156th Street Improvements - Phase 2

Pepperwood Drive to Corby Street

Project Number: MAPA-5127(1) CN: 22376

City of Omaha, Douglas County, Nebraska

Draft Environmental Assessment

June 2014

Submitted Pursuant to 42 USC 4332 (2) (c)
by the:

U.S. Department of Transportation
Federal Highway Administration
and
Nebraska Department of Roads
and
City of Omaha

Cooperating Agency:
Douglas County

_____	_____
Date of Approval	for City of Omaha
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Date of Approval	for Douglas County
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Date of Approval	for NDOR
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Date of Approval	for FHWA

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SECTION 1 INTRODUCTION AND PURPOSE & NEED

1.1 INTRODUCTION

The City of Omaha, Nebraska (City) and Douglas County, NE (County), in cooperation with the US Department of Transportation (USDOT) Federal Highway Administration (FHWA) and the Nebraska Department of Roads (NDOR), are proposing to reconstruct 156th Street, generally between Pepperwood Drive and Corby Streets. The proposed project also includes improvements to Blondo Street from just east of the 162nd Street intersection to approximately 500 feet east of 156th Street, as shown in ***Figure 1.1.*** These improvements have been included by the City of Omaha and the Metropolitan Planning Agency (MAPA) in their 2014 Transportation Improvement Plan (TIP) for the 2014-2018 planning period, and were also identified in the MAPA 2035 Long Range Transportation Plan (LRTP) for property acquisition and construction in 2015 and 2016 (MAPA, 2011). These improvements are proposed to be funded using a combination of Federal and local funds, including funds from both the City of Omaha and Douglas County.

This Draft Environmental Assessment (EA) was prepared in compliance with the requirements of the *National Environmental Policy Act of 1969* (NEPA), the Council on Environmental Quality (CEQ) regulations in the Code of Federal Regulations (CFR) (40 CFR 1500-1508), and guidelines in FHWA's Technical Advisory T-6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents.* The intent of these regulations and guidelines are to ensure that all factors are considered in the transportation decision-making process, including a concern for the environment and the involvement of the public (FHWA, 1987).

1.2 BACKGROUND AND STUDY AREA

1.2.1 BACKGROUND

This segment of 156th Street, which has been identified as a minor arterial by the City of Omaha and MAPA, serves as a north-south connection for those living and/or working in northwest Omaha, and provides access to West Dodge Road (U.S. Highway 6), a major expressway linking suburban, residential developments to downtown Omaha and the interstate system. 156th Street also provides connectivity to West Maple Road (Nebraska Highway 64), one mile north of Blondo Street. Blondo Street, also a minor arterial, serves as an east-west commuter connection for those wishing to stay off the expressway, or away from the commercial development along West Maple Road. ***Figure 1.2*** illustrates the Federal Functional Classification of 156th and Blondo Streets, as well as other roadways in the area (NDOR, 2009).

The majority of traffic along this corridor comes from residential neighborhoods within the immediate vicinity and surrounding areas, among them being Pepperwood, Diamond Head, Farmington Woods, Barrington Park, Windridge Hills, Huntington Park, and Bent Creek. There are two major traffic generators situated along the corridor: Grace Abbott Elementary School at 156th Street & Burt/Cuming Street; and a neighborhood commercial area at the northeast corner of 156th and Blondo Streets, which includes a Bag 'N Save grocery store, a Kwik Shop gas station, and several small retail stores.

Figure 1.1 Location Map

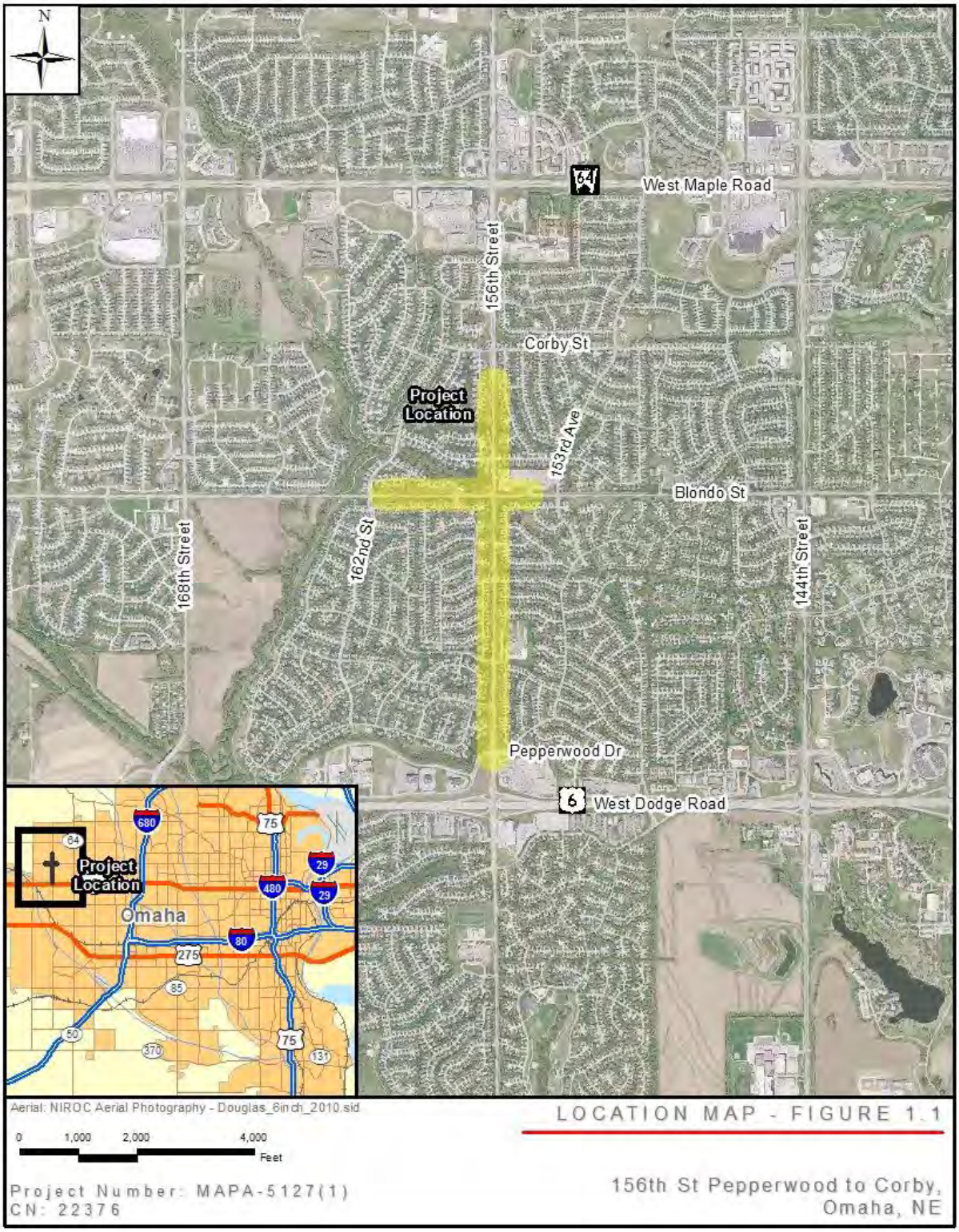
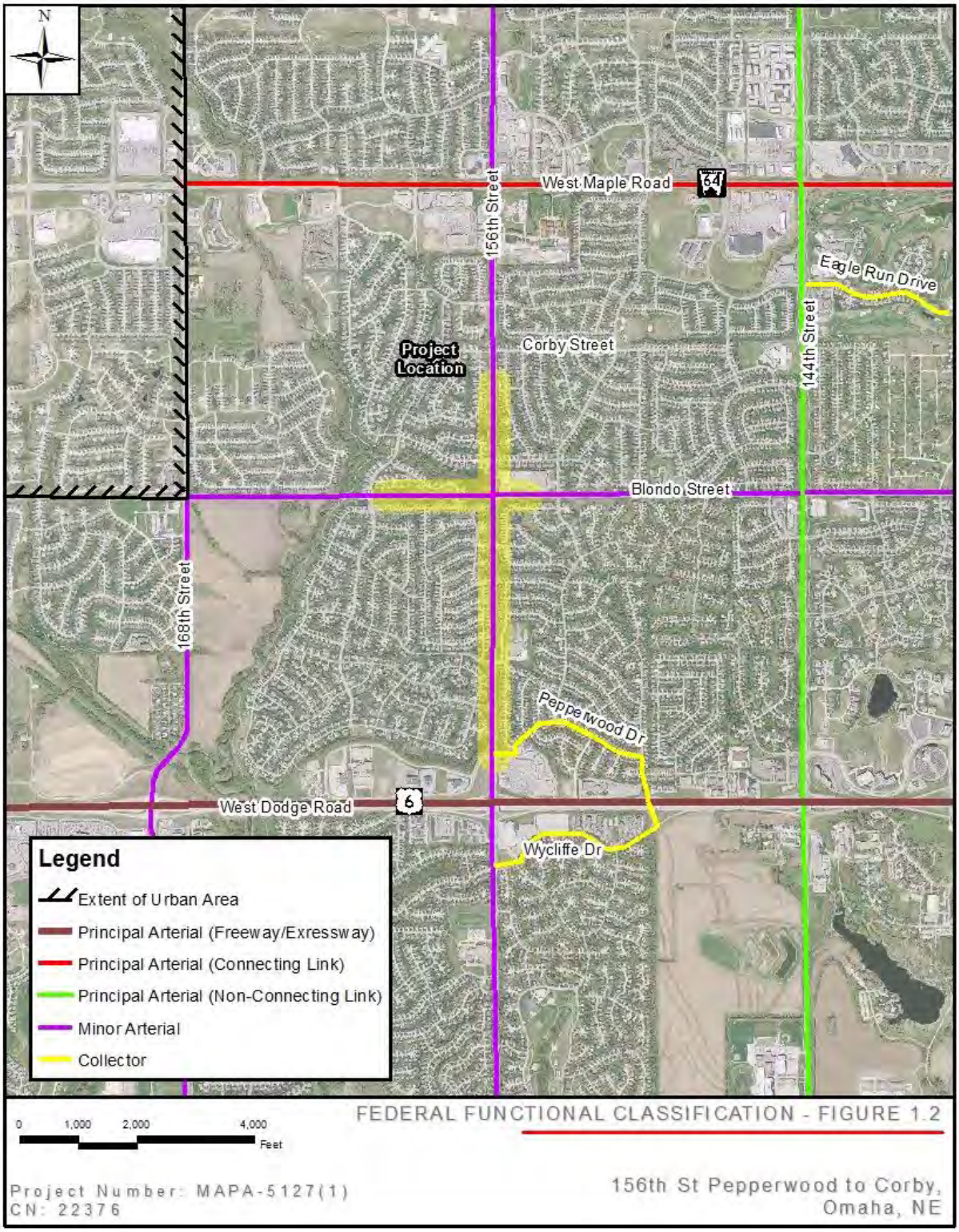


Figure 1.2 Federal Functional Classification System



Several other traffic generators are situated just outside the limits of the corridor: Pepperwood Village southeast of 156th Street and Pepperwood Drive, which includes numerous service-oriented retail stores, a Baker's grocery store, several restaurants, and a bank; Methodist Medical and Business Park southwest of 156th and Pepperwood Drive, which includes several medical and office buildings, Physicians Clinic, and Aldrich Elementary School; a large commercial shopping area southwest of 156th Street and West Maple Road that includes a Hy-Vee grocery store, numerous retail stores, a bank, a gas station, and several restaurants; the Douglas County Garage and Douglas County Sheriff's Office southeast of 156th Street and West Maple Road; Peter Kiewit Middle School south of West Dodge Road; the West Dodge Road interchange at 156th Street; Covenant Presbyterian Church, located on the north side of Blondo Street at approximately 150th Street; and numerous other commercial developments and residential neighborhoods located outside the corridor.

Within the corridor, 156th Street is currently a two-lane "rural" roadway (i.e. without curbs) with additional 3rd and 4th auxiliary lanes at various locations to accommodate turning movements at intersections. The typical cross-section consists of two 11-foot-wide asphalt lanes. However, with the addition of the auxiliary lanes, the existing roadway width varies from 22 feet to 46 feet.

As described above, in order to accommodate turning movements and improve capacity, turn lanes have previously been added at various locations for right and left turns along 156th Street, and also along Blondo Street. ***Table 1.1*** displays the additional turn lanes added along 156th Street, and ***Table 1.2*** displays the additional turns lanes added along Blondo Street. ***Figure 1.3*** shows the locations of these intersections.

