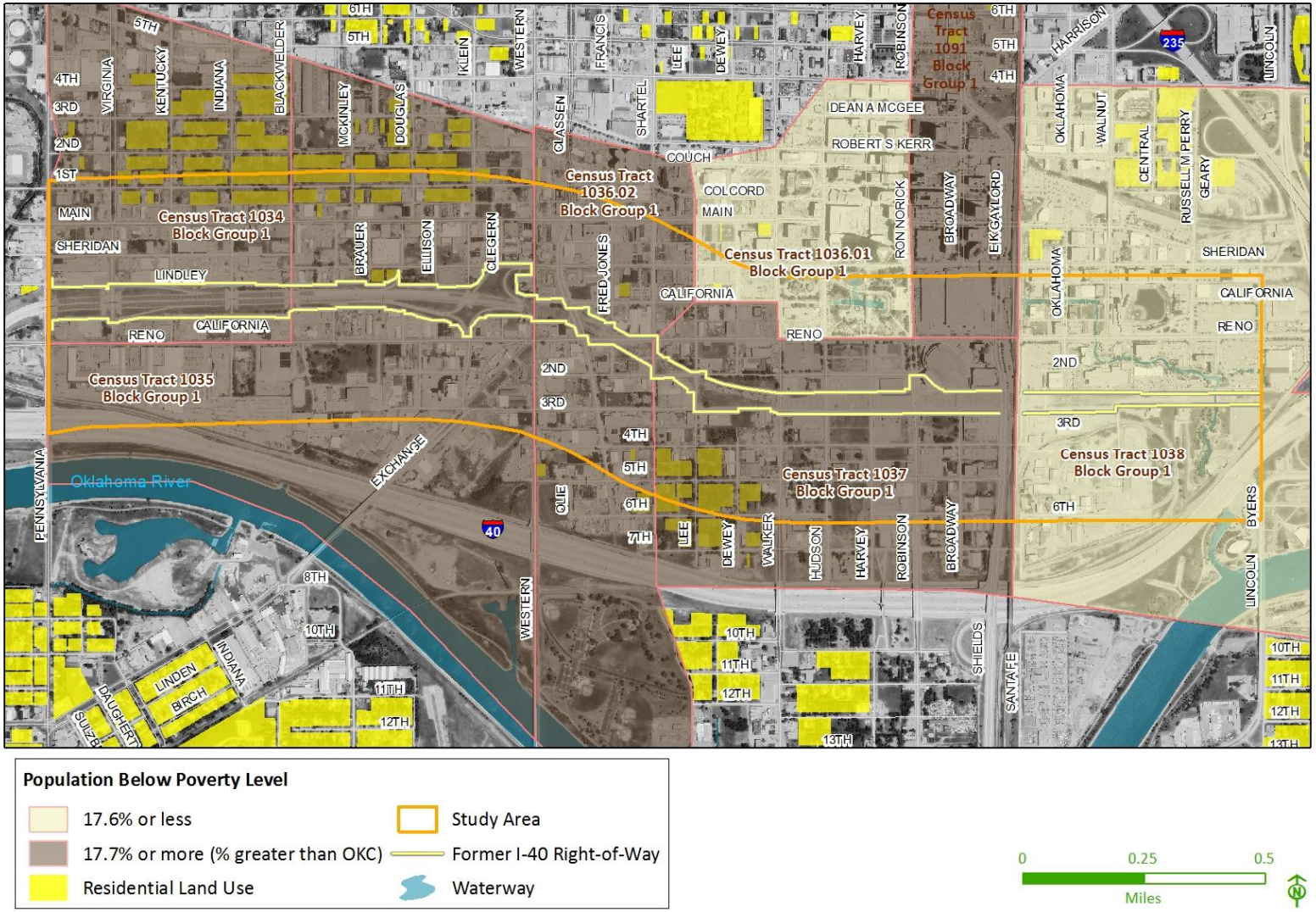


Table 5. Percent of Minority Population

Area	Total Population (Number)	White (%)	Black or African American (%)	American Indian and Alaska Native (%)	Asian (%)	Native Hawaiian or Other Pacific Islander (%)	Other Race or Two or More Races (%)	Hispanic (%)
Oklahoma City	579,999	62.7	15.1	3.5	4.0	0.1	5.2*	17.2
Oklahoma County	718,633	71.8	15.7	4.1	3.2	0.2	5.0*	58.5
Census Tract 1034 Block Group 1	373	43.2	7	5.1	0	0.0	44.8	63.3
Census Tract 1035 Block Group 1	351	54.4	8.8	6.6	0.6	0.0	29.6	34.8
Census Tract 1036.01 Block Group 1	226	84.1	5.8	0.9	4.9	0.0	4.5	6.2
Census Tract 1036.02 Block Group 1	704	68.9	22.2	2.6	0.4	0.0	6.0	4
Census Tract 1037 Block Group 1	514	50.4	31.5	8.9	0	0.0	9.1	12.3
Census Tract 1038 Block Group 1	467	81.4	8.6	2.8	3.4	0.0	3.9	4.7
Census Tract 1091 Block Group 1	251	51.0	35.1	9.2	0.0	0.0	4.8	2.4

Source: U.S. Census Bureau 2010

Note: Shading indicates higher percentage of minority populations than Oklahoma City.

Table 6. Poverty Status, 2012

	Total Population for which Poverty Status is Determined	Population Below Poverty Level	Percentage Below Poverty Level
Oklahoma City	570,573	100,475	17.6%
Oklahoma County	707,176	126,049	17.8%
Census Tract 1034 Block Group 1	326	63	19.3%
Census Tract 1035 Block Group 1	233	76	32.6%
Census Tract 1036.01 Block Group 1	151	11	7.3%
Census Tract 1036.02 Block Group 1	268	245	91.4%
Census Tract 1037 Block Group 1	239	82	34.3%
Census Tract 1038 Block Group 1	428	49	11.4%
Census Tract 1091 Block Group 1	174	137	78.7%

Source: U.S. Census Bureau 2010; 2008–2012
Note: Shading indicates a higher percentage of persons below the poverty level than Oklahoma City or Oklahoma County.

3.4.1 Air Quality

The Crosstown Boulevard Project is located in Oklahoma County, which meets all of the National Ambient Air Quality Standards. The project is not expected to affect regional air quality levels, as it would not affect regional vehicle miles traveled. Alternative A would have the least number of intersections with poor LOS and would therefore have less potential for elevated carbon monoxide levels. Alternative D would have the most number of intersections with poor LOS and would therefore have the greatest potential for elevated carbon monoxide levels. Because the study area is in attainment for carbon monoxide, however, potential emissions of carbon monoxide are not expected to cause a violation of the National Ambient Air Quality Standards. Further details related to air quality are presented in the *Crosstown Boulevard Air Quality Technical Memorandum* (Parsons Brinckerhoff 2014b).