Table 1.1 Existing Turn Lanes along 156th Street

Cross Street	Left Turn Lanes	Right Turn Lanes
Burdette Street	Northbound and Southbound	Southbound
Bag 'N Save / Kwik Shop Access	--	Northbound
Blondo Street	Northbound and Southbound	Northbound
Decatur Street	--	Northbound
Charles Street	--	Northbound and Southbound
Burt / Cuming Streets	Northbound and Southbound	Northbound and Southbound
Webster Street	Northbound	Southbound
Pepperwood Drive	Northbound and Southbound	Northbound

Table 1.2 Existing Turn Lanes along Blondo Street

Cross Street	Left Turn Lanes	Right Turn Lanes
158th Street / Patrick Avenue	--	Eastbound and Westbound
156th Street	Eastbound and Westbound	--

Existing drainage features along 156th and Blondo Streets consist of roadside ditches parallel to the roadways, with culverts or area inlets to carry drainage under the intersecting side streets. Several adjacent areas also drain into the ditches through area inlets and storm sewer outlets. Most of the drainage ditches eventually flow to the intersection of 156th and Blondo Streets, and then empty into an unnamed tributary to the North Branch of West Papillion Creek. There is a large concrete box culvert under 156th Street at this location where this channelized tributary "daylights" (i.e. the tributary was placed into a series of concrete pipes upstream of 156th Street when the Diamond Head neighborhood was built). Drainage ditches along Blondo Street east of 150th Street drain to the northeast and eventually into a tributary to Big Papillion Creek.

Adjacent land uses along the corridor primarily consist of residential neighborhoods. As described previously, Grace Abbot Elementary School is located at the northeast corner of 156th Street and Burt/Cuming Street, and there is a commercial development located at the northeast corner of 156th and Blondo Streets.

Numerous existing utilities, consisting of gas, water, communication facilities, sanitary sewers, overhead power, and transmission lines are also present along the corridor. Four-foot-wide concrete sidewalks are present along one side or the other of each of the two roadways, but are not continuous.

1.2.2 Logical Termini and Environmental Study Area

The logical termini (i.e. rational end points) of the proposed improvements to 156th and Blondo Streets and limits of the Environmental Study Area (Study Area) are shown on ***Figure 1.3***, and described below:

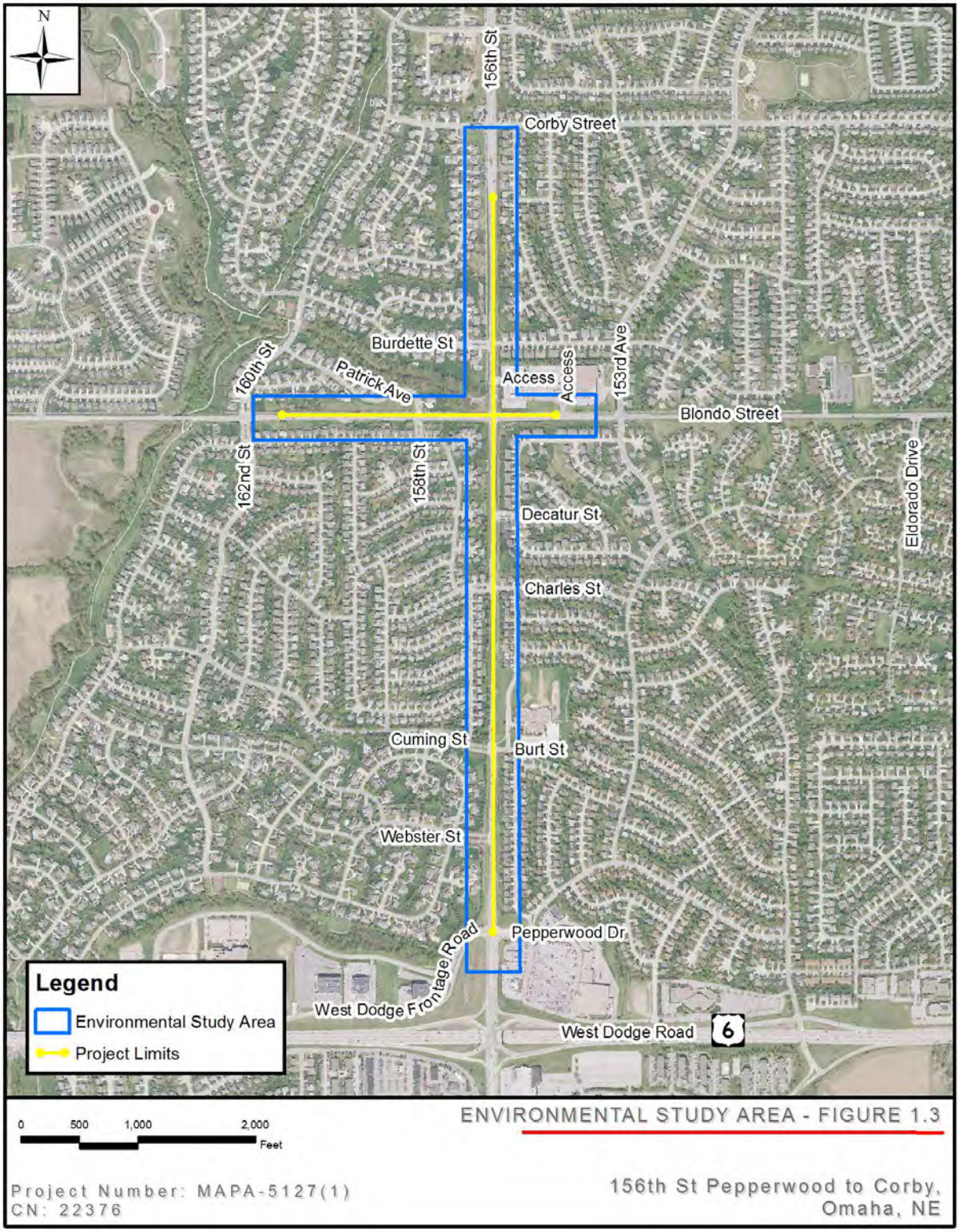
156th Street

The logical termini for the reconstruction of 156th Street are the existing four-lane "urban" cross-sections (i.e. concrete roadways with curbs and medians) of 156th Street, or approximately 240 feet north of Pepperwood Drive to 400 feet south of Corby Street. Some minor reconstruction of the Pepperwood Drive intersection would be required to accommodate the re-configured turn lane geometry along 156th Street. Therefore, the Study Area along 156th Street begins just north of West Dodge Road and extends to just south of Corby Street, or approximately 1.5 miles from south to north, and includes the existing right-of-way and an approximately 100 foot wide buffer.

Blondo Street

The eastern logical terminus for the reconstruction of Blondo Street is immediately west of the access point for the Bag 'N Save parking lot. The western logical terminus is a point approximately 1,800 feet west of 156th Street. The proposed improvements on Blondo Street for this project would connect to the currently proposed four-lane urban roadway to the east (described in the following section), and would extend just far enough to the west to allow for adequate intersection improvements at 156th and 158th Streets, including turning and merging lanes, and the correction of a vertical curve to improve sight distance. Therefore, the Study Area along Blondo Street begins just west of 153rd Avenue, and extends to the intersection of 162nd Street, or approximately 0.6 miles from east to west, and includes the existing right-of-way and an approximately 100 foot wide buffer.

Figure 1.3 Environmental Study Area



Blondo Street Bike Trail

The City of Omaha has plans to extend a bike trail along Blondo Street from the Big Papio Trail (to the east) and the West Papio Trail (to the west). Therefore, as part of this project, a bike trail is proposed to be constructed along the north side of Blondo Street within the project limits. To the east, the bike trail would connect to a segment of the trail that would be constructed before this project is started. To the west, the bike trail would connect to an existing sidewalk along the north side of Blondo, which would provide access to the West Papio Trail by way of existing sidewalks through the neighborhood north of Blondo Street. More information is provided on the bike trail in ***Section 1.4*** and ***Section 3.5***.

1.2.3 Adjacent Projects

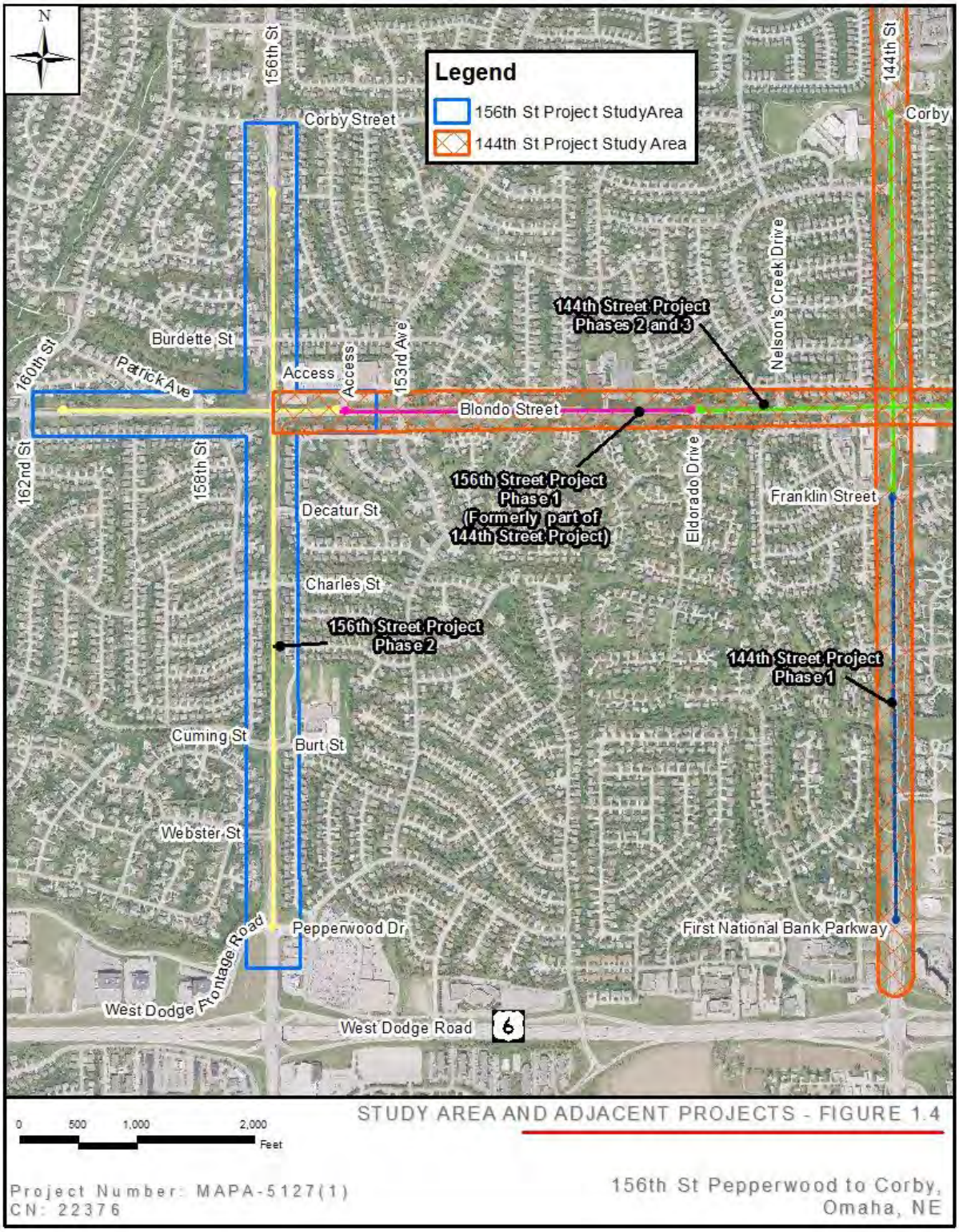
The City of Omaha has also been planning other roadway improvement projects in the vicinity. One of these projects, referred to as the "144th and Blondo Streets Project," slightly overlaps the proposed project discussed in this document. The 144th and Blondo Streets Project includes improvements to 144th Street from First National Parkway north to Corby Street, as well as improvements to Blondo Street from 135th Street west to 156th Street. ***Figure 1.4*** illustrates the project limits and Study Area of the 144th and Blondo Streets projects in relation to the 156th Street project.

The 144th and Blondo Streets Project was originally planned to be constructed in four phases. The first phase (STPC 5001(15)) included 144th Street from First National Parkway to Franklin Street, and began construction in the spring of 2012. The second and third phases (MAPA 5001(19)) included 144th Street from Franklin Street to Corby Street, and Blondo Street from 135th Street to Eldorado Drive, and began construction in 2013. The fourth phase included Blondo Street from Eldorado Drive to just east of 156th Street, and was planned for construction in or by 2015 as part of the MAPA 5001(19) project. However, due to funding arrangements between the City of Omaha and Douglas County, the fourth phase was separated into a new project (MAPA 5127(2)), now referred to as the "156th Street Phase 1 Project" which is planned for construction beginning in October 2014, and extending into 2015.

Although a Final EA and Finding of No Significant Impact (FONSI) were issued on March 9, 2011 for the entire 144th and Blondo Streets Project described above, the Study Area for the 156th Street Phase 2 Project includes a small overlapping segment along Blondo Street (i.e. east to 153rd Ave) to address possible direct impacts resulting specifically from the intersection improvements at 156th Street. This Draft EA does not re-consider impacts along Blondo Street from the 156th Street Phase 1 project, as these impacts were fully accounted for in the previously approved Final EA. The FONSI for the 144th and Blondo Streets project was recently re-evaluated to address minor modifications to the design of the 156th Street Phase 1 project in the vicinity of the 153rd Avenue intersection and the entrance to Bag 'N Save, as well as to update the approval date, which would have been more than three years old when construction begins. This re-evaluation was approved by FHWA on August 29, 2013.