Based on the analysis, EJ populations would not be affected adversely because the project is not expected to adversely affect air quality in the study area.

3.4.2 Visual Quality

Alternative C would have the most visual benefits to the study area. This alternative would reduce visual encroachments along the right-of-way (such as utility poles, debris, and signage). Under Alternatives A and B, the proposed bridge would be expected to slightly decrease visual quality because it would include overhead structures and columns that would obstruct the foreground of views and add visual mass. However, Alternatives A and B would increase visual quality by improving the existing I-40 right-of-way, which is currently vacant land. Alternative D does not include any additional transportation improvements to the existing I-40 right-of-way and would either have not change to or improve slightly the visual quality of the study area. Further details related to visual quality are presented in the *Crosstown Boulevard Visual Technical Memorandum* (Parsons Brinckerhoff 2014c).

Based on the analysis, EJ populations would not be affected adversely since the project is not expected to adversely affect visual quality in the study area.

3.4.3 Community Connectivity

Alternative A provides the least amount of community connectivity for areas north and south of the Crosstown Boulevard. However, EJ populations in the neighborhoods would not be adversely affected since existing communities would not be divided. Alternatives B and C would not affect community connectivity for areas north and south of the Crosstown Boulevard. Alternative D would use the existing grid system in downtown and would not divide existing neighborhoods. Alternative D could benefit EJ populations by promoting connectivity through use of the existing grid system. Therefore, EJ populations in the neighborhoods would not be adversely affected.

3.4.4 Business and Residential Displacements

None of the alternatives would result in displacements. With the exception of Alternative D, each alternative would be constructed primarily within the former I-40 right-of-way. Alternative D would be constructed within existing transportation right-of-way of the downtown grid system. Therefore, EJ populations would not be adversely affected as a result of the project.