It should be noted that the City does not have any current plans (i.e. within the next five years) to widen Blondo Street to the west of this project, or to widen 156th Street to the north or south of this project.

Figure 1.4 Study Area and Adjacent Projects



1.3 PURPOSE OF THE PROPOSED PROJECT

The purpose of this Project is to improve local and regional mobility[1] by enhancing the vehicular transportation system and improving connectivity, reducing driver delays, and improving pedestrian accessibility along the 156th and Blondo Streets corridors. The project is also intended to support local and regional initiatives of the City of Omaha and MAPA, as described in multiple long-range planning documents, including the MAPA 2035 LRTP, the City of Omaha Capital Improvement Program (CIP), and various "Elements" of the City's Master Plan.

1.4 NEED FOR THE PROPOSED PROJECT

The Project is needed because of insufficient roadway capacity and unacceptable delay at intersections, discontinuity with adjacent roadways and intersections, and inadequate pedestrian/bicycle facilities along the corridor. Details about each of these topics are provided in the following sections and in a *Traffic Analysis Technical Memorandum* prepared for the corridor, which is available in ***Appendix G***.

Description of "Level of Service"

Traffic operation conditions are measured by the Level of Service (LOS) of a roadway segment or intersection. LOS is the relative quality of operations taking into consideration such factors as volume, speed, travel time, and delay. LOS service characteristics and criteria for roadways are displayed in ***Table 1.3***. Levels of service range from A (best) to F (worst). According to the City of Omaha's *Traffic Engineering Guidelines*, the City's goal is build new projects to a LOS C or better; and as described in the MAPA 2035 LRTP, one of the goals of the regional transportation system is to maintain LOS D or higher on all existing streets (MAPA, 2011).

Table 1.3 Level of Service Criteria for Roadways

LOS	Type of Traffic Flow and Delays
A	Traffic is flowing freely. Progression is extremely favorable and most vehicles arrive during the green phase of the traffic signal. Many vehicles do not stop at all.
B	Generally unimpeded traffic flow. Good progression, but more vehicles stops than LOS A.
C	Slower but stable flow with minor delays. Fair progression but green time of individual cycles fails to clear queues, resulting in overflows. The number of vehicles stopping is significant though many still pass through the intersection without stopping.
D	Reduced speeds and increased delays. Congestion is more noticeable. Longer delays result.
E	Slow speeds and significant delays due to poor progression and high volume-to-capacity ratios.
F	Stop-and-go traffic, high level of delay, often occurring with oversaturation.

Adapted from *Highway Capacity Manual 2000*. Transportation Research Board.

[1] The term mobility is defined by FHWA as "the ability to move or be moved from place to place" and is not mode-dependent, but applies to vehicles, transit, pedestrians, and bicyclists. According to FHWA, mobility can be measured in terms of "travel times, level of traffic congestion, or duration of congestion—all of which focus on how long it takes to get from place to place."

LOS is also computed based on the average control delay at intersections. ***Table 1.4*** displays the LOS that corresponds to intersection delays, expressed in "seconds of delay per vehicle" or "s/veh".

Table 1.4 Level of Service Criteria for Intersections

LOS	Average Control Delay [s/veh]	
	Signalized	Un-signalized
A	≤10	≤10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

1.4.1 Insufficient Roadway Capacity

The LOS for 156th and Blondo Streets is expected to be affected as traffic volumes increase in the future. As shown in ***Table 1.5***, traffic volumes are projected to increase between 56 percent and 294 percent for the future conditions between 2008 and 2035, along various roadway segments within the corridor.

Based on roadway capacities in the National Cooperative Highway Research Program's (NCHRP) *Report 365 - Travel Estimation Techniques for Urban Planning*, a two-lane roadway typically has the capacity to carry approximately 15,600 vehicles per day (vpd) (NCHRP, 1998). Based on traffic counts conducted by MAPA and the City in 2008 and 2009, 156th Street between Pepperwood Drive and Burt/Cuming Streets has a volume of approximately 23,650 vpd, resulting in LOS F for that segment of roadway. In the future, this segment is expected to have nearly 37,000 vpd.

Traveling north on 156th Street toward Blondo, traffic volumes decrease as vehicles exit the roadway into the adjacent neighborhoods. Therefore, 156th Street just north and south of Blondo Street has an existing volume of 18,100 vpd and 18,800 vpd, respectively, resulting in LOS F for these segments. The future projected volume by 2035 along 156th Street is approximately 34,000 vpd and 29,000 vpd south and north of Blondo, respectively.

As shown on ***Table 1.5***, even though the LOS would not change for these particular segments, traffic volumes are expected to continue to increase, and traffic operations are expected to continue to decrease. In addition, traffic operations and LOS on other segments are expected to decline from LOS C to LOS F.

Table 1.5 Existing and Future Daily Traffic Volumes; and Levels of Service

Roadway Segment	Existing 2008 Average Daily Traffic (vehicles per day)	Existing 2008 LOS	Future 2035 Average Daily Traffic [1] (vehicles per day)	Future 2035 LOS	Percent Change 2008-2035
156th St North of Blondo St	18,100	F	29,500	F	+63%
156th St between Blondo St & Burt/Cuming St	18,800	F	34,250	F	+82%
156th St south of Burt/Cuming St	22,500 - 24,800	F	36,000 - 38,000	F	+56%
Blondo St west of 156th St	8,000	C	30,800	F	+294%
Blondo St east of 156th St	9,800	C	28,600	F	+196%

[1] Future traffic volumes provided by MAPA.

1.4.2 Unacceptable Delay at Intersections

Table 1.6 displays existing and 2035 traffic volumes, and the associated LOS and delay for the intersections in the Study Area; there are several instances of insufficient capacity for both current and future anticipated traffic volumes. Currently, six intersections are at LOS D or worse, representing unacceptable traffic operations under existing conditions. ***Figure 1.5*** displays the existing LOS and traffic volumes within the Study Area.

As shown in ***Table 1.6***, the future conditions in 2035 for all of the intersections in the corridor are expected to be LOS F, representing very unacceptable traffic operations in the future. ***Figure 1.6*** displays the future LOS and traffic volumes within the Study Area.

Table 1.6 Existing and Future Levels of Service and Delay

Intersection Location	Existing 2008 LOS (seconds/vehicle)	Future 2035 LOS (seconds/vehicle)
156th Street & Burdette Street [1]	F(223.4)	F(X)[2]
156th Street & Bag 'N Save Access [1]	C(23.3)	F(432.9)
156th Street & Blondo Street	D(49.6)	F(429.4)
156th Street & Decatur Street [1]	D(29.1)	F(X)[2]
156th Street & Charles Street [1]	F(114.2)	F(X)[2]
156th Street & Burt / Cuming Streets	A(6.5)	F(113.7)
156th Street & Webster Street [1]	D(28.8)	F(X)[2]
156th Street & Pepperwood Drive	C(22.9)	F(125.4)
Blondo Street & Patrick Ave / 158th Street [1]	C(18.8)	F(X)[2]

[1] Un-signalized intersection; reported delay is experienced on side street only

[2] "X" = volume exceeds capacity; delay is theoretically infinite

1.4.3 Discontinuity with Roadways and Intersections (Vehicular System Linkage)

System linkage is a concept referred to by FHWA as the desire to provide "connecting links" within the transportation system. While this proposed project is not a "missing link" in the transportation system, it is certainly a "weak link." 156th Street is four lanes from approximately 400 feet south of Corby Street to approximately 1,050 feet north of Maple Street (a distance of 0.8 miles). Blondo Street east of 156th Street is currently a two-lane roadway, but is planned to be a four-lane urban roadway, with construction beginning in 2014. Between these other segments of four-lane urban roadways, 156th Street and Blondo Street are still two-lane rural roadways.

These conditions result in congestion in the Study Area as traffic funnels into the smaller capacity roadways. For instance, as traffic exits West Dodge Road and continues north, instead of using both northbound lanes, vehicles begin to position themselves in the through lane (i.e. left lane), to avoid having to merge after the Pepperwood intersection, as the right lane ends just 225 feet north of the traffic signal. Because the right lane does not continue as a through lane, the utilization for the traffic signal is affected, and creates excessive wait times. Similarly, the same situation occurs at Corby Street for southbound traffic, and is likely to occur along westbound Blondo Street, east of 156th Street, when this segment of Blondo Street is improved to four lanes in 2014.

These unintended delays at the edges of the Study Area also contribute to additional traffic congestion and impacts to other roadways and intersections outside the Study Area. One example of this is on the West Dodge Road off-ramp to northbound 156th Street. At peak times, vehicles exiting West Dodge Road that are headed north on 156th Street must utilize the shoulder of the off-ramp, to avoid being rear-ended by vehicles exiting West Dodge Road headed south on 156th Street.

1.4.4 Inadequate Pedestrian and Bicycle Accessibility (Pedestrian System Linkage)

Within the Study Area, both 156th Street and Blondo Street are two-lane "rural" roadways with roadside ditches, and sidewalks that are not continuous along the entire corridor. Existing sidewalks are located in the following locations:

156th Street

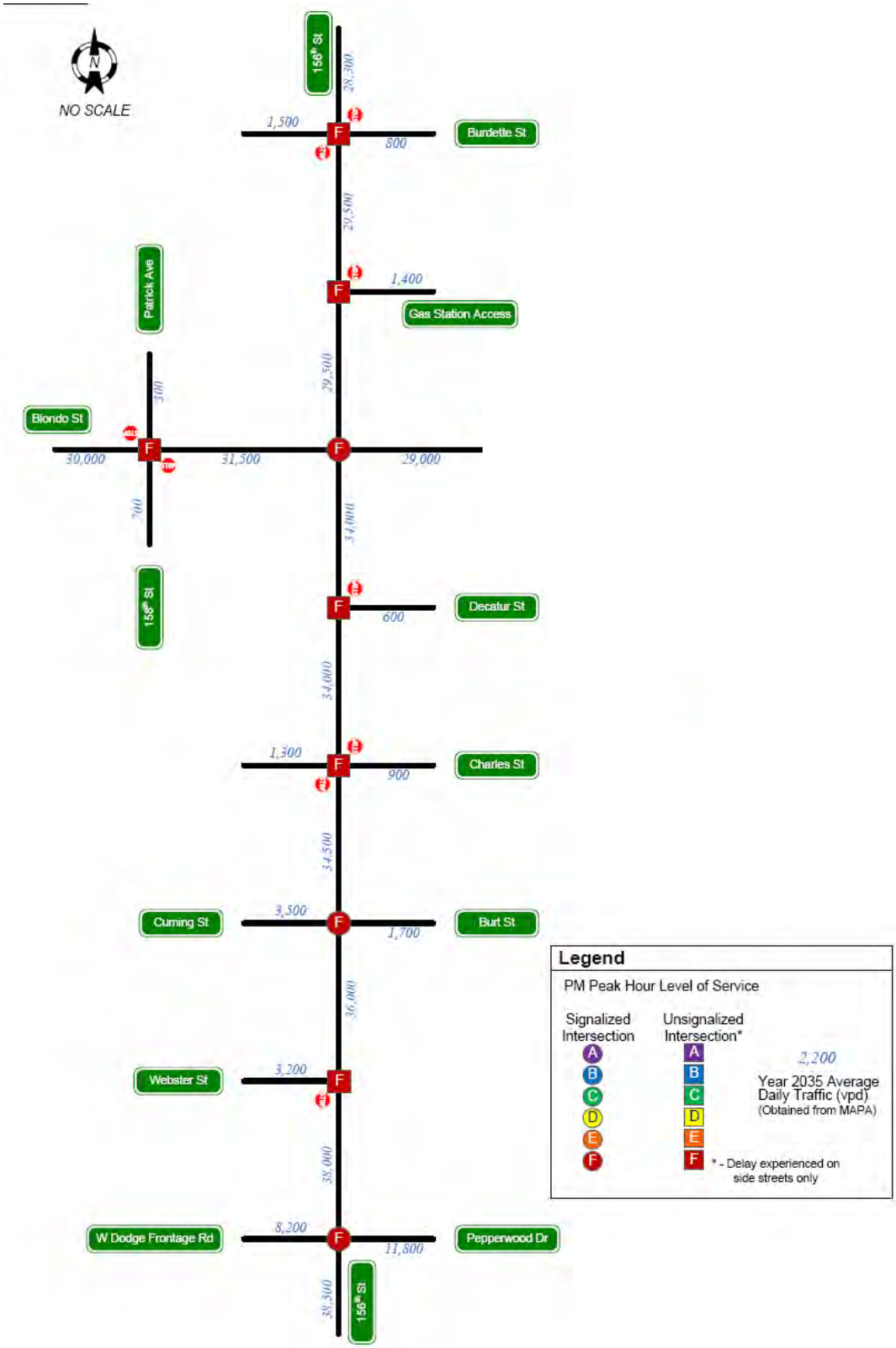
- West side: from West Dodge Road to the north side of Burt/Cuming Streets, and from the north side of Blondo Street to Corby Street.
- East side: from West Dodge Road to Pepperwood Drive, Charles Street to approximately 130 feet north of the Bag 'N Save/Kwik Shop entrance (north of Blondo Street), and from approximately 420 feet south of Corby Street to Corby Street.