3.4.5 Traffic

3.4.5.1 Capacity

The alternatives were developed with varying degrees of capacity and access to downtown. Alternatives A, B, and C are the most similar because the Crosstown Boulevard would follow the same general alignment. Alternatives A, B, and C would provide varying degrees of vehicular capacity as well as access to downtown. Alternative A would provide the most capacity because it includes three through lanes in each direction; however, it would not provide the highest number of access points of these three alternatives to the downtown area. Alternatives B and C would reduce capacity when compared to Alternative A because of the four-lane cross-section. Alternative A and B would have the same level of access points to the downtown area, but Alternative C would increase the number of access points to the downtown area by adding three intersections along the east end of the boulevard: Reno Avenue, Lee Avenue, and Shartel Avenue. As a result, Alternative C would provide more access to and from the area for EJ populations.

Alternative D was developed in an effort to maintain the existing infrastructure and street grid, and therefore would not provide any new capacity to the downtown area. Based upon the traffic analysis (Traffic Engineering Consultants, Inc. 2014), by 2040, 21 of the 31 intersections are expected to operate at unacceptable levels of service for at least one peak hour. In order for the existing Oklahoma City street grid to accommodate the expected increase in traffic, the majority of roadways in the study area would need to be widened to a four-lane cross-section

with signalized intersections and turn lanes. Although slower posted motor vehicle speeds would encourage bicycle and pedestrian activity, thereby promoting a sense of community.

3.4.5.2 Accessibility

The benefits of Alternatives A, B, and C would lead to improved roadway 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 study area to a more pedestrian and transit-friendly environment as suggested by the Core to Shore Plan and the MAPS 3 program. Changes in travel patterns and access associated with a transportation project typically drive socioeconomic impacts, including induced development and changes in property tax values. These are indirect impacts that could occur as a result of the project. Indirect impacts to minority and low-income populations residing within the study area that could occur are discussed in the *Crosstown Boulevard Indirect and Cumulative Effects Technical Memorandum* (Parsons Brinckerhoff 2014d).

Alternatives A, B, and C are not expected to have a disproportionate and adverse impact to EJ populations. Alternative D could have an adverse effect on EJ populations from the lack of improved capacity and poor intersection movement throughout the area.

3.4.6 Noise Impacts

For each alternative, two sites would experience noise impacts. One site is a residence on North Barauer Avenue between Sheridan Avenue and the Crosstown Boulevard. The other was the Rescue Mission on the corner of Reno Avenue and Classen Avenue.

ODOT Noise Policy states that noise mitigation must be considered for any receivers that would experience impacts. However, only noise abatement measures that are determined feasible and reasonable will be recommended. For the Crosstown Boulevard, noise abatement cannot be recommended because neither site met both the feasible and reasonable criteria in accordance with the ODOT Noise Policy. Further details related to noise quality are presented in the *Crosstown Boulevard Noise Technical Analysis* (Parsons Brinckerhoff 2014a). Because noise impacts would occur throughout the study area, they would not have any disproportionate and adverse impacts to environmental justice populations.

4.0 Parks and Recreation/Section 4(f)/6(f)

This section describes parks and recreational facilities within the study area. Publically owned recreational properties that are protected by Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. Section 303 and 23 U.S.C. 138) are also identified. No properties in the study area were purchased using Land and Water Conservation funds.

4.1 Regulatory Setting

Section 4(f) of the U.S. Department of Transportation Act of 1966 protects publicly owned land within parks, recreation areas, wildlife and waterfowl refuges, and historic and archaeological sites, whether publicly or privately owned. For purposes of Section 4(f), historic sites are protected if they have been listed on or determined eligible for listing on the National Register of Historic Places. In addition, Section 4(f) applies to archaeological sites that are on or eligible for listing on the National Register of Historic Places and that warrant preservation in place. Properties protected by Section 4(f) are referred to as "Section 4(f) resources." This section addresses non-historic and archeological Section 4(f) resources.

Section 6(f) of the Land and Water Conservation Fund Act of 1965 (LWCF) (Public Law 88-578) states that properties purchased or improved with LWCF funds cannot, "without the approval of the Secretary [of the Department of Interior], be converted to other than public outdoor recreation uses." Properties purchased using LWCF funds (Section 6(f) lands) are protected and may also be a resource protected by Section 4(f) of the U.S. Department of Transportation Act of 1966.

4.2 Methodology

Secondary source information supplemented by field reviews on March 29, 2013, was used to identify parks and recreational areas in the study area. The Oklahoma City Parks Department website, Google Maps, and planning documents also were reviewed to identify potential resources. Geographic Information System data were obtained to locate existing parks and recreational resources within, and in the vicinity of, the study area.

4.3 Existing Conditions: Parks and Recreational Facilities

Parks, recreational areas, and open spaces in the study area are shown on Figure 3 and described below. Regatta Park and Draper Memorial Park were identified as potential Section 4(f) resources because they are publically owned. The area identified as Draper Memorial Park (100 SW 3rd Street) is the former entrance ramp onto the I-40 expressway, and there are no recreational amenities present. The Oklahoma City Parks Department stated in a phone conversation (April 29, 2014) that the 2 acres space is currently identified as greenspace in the parks plan and includes some trees and flower beds. However, the open space, owned by

Oklahoma City, does not have any recreational amenities and is not actively used by the public; therefore the property is not a Section 4(f) resource.

The area at the southeast corner of West Reno Avenue and Blackwelder Avenue is currently open space with no recreational activities. This open space is privately owned by Goodwill Industries. In addition, within the study area, Myriad Gardens and Bricktown Riverwalk Park and Canal Trail are privately owned and are not Section 4(f) resources.

Existing recreational facilities, public and private, are as follows:

- Myriad Gardens—Located at 301 West Reno Avenue; amenities include botanical gardens, a dog park, a conservatory, fountains, and open space; it is privately owned and operated
- Bricktown Riverwalk Park and Canal Trail—Located between I-40 and Reno Avenue; amenities include walking trails, a water taxi, Centennial Land Run Monument, and open space; it is privately owned and operated
- Regatta Park—Located at 701 S. Lincoln Boulevard; amenities include a boathouse and launch, trails, and open space; it is publicly owned

In addition, a future downtown park (Central Park) is planned that would be adjacent to Alternatives A, B, and C. This new downtown park is identified in MAPS 3 and is planned to be located between the new boulevard, Robinson Avenue, the existing I-40, and Hudson Avenue. The first phase of the park is located between the Crosstown Boulevard and the existing I-40. Park amenities in the first phase are planned to include event gardens, plaza, promontory, passive gardens, lake with boat rental, great lawn and stage, promenade, amusement and concession area, and family recreation area. Since this planned park is part of adopted plan and is programmed for construction, is publicly owned, and will have significant recreational activities, it will be evaluated as a Section 4(f) resource.

Other recreational activities within the study area include two sports facilities: the Chickasaw Bricktown Ballpark and the Chesapeake Energy Arena. The arena is home to the National Basketball Association's Oklahoma Thunder, and the ballpark is home to the Major League Baseball Triple-A Oklahoma City Redhawks. No properties in the study area were purchased using Land and Water Conservation funds; therefore, there are no Section 6(f) resources.

4.4 Existing Conditions: Cultural Resources

ODOT conducted a review of historic resources for the Crosstown Boulevard. The review indicated that the West Connection and Central Section 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. ODOT coordinated with the State Historic Preservation Officer (SHPO) to determine impacts to this resource as a result of the project.

4.5 Impacts to Parks and Recreational Facilities

With the existing conditions, there would be no effect to parks and recreational facilities as a result of this project. No Section 4(f) properties are expected to have a use by any of the alternatives since none of the parks would be converted into a transportation facility. None of the publicly owned parks in the study area would be directly impacted. Indirect impacts to parks and recreational facilities are described in the *Crosstown Boulevard Indirect and Cumulative Effects Technical Memorandum* (Parsons Brinckerhoff 2014d). Regatta Park is approximately 0.10 mile from the right-of-way location of the new boulevard, and it is south of the existing I-40; therefore no constructive use is expected based on location. The project would not incorporate any land of the planned Central Park into a transportation facility but the Crosstown Boulevard would be adjacent to the planned park. The planned Central Park would not have a constructive use as the outdoor recreational activities would not be substantially impaired and no proximity impacts would occur. Future peak hour noise levels for Alternatives A, B, and C will not exceed the NAC for Category C receptors and therefore not have a noise impact. The future peak hour noise levels for Alternative D will not change from the existing noise level. A constructive use does not occur when projected traffic noise levels do not exceed the FHWA noise abatement criteria (23 CFR 774.15 (f)(2).

Bricktown Riverwalk Park and Canal Trail is the only resource that would be affected by the alternatives. Each of the alternatives would bridge the Bricktown Riverwalk Park and Canal Trail at the same location. The bridge would be similar to existing conditions in the East Connection of the study area and, therefore, it would not introduce any new impacts to this recreational area.

4.6 Impacts to Cultural Resources

The SHPO determined in a letter dated June 13, 2014 that the project will have no adverse effect on the Santa Fe Railroad Historic District. Therefore, there will not be a Section 4(f) use of the historic district by any of the alternatives.

5.0 References

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