Blondo Street

- North side: from the western project limits to the eastern project limits.
- South side: from the east side of 156th Street to the eastern project limits.

Figure 1.5 Existing Levels of Service and Traffic Volumes

Figure 1.6 Future Levels of Service and Traffic Volumes



The intersections of 156th Street and Pepperwood Drive, Blondo Street, and Burt/Cumming Streets are currently signalized, with pedestrian crosswalks. There is also one direct access point (i.e. between two houses) into the Windridge Hills subdivision at the southwest corner of 156th and Blondo Streets.

It should also be noted that at the intersection of 156th and Blondo Streets, the sidewalks along the northwest side of the intersection (approximately 200 feet to the west and 250 feet to the north) share the shoulder of the road with vehicles, due to the limited area for a separate sidewalk, caused by the steep banks of the nearby creek. In particular, the segment along the north side of Blondo Street, west of 156th Street is a gravel shoulder, without a guardrail.

The intermittent pattern of existing sidewalks is not conducive to pedestrian safety, as it necessitates multiple crossings of 156th Street to stay on a paved sidewalk. In addition, because children in the Windridge Hills subdivision attend Grace Abbott Elementary School, and often walk along 156th Street where there is no sidewalk, there is an added need to construct sidewalks along 156th Street. Also, as described previously, the City of Omaha Parks, Recreation and Public Property Department has plans for a trail along the north side of Blondo Street through the project corridor, creating an additional need to construct a wider sidewalk along this segment of Blondo Street. Finally, in a mostly residential corridor such as this, it is required by a City of Omaha ordinance[2] to have sidewalks along both sides the street.

1.5 SUMMARY

156th and Blondo Streets are minor arterial roadways, and serve as primary commuter routes for residents of western Douglas County and the City of Omaha. Both roads connect to other major arterials and nearby freeways, including West Maple Road and West Dodge Road, and are expected to experience an increase in traffic volumes in the future.

The levels of service along these roadway segments, and at numerous intersections in the corridor, are all expected to degrade to LOS F, which would lead to unacceptable traffic operations. Additionally, these roads are currently discontinuous in character to the surrounding roadways, both from a lane number/configuration and roadway width standpoint, and from a pedestrian and bicycle access standpoint, as there are several missing links in the sidewalks along this corridor.

The proposed project is intended to improve the traffic operations of the corridor, improve the level of service, improve connectivity, and provide greater pedestrian and bicycle access, consistent with regional initiatives outlined in the MAPA 2035 LRTP and the City's Master Plan.

[2] City of Omaha Municipal Code, Ordinance No. 38997, enacted May 3, 2011 (Supp. No. 51)

SECTION 2 ALTERNATIVES

NEPA requires that reasonable alternatives, including the No-Action Alternative, be presented and evaluated in a NEPA document. This section describes the process used to identify the alternatives that were fully assessed in this Draft Environmental Assessment.

2.1 OTHER ALTERNATIVES CONSIDERED

The City of Omaha's roadway network is primarily laid out on a grid system, with major arterial roadways on one-mile spacing. Because 156th and Blondo Streets are aligned on this type of system, consideration of alternatives that would re-align these roadways was not considered reasonable or prudent. Additionally, the entire corridor is developed with residential housing and commercial developments, and the existing 100-foot-wide right-of-way would make even a minor re-alignment of these roadways unreasonable. Nonetheless, prudent alternatives were considered where possible, including shifting the centerlines of the roadways slightly to one side or the other to minimize impacts to a variety of constraints, such as existing and proposed utilities, existing driveways and intersections, drainage features, and other physical constraints.

As explained in the *Traffic Analysis Technical Memorandum* (***Appendix G***), a traffic analysis was performed that evaluated the traffic volumes, capacity, and LOS of the existing roadway network, and evaluated the potential design solutions, including optimal roadway cross-sections, recommended lane widths, median locations, and intersection configuration.

Transportation System Management (TSM) alternatives are those activities which maximize the efficiency of the present system. Possible improvements include fringe-area parking, ridesharing, high-occupancy vehicle (HOV) lanes on existing roadways, and traffic signal timing optimization. In general, TSM alternatives are used to address major regional transportation issues in metropolitan areas with populations greater than 200,000 (FHWA, 1987). TSM measures are limited in their ability to affect long-term improvements in traffic flow, level of service, and safety. In addition, substandard geometric features of the existing roadways would not be improved. Because the volume to capacity ratio would be exceeded in the future without adding capacity (i.e. additional lanes), TSM alternatives would not fully satisfy the project purpose and need, and were therefore eliminated from further consideration (Murthy Koti, City of Omaha Traffic Engineer, personal communication, April 24, 2014).

Other Intelligent Transportation Systems (ITS) measures were also evaluated by the City. Traffic signal timing optimization is performed by the City of Omaha on a regular basis at various intersections studied for this project. As such, the City routinely uses the latest traffic volume data to re-time the signals. Although the City does not have a centralized Traffic Management Center (TMC) at this time, efforts are in place to upgrade the signal infrastructure, sensors, communication systems, and share the NDOR Traffic Operations Center (TOC) located at 108th and "I" Street in the near future. While these initiatives have some potential to reduce non-recurring traffic congestion during off-peak hours, and may improve the City's capability to better manage the signal infrastructure, it is not anticipated that these strategies, alone or in combination with other TSM strategies would improve the future conditions within the corridor

without roadway improvements. Furthermore, they would not address the recurring congestion during peak hours on weekdays (Koti, personal communication, February 9, 2012).

Various typical roadway configurations were also considered, including four-lane undivided and five-lane urban cross-sections. On the basis of current and projected corridor volume, safety, constructability, impacts, and the configuration of the surrounding corridors, the four-lane roadway with median cross-section was selected to compare to the No-Action alternative. Constructing 156th Street without a median would be inconsistent with the adjacent roadways, it would not provide a pedestrian refuge for people crossing the street, and would reduce or eliminate the ability to add dedicated left turn lanes throughout the corridor. For these reasons, alternative cross-sections were not considered further.

2.2 NO-ACTION ALTERNATIVE

The No-Action Alternative, as defined by FHWA, includes normal, short-term, minor activities that address safety and maintenance issues, without making any major improvements to the existing transportation network, but does not preclude the construction of other planned improvements through the City's Long Range planning process, the Comprehensive Plan, or through other county or state projects. This Alternative does not meet the purpose and need as discussed in Section 1, because it does not address the capacity and delay issues, maintains the same discontinuous roadway configuration, and does not satisfy the need for continuous pedestrian accessibility. Nonetheless, it was carried forward for analysis, and is discussed in subsequent sections as a baseline for comparison.

2.3 PROPOSED ALTERNATIVE

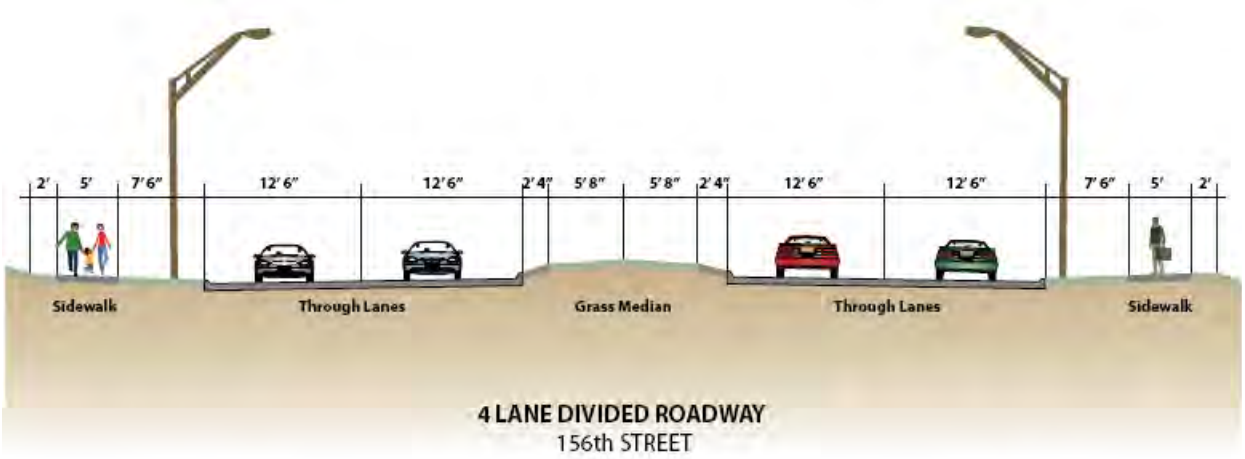
The Proposed Alternative is a four-lane roadway, with raised medians and curbs, and separated, parallel sidewalks or combination sidewalk/bike paths as appropriate. The Proposed Alternative maintains all of the current access points to the adjacent residential neighborhoods, Grace Abbott Elementary School, and the commercial area at the northeast corner of the intersection of 156th and Blondo Streets.

The proposed project would remove and reconstruct the existing two-lane rural asphalt roadway to a four-lane urban concrete roadway with raised medians. Additional auxiliary lanes would be added to accommodate turning movements and to increase the traffic capacity of the roadway. The typical four-lane divided roadway cross-sections (see illustrations below) would consist of two 12.5-foot-wide lanes on 156th Street, and two 12-foot-wide lanes on Blondo Street (i.e. for a total of 25 or 24 feet wide respectively, from the outside back of curb to the inside back of curb) in each direction. The widest roadway cross-section would occur at the 156th and Blondo Street intersection. At this location, the roadway would include two through lanes in each direction, along with dual left-turn-lanes, and one right-turn-lane for an overall pavement width of 90 feet between the outside back of curbs. The proposed pavement would be ten inch (10") thick concrete with six inch (6") high integral curbs.

The driving lanes would be separated by a 16-foot-wide grassed median on 156th Street, and a 15-foot-wide grassed median on Blondo Street, for an overall total width of 66 feet (156th Street) or 63 feet (Blondo Street) between the outside back of curbs. These medians are required to accommodate the addition of

dedicated left-turn lanes at several locations. The grassed medians would have hard-surfaced "mow strips" (i.e. 28-inch-wide by six-inch-thick concrete) adjacent to the inside back of curb.

The construction of medians and dedicated left-turn lanes would result in the conversion of full-access to right-in/right-out only access at the following locations: Decatur Street, Burdette Street, and Patrick Ave/158th Street. These conversions are necessary to maintain compliance with the City's Master Plan, and more specifically, with policies in the *Transportation Element* of the City's Master Plan to control or eliminate access to main roadways within ¼ mile of major intersections. The purpose of these policies in the Master Plan is to improve safety and reduce congestion on the City's arterial street network. To offset these changes, U-turns would be allowed on the northbound and southbound legs of the 156th and Blondo Streets intersection.



4 LANE DIVIDED ROADWAY
156th STREET

4 LANE DIVIDED ROADWAY
BLONDO STREET

The proposed roadway shoulders would consist of either 7.5-foot-wide (156th Street) or 5-foot-wide (Blondo Street) grassed areas, with an adjacent 5-foot-wide concrete sidewalk and 2-foot-wide clear area. A 10-foot-wide bicycle trail would be constructed in place of the 5-foot-wide sidewalk along the north side

of Blondo Street for the entire length of the project. Sidewalk ramps conforming to *Americans with Disabilities Act* (ADA) standards would be constructed to accommodate pedestrians crossing at stop-controlled intersections[3]. An additional left-turn lane would be added to the west leg of the West Dodge Frontage Road (i.e. across from Pepperwood Drive) to accommodate dual-left turning movements onto northbound 156th Street, and associated signal-head and signal timing adjustments would be made. Existing signals at the intersection of 156th Street and Cuming Street/Burt Street would be replaced with signal poles and mast arms. The existing signals at 156th and Blondo Streets would be replaced with new signals.

Grading activities and proposed roadway and sidewalk features would require utility relocations and retaining wall construction. The majority of construction would occur within existing right-of-way, with the exception of the area around the 156th and Blondo Streets intersection, and some areas along the project where grading would not adversely impact adjacent residences (i.e. open spaces). Retaining walls would be used to minimize the impacts to residences if grading is required outside the right-of-way.

The drainage structures that outlet at the northwest corner of 156th and Blondo Streets would be extended to accommodate the widening of 156th Street. The proposed structure would be a twin-barrel reinforced concrete box extending approximately seventy linear feet. The tributary channel at the drainage outlet would be lined with "gabions" (i.e. rock filled wire baskets) or employ some other acceptable treatment to reduce scour and channel degradation. Additional storm sewers and inlets would be constructed to meet the drainage requirements of the *Omaha Regional Stormwater Design Manual*.

2.4 PROPOSED FUNDING PLAN AND PROJECT IMPLEMENTATION (PHASING)

Project Funding

The proposed project to widen 156th Street between Pepperwood Drive and Corby Street is currently estimated to cost approximately $11.7 M. This includes preliminary engineering, NEPA documentation, ROW acquisition, utility relocations, construction, and construction engineering.

The proposed project would be funded by a combination of funds from the City of Omaha, Douglas County, and FHWA. Federal funds are currently being provided through MAPA's TIP program. Federal funding guidelines for Local Public Agency (LPA) projects require a 20 percent match, with the remaining 80 percent of the funds being provided by FHWA. The 20 percent matching funds would be split between the City of Omaha (59 percent) and Douglas County (41 percent)[4]. Local and federal funds have been

[3] The United States Access Board is currently in the process of developing final rules for accessibility of pedestrian facilities in the public right-of-way (PROWAG). These guidelines are expected to be finalized prior to the final design of the Proposed Alternative, and would be used for sidewalks throughout the project. The draft rule is available online at http://www.access-board.gov/prowac/. Audible crossing signals for visually impaired persons would be installed if the individual requesting these assistive devices provides the documentation required by City's policy, which requires medical documentation from a physician, physician's assistant, or nurse practitioner for the individual's impairment prior to installing the device.

[4] Douglas County's contribution to the project (i.e. for County ROW adjacent to Diamond Head) may be re-calculated based on future City annexation agreements.

previously obligated by the City, County, MAPA, and FHWA for the years 2010-2016, with construction currently planned to begin in 2016.

Project Implementation (Phasing)

The proposed project would be implemented in two major phases, occurring over two construction seasons. Preliminary plans are for the first construction season to focus on the construction of Blondo Street, and for the second construction season to focus on the construction of 156th Street. These plans may be subject to change, pending project specifications developed for the final design and following constructability reviews by the contractor and the City.

A detailed phasing plan would be developed during the final design phase of the project. This plan would take into consideration: right-of-way impacts, property and business access, existing traffic using these routes, utility relocations, and a contractor's necessary work zone to complete the construction activities within a defined time frame. Currently, traffic would be maintained along existing routes where feasible; however, it would be necessary to close portions of 156th Street and Blondo Street. These closures would be limited to areas that have large grade changes, deep sewer and utility relocations, and limited right-of-way.

The City would coordinate the planned construction activities with the public throughout the construction process. Specifically, the City would place door hangers on affected property owners' front doors prior to construction and would hold a pre-construction public meeting to discuss specific issues related to detours, access, and timing. **If you or someone you know may require special access or provisions during construction, please contact the City at 402-444-5000.**

SECTION 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section includes a description of potentially affected natural and human environmental resources, and the environmental consequences of the No-Action and Proposed Alternatives. It also lists mitigation measures, including NDOR standard specifications, and special provisions[5] of the Proposed Alternative to avoid, minimize, or mitigate adverse impacts. Pursuant to NEPA, and based on the character of the Study Area, as well as input received from agencies, the public, and stakeholders, the following list of potentially affected resources was identified for detailed analysis:

- Land Use
- Social and Economic Considerations
- Environmental Justice
- Right-of-Way, Acquisitions, and Relocations
- Pedestrians, Bicyclists, and Accessibility for Individuals with Disabilities
- Parks, Recreation Areas, and Section 4(f) Resources
- Historic and Archeological Resources
- Water Resources and Water Quality
- Wetlands and Riparian Areas
- Floodplains
- Vegetation, Wildlife, and Migratory Birds
- Threatened and Endangered Species
- Utilities
- Noise Impacts
- Air Quality, Mobile Source Air Toxics, and Greenhouse Gases
- Hazardous Materials and Recognized Environmental Conditions
- Visual Impacts and Aesthetic Considerations
- Temporary Construction Impacts
- Secondary and Cumulative Impacts

The following potentially affected resources either do not occur in the Study Area, or were determined to be not affected by the proposed project, and are therefore not discussed in this section:

- Freight Movement - According to the City of Omaha Public Works Department, 156th Street and Blondo Street are not currently designated truck routes, nor would they be designated as truck routes following the construction of the proposed project. The proposed project is also not part of a statewide or national freight network, policy, or strategic plan. Therefore, there would be no appreciable impacts or benefits to freight movement as a result of the proposed project.

[5] NDOR's *Standard Specifications for Highway Construction, 2007 Edition* lists standard construction methods and processes that would be used to minimize and mitigate potential adverse impacts to the natural and social environment, and are listed as commitments in the mitigation section for each of the relevant resources. Special Provisions are modifications or additions to the standard specifications described above, and would be included in the construction documents for this project. Responsible parties are also noted in Section 5.

However, local deliveries may experience improved mobility resulting from shorter wait times and reduced congestion.

- Prime Farmland - There is no farmland within the Study Area, including prime farmland or farmland otherwise designated as unique or important.
- Section 6(f) - There are no properties developed with Land and Water Conservation Act Funds within the Study Area.
- Wild and Scenic Rivers - The nearest Wild and Scenic River is the Missouri River at Yankton, SD.
- Coastal Barriers or Coastal Zones - There are no coastal areas in Nebraska.
- Platte River Depletions - The project area is not within the Platte River watershed.

3.1 LAND USE

Land use is considered by determining the potential impacts from a proposed project as it relates to consistency with an area's local land use plans and policies, including Comprehensive Plans, Long Range Transportation Plans, community development plans, special zoning or overlay districts, and other growth initiatives. Specifically, in the City of Omaha, these plans and policies are outlined in the City's Master Plan, which includes various "Elements" for Transportation, Environment, Urban Development, Land Use, Parks and Recreation, and Housing and Community Development.

3.1.1 CURRENT CONDITIONS

The existing land uses in the Study Area are primarily low-density residential, with one area of commercial development at the northeast corner of 156th and Blondo Streets, which includes a Bag 'N Save grocery store, a Kwik Shop gas station, and a small retail strip mall (***Figure 3.1***). There is a stream channel that has been enclosed (i.e. placed into a culvert) under this development, which outlets at the northwest corner of the intersection. There is also one elementary school along 156th Street; Grace Abbott Elementary School.

The *Land Use Element* of the City's Master Plan (***Figure 3.2***) indicates that future land uses in the Study Area are generally anticipated to be the same as existing land uses. Specifically, the majority of the corridor is low-density single family residential housing, and the intersection of 156th and Blondo Streets is a "Convenience Area[6]." Just outside the Study Area, there are two additional "Convenience Area" intersections; at 144th and Blondo Streets, and at 168th and Blondo Streets, and two "Community 80 Mixed Use Area[7]" intersections; one located at 156th Street and West Maple Road, and one located at 156th Street and West Dodge Road.

[6] The Master Plan describes "Convenience Areas" as areas providing "goods and services at a moderate scale to nearby residences. Typical facilities include convenience stores, grocery stores, gas stations, ATMs, and small offices and shops."

[7] The Master Plan describes "Community Mixed Use Areas" as providing "major grocery and discount stores, major retail stores, major medical and educational institutions, automobile dealerships and other large-scale auto-related uses, moderate- to large-scale civic and cultural facilities, community recreational centers, apartment buildings and townhouses, and moderately sized office buildings." The "80" refers to the size (80 acres) of the area.

Figure 3.1 Existing Zoning from City of Omaha

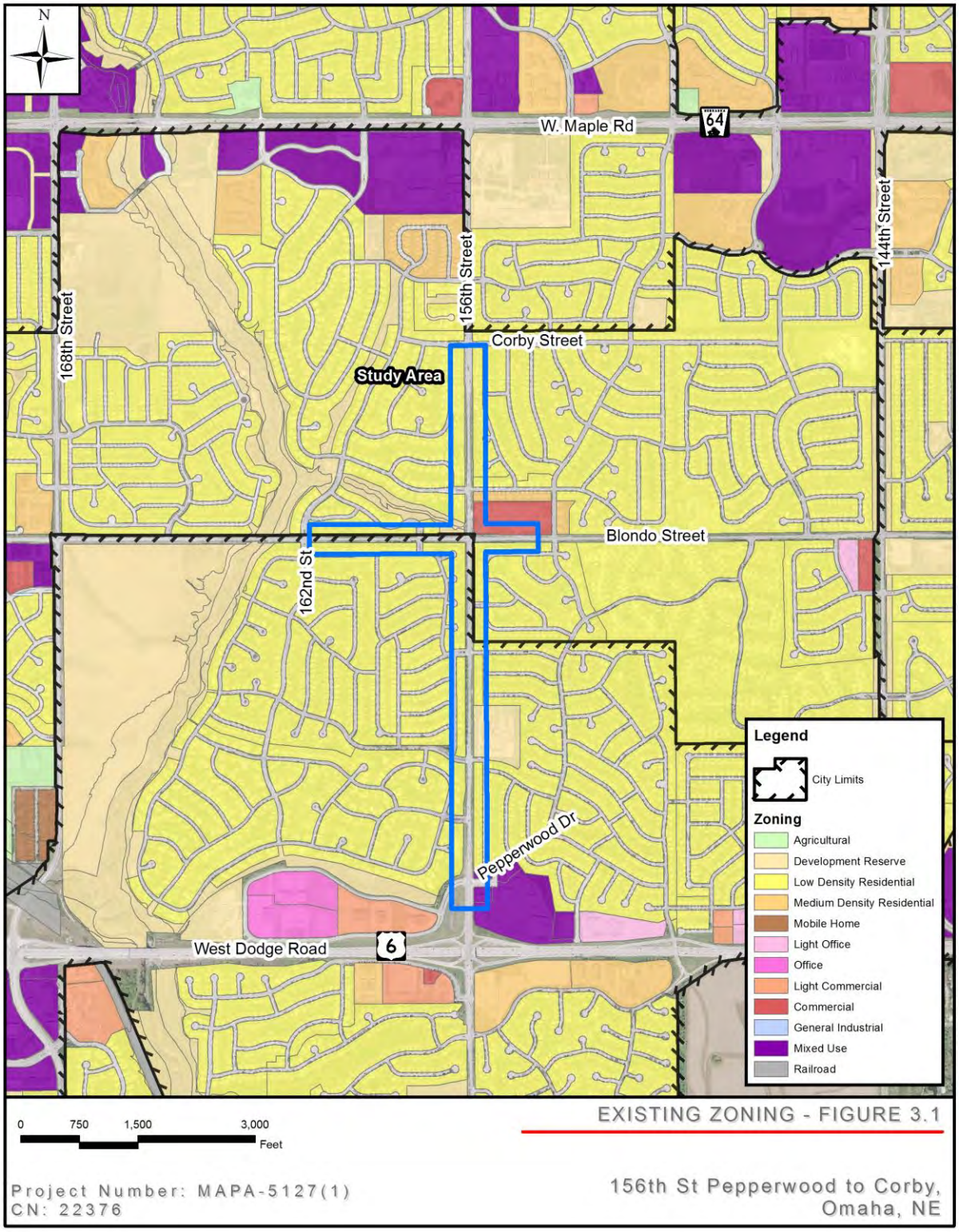
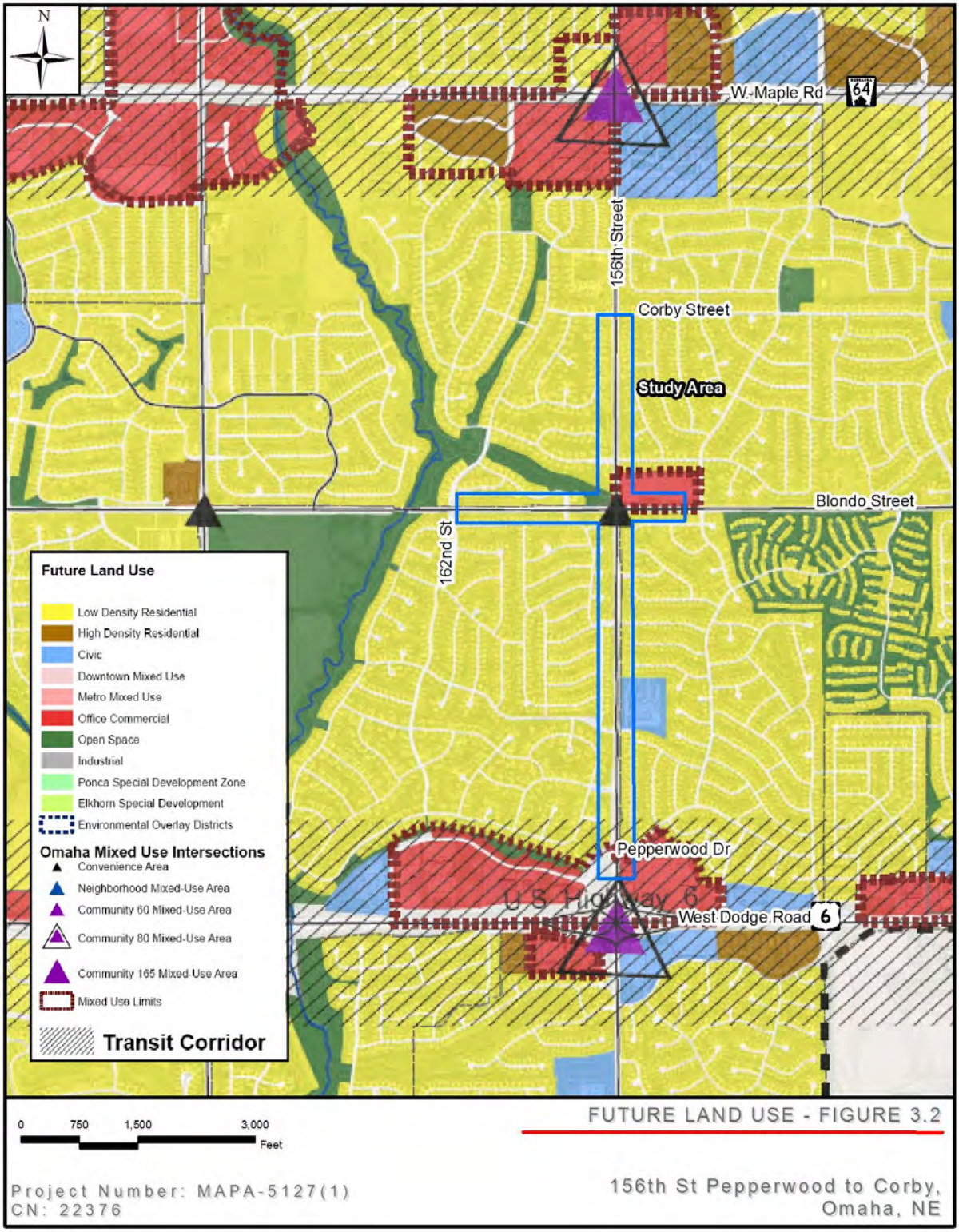


Figure 3.2 Future Land Use Map from City of Omaha Master Plan



While the future land use map does show the area around the stream channel northwest of the intersection of 156th and Blondo Streets as "Open Space," the area is actually an "outlot" owned by Sanitary Improvement District[8] (SID) #374, Huntington Park, and is not a publicly accessible park or recreation area. More information on this property is provided in ***Section 3.6, Parks, Recreation Areas, and Section 4(f) Resources***.

3.1.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would not create any changes to existing land uses, nor would it modify any of the City's future land use plans.

Proposed Alternative

The Proposed Alternative would not be expected to affect the existing land uses of the Study Area, nor would it be expected to change the future land use plans for the area.

The potential does exist for the neighborhood commercial area to be re-zoned to a higher or different use in the future; however, this would be unlikely given the fact that the 156th and Blondo intersection is defined as a "Convenience Area" which is based on the functional classification of the intersecting roadways, which would not be affected by the proposed project. The Proposed Alternative would not create additional access points to the commercial or residential areas, and would not create an incentive to change future land use plans for any other areas along or outside the corridor.

In addition, the introduction of medians at Decatur Street, Burdette Street, and Patrick Ave/158th Street would not affect land use. The Proposed Alternative would also not create any additional opportunities for unplanned growth or development, as the entire corridor is already developed.

3.1.3 Proposed Mitigation

No mitigation is proposed.

3.2 Social and Economic Considerations

Changes to community cohesion, travel patterns, accessibility, school districts, induced development, and other modifications to the community are considered social impacts. Potential economic impacts can include changes to the regional or local economy including reduced tax revenues, increased public expenditures, changes to employment opportunities, decreases in retail sales, and loss of businesses.

[8] A Sanitary Improvement District is a local governing body that is a precursor to City annexation, used to develop areas on the fringes of the City of Omaha and surrounding cities. SID's collect taxes and make infrastructure improvements to the neighborhood, and are governed by a board of resident owners.

3.2.1 CURRENT CONDITIONS

Subdivisions and Neighborhoods

In this area of Omaha, neighborhoods are generally self-contained, and are not bisected by major arterial roadways, such as 156th or Blondo Streets, as they were platted around the rural section-line roads around the 1980's. Neighborhoods or subdivisions in the vicinity of the Study Area include Barrington Park, Bent Creek, Pepperwood, Huntington Park, Diamond Head, Seven Pines, Windridge Hills, Farmington Woods, and Eldorado. Three of these subdivisions are within the City of Omaha limits (Bent Creek, Windridge Hills, and Barrington Park). Two of these subdivisions (Bent Creek and Barrington Park) have officially recognized Homeowners Associations (HOA). The other subdivisions are SID's, are located outside the city limits, and therefore have SID Boards of Trustees as well as HOA's. These entities (HOA's and SID Boards) usually collect annual dues, and maintain common areas, organize neighborhood events, and generally create a community feel for the residents of their neighborhood. None of these subdivisions cross 156th Street or Blondo Street. The subdivision boundaries are shown on ***Figure 3.3***.

The convenience area at the intersection of 156th and Blondo Streets also creates somewhat of a community gathering place, as area residents frequent these businesses for typical household items, groceries, gas, and basic services.

Elementary Schools

There are three elementary schools in vicinity of the Study Area, only one of which is actually along 156th Street. Millard Public Schools' (MPS) Grace Abbott Elementary School is located at the northeast corner of 156th and Burt Streets. Another MPS elementary school, Aldrich Elementary School, is located at 162nd and Cass Street, and accessed off the West Dodge Frontage Road, west of the 156th Street and Pepperwood Drive intersection. Finally, one Omaha Public Schools (OPS) elementary school, Picotte Elementary School, is located at 144th Street and Nelson Creek Drive. The attendance areas for these three schools are shown on ***Figure 3.4***.

According to the principals of these schools, children in MPS who live greater than one mile away from their assigned schools receive free bus transportation (Dr. Susie Melliger, Aldrich, personal communication, March 30, 2012), and children in OPS who live greater than 1.5 miles away receive free bus transportation (Denise McCown, Picotte, personal communication, March 30, 2012). Therefore, almost all of the children in the subdivisions north of Blondo Street and west of 156th Street (Huntington Park, Bridlewood, Carriage Hill, and Shadow Glen) take the bus to Picotte Elementary School, while the remaining students are driven to school by parents. Discussions with residents at public information meetings, and also with the principals of the elementary schools, indicate that a relatively small number of children actually cross 156th Street to get to Grace Abbot Elementary from the Windridge Hills subdivision, and that no children cross 156th Street to get to Picotte Elementary School from Huntington Park. For those children that do need to cross 156th Street to get to Grace Abbot Elementary, the school relies on a privately-funded (i.e. paid for by the school's Parent Teacher Organization (PTO)) crossing guard, situated at the Burt/Cumming Streets intersection during the morning arrival and afternoon dismissal periods (Erick Chaussee, Grace Abbott, personal communication, January 30, 2012).

Figure 3.3 Subdivisions

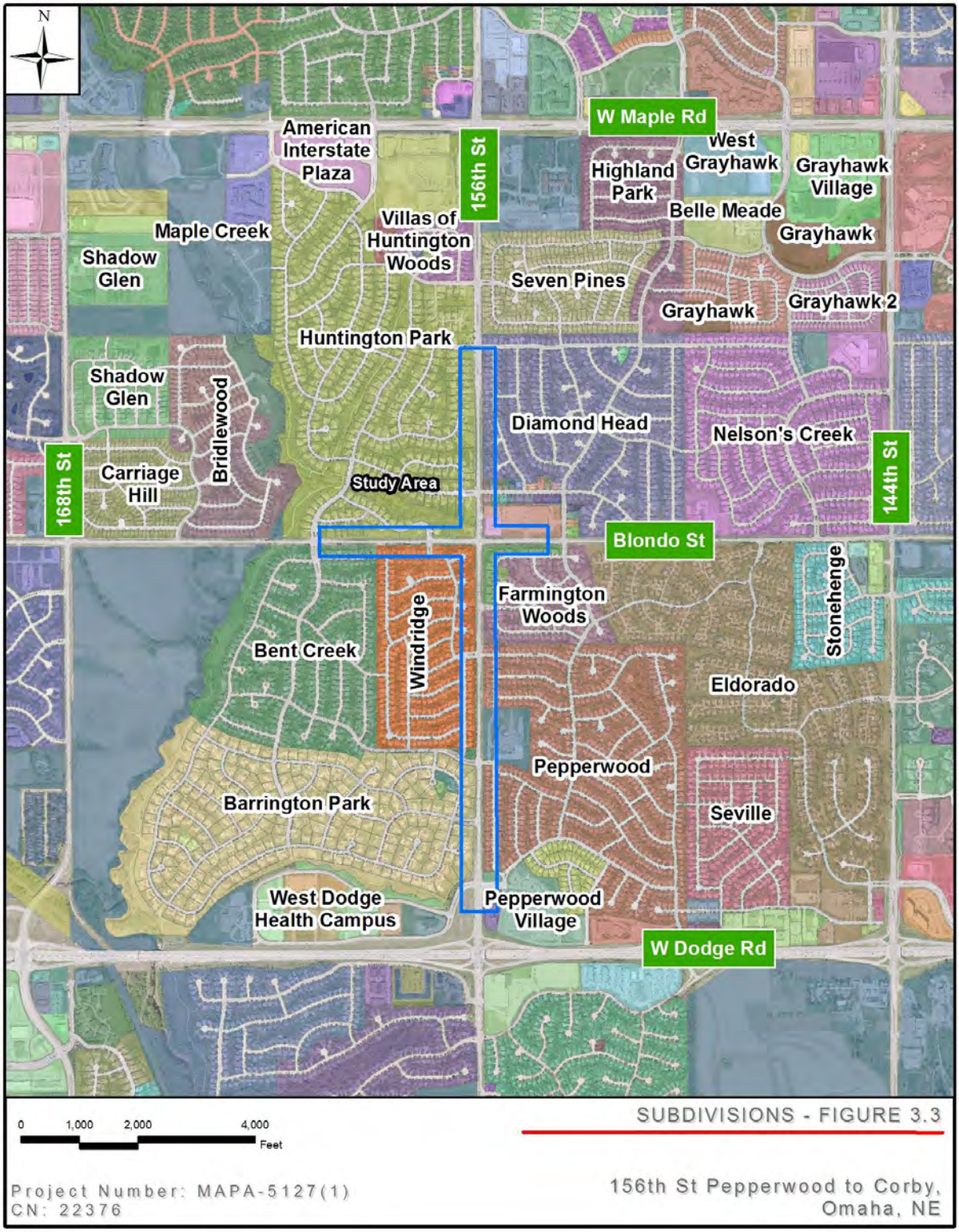
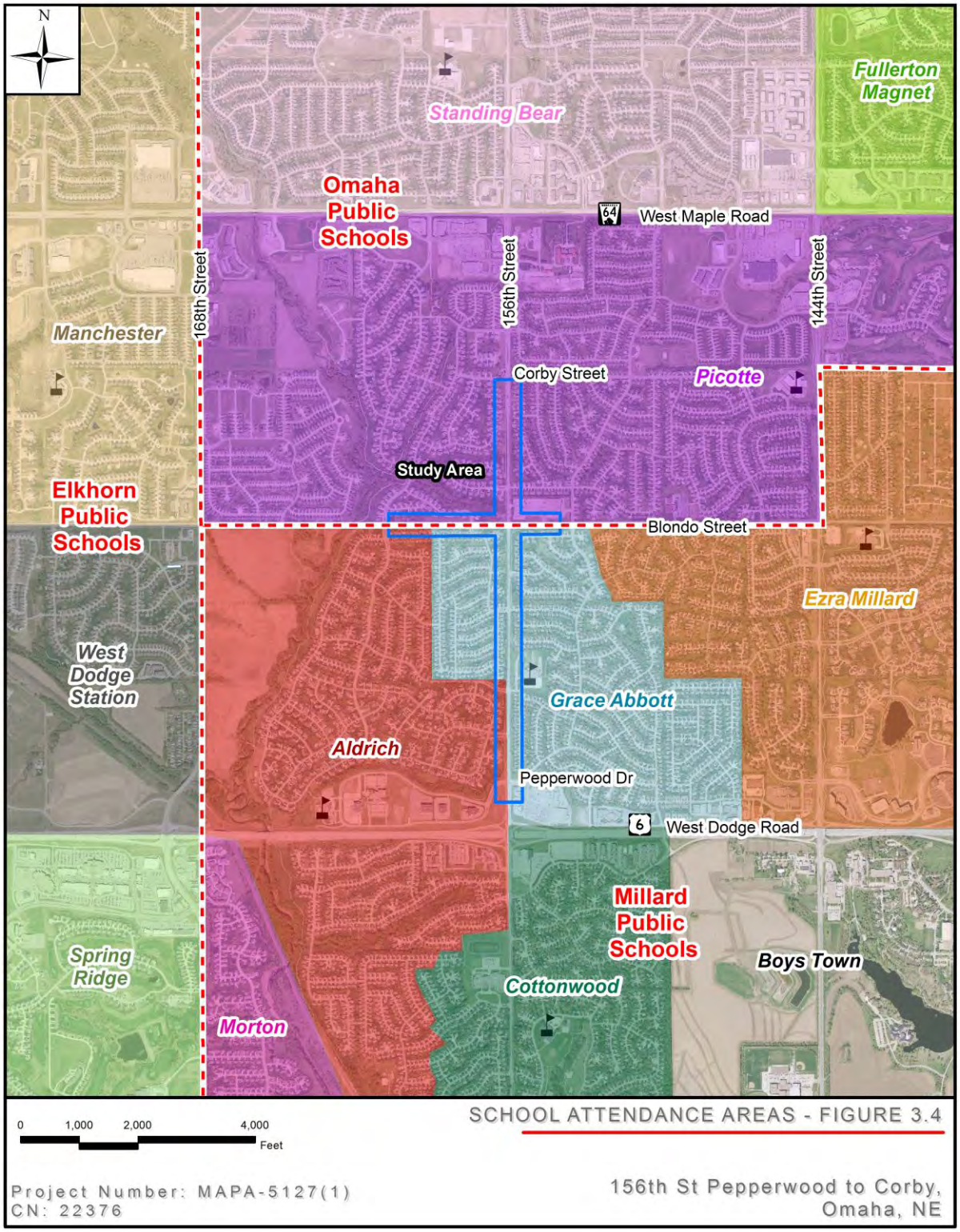


Figure 3.4 School Attendance Areas



Businesses

The Bag 'N Save shopping center, Pepperwood Village, and the West Dodge Health Campus commercial and office areas contribute to the economy by providing an increased tax base, increasing revenue production, and by providing employment opportunities to the local and regional public. The property value and property taxes paid from these areas is shown in ***Table 3.1*** (Douglas County Treasurer, 2014).

Table 3.1 Adjacent Commercial Areas' Economic Contributions

Commercial Area	2013 Property Value	2013 Property Taxes
Bag 'N Save Convenience Area	$4,108,800	$96,999
Pepperwood Village	$13,758,800	$297,428
West Dodge Health Campus	$35,585,000	$769,251

The West Dodge Health Campus currently has four vacant lots yet to be developed, as well as leasing and purchasing opportunities for additional office and commercial space. Similarly, in Pepperwood Village, there are leasing and purchasing opportunities for businesses to fill several empty storefronts and out-buildings.

3.2.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no adverse impacts to social cohesion, economic vitality or employment opportunities, or school attendance areas. There would be continued concerns from the surrounding neighborhoods about pedestrian safety, congestion, and access along this roadway corridor.

Proposed Alternative

The project is intended to have a beneficial impact to the community by increasing mobility, reducing congestion at and around intersections, improving pedestrian access, and generally enhancing the transportation network. Temporary impacts during construction are discussed further in ***Section 3.18, Temporary Construction Related Considerations***.

Specifically, there would be no changes to community, school, or development boundaries; there would be no effects on the existing property valuation or increases in taxes paid by residences or business; and there would be no effects on commercial space availability or the ability to construct new commercial buildings where they are currently allowed. The Proposed Alternative would, however, improve vehicular mobility and reduce wait times for vehicles entering and exiting the commercial areas. Furthermore, existing pedestrian access would be maintained and improved, and additional sidewalks would be added along 156th Street and Blondo Street where none exist today. Additional discussion regarding accessibility is provided in ***Section 3.5, Pedestrians, Bicyclists, and Accessibility for Individuals with Disabilities***.

The existing pedestrian crossing on 156th Street at Burt/Cumming Streets would remain in place following construction. This crossing is currently approximately 52 feet in length, spanning four lanes of traffic (i.e. one through lane northbound, one through lane southbound, with dedicated southbound right-turn and left-turn lanes). The Proposed Alternative would increase the overall length of this crossing to

approximately 64 feet, spanning five lanes of traffic (i.e. two northbound through lanes, two southbound through lanes and one dedicated southbound left-turn lane). To compensate for the slightly longer distance, the new traffic signal timing would include a longer "green time" for pedestrians crossing 156th Street, and would also take into consideration the speed of children crossing the street. The City of Omaha would also maintain the "school zone" signage in this area, which reduces the speed limit on 156th Street to 25mph (when children are present) from the proposed speed limit of 45mph. Furthermore, the improved LOS of the intersection would reduce the potential number of conflict points at the intersection, and the practice of using a paid crossing guard would be expected to continue, thus improving safety for pedestrians. In regards to temporary impacts during construction, the pedestrian crossing would remain open during construction at all times while school is in session; these impacts are discussed further in ***Section 3.18, Temporary Construction Related Considerations***.

While the conversion from full access to right-in/right-out only access at Decatur Street, Burdette Streets, and Patrick Ave/158th Street would create minor (i.e. measured by a few hundred feet) out-of-distance travel for some residents, requiring drivers to travel new routes or make U-turns to access their homes, the benefits of safer intersections and roadways outweigh these minor impacts. Additionally, these changes are consistent with the City's Master Plan that regulates access near major intersections. U-turns would be allowed at the intersections of 156th and Blondo Streets and 153rd Avenue and Blondo Street[9] to reduce the out-of-distance travel for residents. These U-turns would be allowed with signage and signals, and the intersection would be designed to properly accommodate turning vehicles.

Therefore, the Proposed Alternative is not expected to adversely impact social cohesion, travel patterns or accessibility, affect existing schools, induce development, or cause any other social or economic modifications to the community.

3.2.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- Individuals directly affected by construction, Grace Abbott Elementary School, neighborhood associations, and the businesses at the corner of 156th and Blondo Streets would be notified of the construction schedule approximately four weeks prior to construction. (City)
- The City would notify the general public of the start of construction by placing notices in the newspaper at least 10 calendar days prior to construction, and electronic message boards would be used prior to the beginning of construction activities. (City)
- Access to the businesses at the corner of 156th and Blondo Streets would be maintained at all times during construction, from either 156th Street or Blondo Street. (City, Contractor)

[9] The improvements to the intersection of 153rd Avenue and Blondo Street are being completed as part of the Phase 1 project that is currently scheduled to begin in 2014, and were included in the evaluation of impacts in the Final Environmental Assessment for the 144th and Blondo Streets project, which was approved by FHWA in 2011 and subsequently re-evaluated in 2013. For more information see ***Section 1.2.3, Adjacent Projects***.

- The City would notify emergency services such as police and fire departments before construction activities begin, as well as maintain continued coordination throughout construction. Emergency services providers would be invited to the pre-construction meeting for this project. (City)
- Throughout construction the City would continue to coordinate with neighborhood associations, the businesses at the corner of 156th and Blondo Streets, and Grace Abbott Elementary School to provide up-to-date information regarding construction timing and maintenance of pedestrian and vehicular access. (City)
- Temporary access would be provided for residents temporarily affected by construction through the use of existing side streets and on-street parking. (City, Contractor)
- Phasing would be used to construct the portion of 156th Street between Cuming/Burt Street and Charles Street during the summer, when school is out of session. (City, Contractor)
- Pedestrian access across 156th Street at Cuming/Burt Streets would be maintained at all times when school is in session. (City, Contractor)
- The City would maintain the 25mph "school zone" on 156th Street for Grace Abbott Elementary School, and would also configure the pedestrian crossing time to consider the speed of children walking across 156th Street at the Cuming/Burt Street intersection. (City)
- Vehicular access to Grace Abbott Elementary School at Burt Street will be maintained at all times when school is in session. If, for unforeseen reasons, it is not possible to maintain vehicular access at this location when school is in session, access would be provided at Charles Street and 155th Street. (City, Contractor)The City would allow U-turns on 156th Street at the intersection of 156th Street and Blondo Street, and on Blondo Street at the intersection of 153rd Avenue and Blondo Street. (City, Engineer)

3.3 ENVIRONMENTAL JUSTICE

Title VI of the *Civil Rights Act of 1964* and related laws and regulations assure that individuals and groups are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. Executive Order (EO) 12898 on Environmental Justice (EJ) was signed by President Clinton on February 11, 1994, and requires that, to the extent practicable and permitted by law, low-income or minority populations may not receive "disproportionately high and adverse" human health or environmental impacts as a result of a proposed project. Federal agencies must take the appropriate and necessary steps to identify and address "disproportionately high and adverse" effects of federal projects on the health or environment of low-income and minority populations. Also, representatives of any low-income or minority populations in the community that may be affected by a project must be given the opportunity to be included in the impact assessment and public involvement process. On June 14, 2012, FHWA issued Order 6640.23A – *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*[10], which established policies and procedures for the FHWA to use in complying with

[10] More information on FHWA's role in non-discrimination and protecting civil rights can be found at http://www.fhwa.dot.gov/civilrights.

Executive Order 12898. As defined in FHWA Order 6640.23A, a "disproportionately high and adverse effect" on minority and low-income populations means "an adverse effect that: (1) is predominantly borne by a minority population and/or a low-income population; or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population."

FHWA Order 6640.23A defines a minority as a person who is:

- Black: a person having origins in any of the black racial groups of Africa;
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent;
- American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

FHWA Order 6640.23A defines a low-income individual as a person whose median household income is at or below the Department of Health and Human Services poverty guidelines.

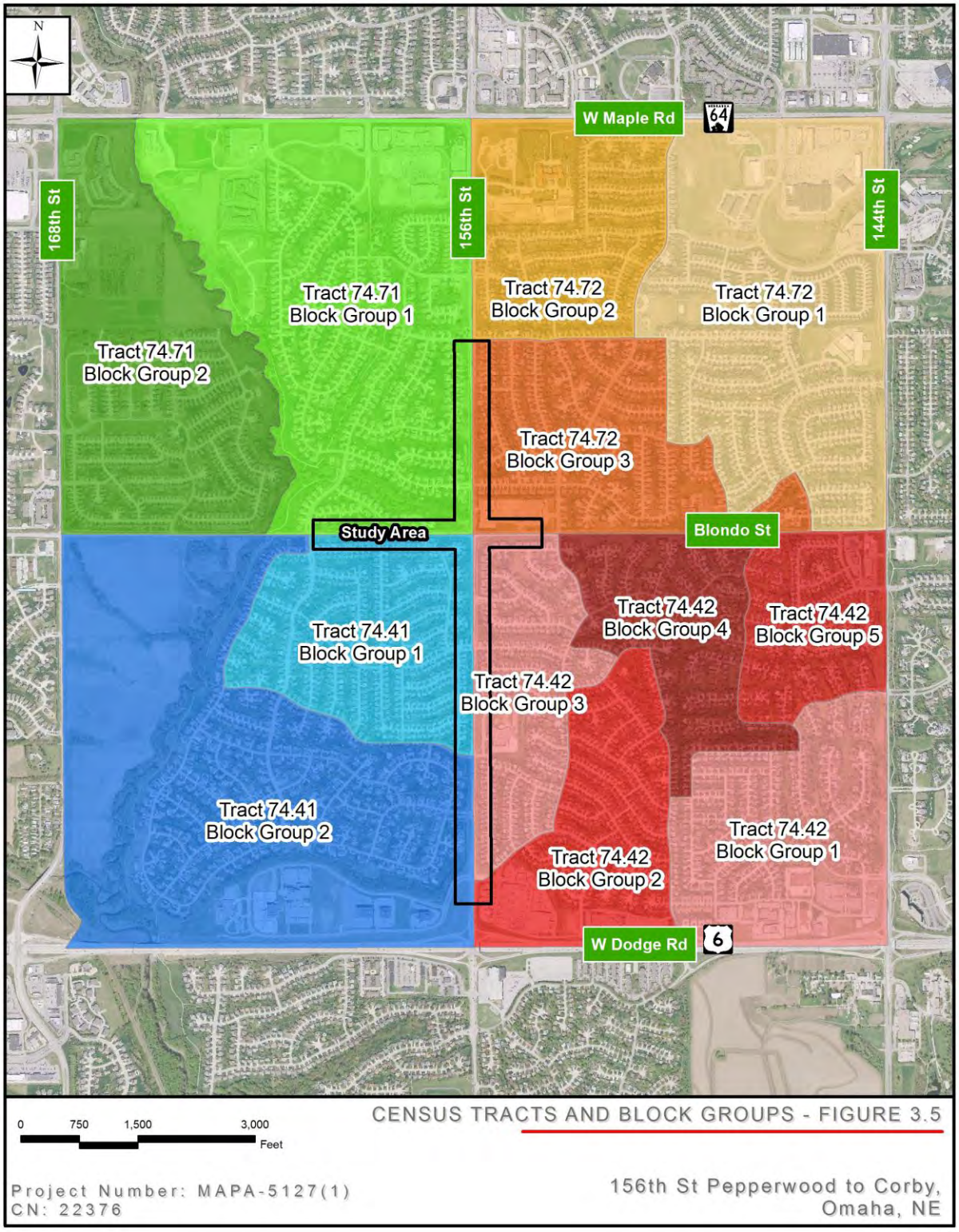
Minority and low-income populations are any readily identifiable group of these respective persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity.

3.3.1 Current Conditions

Consistent with the requirements of Title VI and EO 12898, potential EJ populations with respect to race, ethnicity, and income were determined by absolute and relative population measurements using information from the 2010 Census and the 2008-2012 *American Community Survey* (ACS) 5-Year Estimates, both provided by the U.S. Census Bureau. ***Figure 3.5*** shows the 2010 Census tracts and block groups.

For the purposes of this EJ analysis, minority populations (of a single race/ethnicity or when combined with other minorities) or low-income populations were considered to be present if they were greater than 50 percent of the total population, or were "meaningfully greater" than the comparable population percentage in the City or County population percentages.

Figure 3.5 Census Tracts and Block Groups



Low-Income Populations

Table 3.2 shows household and individual income data from the 2008-2012 ACS, comparing the affected tracts[11] to the City of Omaha, Douglas County, and the State of Nebraska. In general, the census tracts adjacent to the Study Area have populations that are well above the median and mean household incomes. In addition, when compared to the City of Omaha and Douglas County, the percentage of individuals below the poverty level are well below those of the surrounding area. Therefore, there are no low-income populations present for the purpose of this EJ analysis.

Minority Populations

Table 3.3 shows 2010 Census population data for residents in the affected tracts (by block groups), compared to the residents of the City of Omaha, Douglas County, and the State of Nebraska. While the Study Area is almost entirely populated by persons with a white ethnicity, one group that appears to have a higher concentration of persons is those with an Asian race or ethnicity. According to the 2010 Census, several block groups around the Study Area have approximately twice or greater the number of persons in this category when compared to the County and City (2.7 percent and 2.4 percent respectively). These block groups are BG1 (4.7 percent) and BG2 (5.1 percent) in Tract 74.41, BG1 (4.6 percent) and BG2 (10.7 percent) in Tract 74.71, and BG2 (5.1 percent) in Tract 74.72. Therefore, because the percentage of Asian individuals in these block groups is "meaningfully greater" than the City and County averages, they would be considered a minority population for the purposes of this EJ analysis.

Limited English Proficiency

According to the 2008-2012 ACS, 93.3 percent of the population in the four census tracts surrounding the project area speaks only English. The most frequently spoken language other than English is Spanish, which is spoken by approximately 2.7 percent of the population. Many of the people in these census tracts who speak Spanish also speak English; only 0.8 percent of the total population of these census tracts speaks Spanish and also speaks English "less than very well." These statistics do not indicate the presence of a limited English proficiency (LEP) population in the project area that reaches the NDOR LEP outreach thresholds of 5 percent of the population or 1,000 persons.

Regarding the possibility of the Asian minority population also being considered a LEP population, discussions were held with the principals of Grace Abbott Elementary School (Erik Chaussee), Aldrich Elementary School (Dr. Susie Melliger), and Picotte Elementary School (Denise McCown). The principals all indicated that the minority population numbers were generally consistent with their student enrollments. However, they also indicated that their schools do not provide special language assistance (i.e. alternative mailings or interpreters) to these families. The principals indicated that these families are generally well-educated, higher earning families who have moved into the neighborhoods to attend these schools, and that children frequently do not take exams offered for English Language Learner (ELL) programs, or that parents will often sign a waiver to not receive ELL services because they speak English at home.

[11] Census tracts are the smallest geographic area for which income statistics are reported.

Table 3.2 Income and Poverty Statistics for the Study Area, 2008-2012 American Community Survey

2010 Census Statistic	Nebraska	Douglas County	City of Omaha	Census Tract 74.41	Census Tract 74.42	Census Tract 74.71	Census Tract 74.72
Median Household Income	$51,381	$53,295	$46,978	$125,052	$97,043	$102,500	$83,447
Mean Household Income	$65,979	$72,760	$65,574	$160,426	$108,679	$127,058	$99,531
Individuals Below Poverty	12.4%	14%	16.4%	0.5%	4.2%	8.9%	0.9%

Table 3.3 Minority Populations Statistics for the Study Area, 2010 Census

2010 Census Statistic	Nebraska		Douglas County		City of Omaha		Census Tract 74.41					
							CT	*CT*	BG1	BG1	BG2	BG2
	#	%	#	%	#	%	#	%	#	%	#	%
Total Persons	1,826,341	--	517,110	--	408,958	--	**2,733**	--	1,655	--	1,078	--
White	1,572,838	***86.1***	395,025	***76.4***	298,815	***73.1***	**2,511**	***91.9***	1,510	*91.2*	1,001	*92.9*
African American	82,885	***4.5***	60,071	***11.6***	55,950	***13.7***	**38**	***1.4***	31	*1.9*	7	*0.6*
Asian	32,293	***1.8***	13,755	***2.7***	10,014	***2.4***	**133**	***4.9***	78	***4.7***	55	***5.1***
American Indian and Alaska Native	18,427	***1.0***	3,731	***0.7***	3,391	***0.8***	**5**	***0.2***	3	*0.2*	2	*0.2*
Native Hawaiian and Pacific Island	1,279	***0.1***	394	***0.1***	326	***0.1***	**0**	***0.0***	0	*0.0*	0	*0.0*
Other Race	79,109	***4.3***	29,645	***5.7***	28,193	***6.9***	**23**	***0.8***	17	*1.0*	6	*0.6*
Two or More Races	39,510	***2.2***	14,489	***2.8***	12,269	***3.0***	**23**	***0.8***	16	*1.0*	7	*0.6*
Hispanic Origin (of any race)	167,405	***9.2***	57,804	***11.2***	53,553	***13.1***	**66**	***2.4***	35	*2.1*	31	*2.9*

Table 3.3 Minority Populations Statistics for the Study Area, 2010 Census (continued)

2010 Census Statistic	Census Tract 74.42											
	CT	CT	BG1	BG1	BG2	BG2	BG3	BG3	BG4	BG4	BG5	BG5
	#	%	#	%	#	%	#	%	#	%	#	%
Total Persons	5,003	--	975	--	1,108	--	1,165	--	997	--	758	--
White	4,676	93.5	931	95.5	1,043	94.1	1,096	94.1	912	91.5	694	91.6
African American	71	1.4	4	0.4	8	0.7	14	1.2	27	2.7	18	2.4
Asian	132	2.6	15	1.5	36	3.2	43	3.7	21	2.1	17	2.2
American Indian and Alaska Native	18	0.4	5	0.5	6	0.5	3	0.3	3	0.3	1	0.1
Native Hawaiian and Pacific Island	6	0.1	0	0.0	0	0.0	0	0.0	2	0.2	4	0.5
Other Race	24	0.5	3	0.3	2	0.2	1	0.1	15	1.5	3	0.4
Two or More Races	76	1.5	17	1.7	13	1.2	8	0.7	17	1.7	21	2.8
Hispanic Origin (of any race)	122	2.4	19	1.9	39	3.5	5	0.4	40	4.0	19	2.5

2010 Census Statistic	Census Tract 74.71					
	CT	CT	BG1	BG1	BG2	BG2
	#	%	#	%	#	%
Total Persons	3,595	--	1,941	--	1,654	--
White	3,057	85.0	1,669	86.0	1,388	83.9
African American	180	5.0	145	7.5	35	2.1
Asian	266	7.4	89	4.6	177	10.7
American Indian and Alaska Native	6	0.2	5	0.3	1	0.1
Native Hawaiian and Pacific Island	4	0.1	0	0.0	4	0.2
Other Race	17	0.5	6	0.3	11	0.7
Two or More Races	65	1.8	27	1.4	38	2.3
Hispanic Origin (of any race)	104	2.9	48	2.5	56	3.4

Table 3.3 Minority Populations Statistics for the Study Area, 2010 Census (continued)

2010 Census Statistic	Census Tract 74.72							
	CT	***CT***	***BG1***	***BG1***	***BG2***	***BG2***	***BG3***	***BG3***
	#	***%***	***#***	***%***	***#***	***%***	***#***	***#***
Total Persons	**4,486**	**--**	1,870	--	1,239	--	1,377	--
White	**4,167**	***92.9***	1,736	*92.8*	1,102	*88.9*	1,329	*96.5*
African American	**91**	***2.0***	44	*2.4*	30	*2.4*	17	*1.2*
Asian	**116**	***2.6***	35	*1.9*	63	***5.1***	18	*1.3*
American Indian and Alaska Native	**3**	***0.1***	1	*0.1*	2	*0.2*	0	*0.0*
Native Hawaiian and Pacific Island	**5**	***0.1***	3	*0.2*	2	*0.2*	0	*0.0*
Other Race	**27**	***0.6***	11	*0.6*	13	*1.0*	3	*0.2*
Two or More Races	**77**	***1.7***	40	*2.1*	27	*2.2*	10	*0.7*
Hispanic Origin (of any race)	**108**	***2.4***	45	*2.4*	45	*3.6*	18	*1.3*

3.3.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no impacts to minority or low-income populations.

Proposed Alternative

As defined in FHWA Order 6640.23A, a "disproportionately high and adverse effect" on minority and low-income populations means "an adverse effect that: (1) is predominantly borne by a minority population and/or a low-income population; or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population."

The Proposed Alternative would have no impact on low-income populations, as there were none identified in the Study Area.

To determine the potential for possible community-wide impacts on the Asian minority population, a review of businesses, services, employers, and other cultural gathering places in the area was conducted. The review did not indicate a greater concentration of businesses that are dependent on an Asian population or that cater specifically to Asian individuals. While there are several Asian food-markets and churches in the Omaha area, they are all well outside the Study Area.

Next, the types of possible project-level impacts on this minority population were evaluated. The Proposed Alternative does have the potential to result in minor socio-economic (i.e. human health) impacts including: detours, noise impacts, right-of-way acquisition, changes in vehicular accessibility during and following construction, and temporary impacts such as increased dust and noise during construction. There are also minor impacts to the environment including: impacts to wetlands, streams, and floodplains, vegetation and tree removal, and temporary impacts to water quality during construction. There are also beneficial impacts such as improved vehicular mobility, reduced wait times at intersections, increased pedestrian access, and improved safety.

Impacts to this minority population would not be appreciably greater or more severe because they would be experienced by all residents and travelers in a similar manner. In addition, these impacts are either temporary or are being mitigated due to other requirements (e.g. noise walls are being evaluated in compliance with NDOR's Noise Policy, compensation for right-of-way would be provided in conformance with the Uniform Act). Furthermore, the temporary construction impacts such as erosion or noise during construction are not permanent, and would be offset by the beneficial impacts of reduced congestion and improved mobility.

There would be no loss of access to essential services used by minority populations, there would be no permanent loss of access to individual residences, there would be no relocations or building removal from minority neighborhoods, and there would be no isolation or exclusion of the minority community or individuals as a result of this project.

For these reasons, there would be no disproportionately high and adverse human health or environmental effects visited upon minority and low-income populations, as defined in FHWA Order 6640.23A. NDOR's office of Civil Rights has reviewed and concurred with these findings in a memo dated June 3, 2014 (***Appendix H***).

3.3.3 Proposed Mitigation

No mitigation is proposed.

3.4 Right-of-Way, Acquisitions, and Relocations

Residential displacements typically result from the conversion or re-development of an area and the loss of available replacement housing for affected residents, and are considered to be direct adverse impacts. Displacements can occur by demolition of housing units, conversion of housing units from ownership to rental (or vice versa). Displacements can also occur by the process of neighborhood gentrification, in which a neighborhood or housing area changes in such a way that influences home prices so greatly that individuals are forced to move. Secondary adverse impacts resulting from displacements can include loss of family unity, overcrowding, homelessness, acceptance of inadequate or substandard housing, physiological and psychological stress, loss of social cohesion, segregation, increased demand for social services, and increased demand on transportation systems.

Acquisitions and relocations must be conducted in accordance with the *Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (Uniform Act), as amended (42 USC 4601 et seq.), and the *Nebraska Relocation Assistance Act* (Neb. Rev. Stat. Section 76-1214 et seq.).

The Uniform Act provides protections and benefits for people affected by federal and federally assisted projects. Its purpose is to provide for uniform and equitable treatment of all persons relocated from their homes, businesses, and farms, without discrimination on any basis. The Uniform Act ensures fair compensation of property owners for their residential structures. It requires that the sponsor of a project provide financial and technical relocation assistance for relocated residents. The Uniform Act also contains allowances for renters. A one-time rental assistance payment is available for the tenant to find a decent, sanitary, safe dwelling for a period of 42 months. NDOR's guidelines for complying with the Uniform Act are contained in NDOR's *Right of Way Manual, Third Edition* (NDOR, 2009).

3.4.1 Current Conditions

The entire corridor is already developed, primarily with residential neighborhoods. The existing right-of-way (ROW) is between 100 and 150 feet wide along both roadways. Numerous homes back up to the roadway, many of which have fences along the ROW line. Additional improvements exist in close proximity to (or within) the ROW, including landscaping, sprinkler systems, neighborhood monument signs, neighborhood fencing, and private fencing.

3.4.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no permanent impacts to ROW, nor would it require acquisitions or relocations, and it would also not result in any residential displacements.

Proposed Alternative

The Proposed Alternative would not result in relocations, nor would it create the conditions for the secondary impacts from displacements described above; therefore, there would not be any relocation impacts as a result of the Proposed Alternative.

The Proposed Alternative would, for the most part, be built within existing ROW; however, there are several locations where minor property acquisitions and permanent or temporary construction easements would be required for the roadway and utility improvements. Based on the current preliminary engineering plans, there would be approximately 0.35 acres of ROW acquisition, 0.83 acres of permanent easements, and 4.10 acres of temporary easements from a total of 142 tracts required for construction of the Proposed Alternative. The exact locations of these easements and acquisitions would be determined during final design, and impacted properties would be coordinated with in accordance with the proposed mitigation explained below.

Impacts to landscaping, neighborhood monuments, fencing, and sprinkler systems are discussed in greater detail in ***Section 3.17, Visual Impacts and Aesthetic Considerations***. Temporary impacts during construction are discussed in greater detail in ***Section 3.18, Temporary Construction Related Considerations***.

3.4.3 PROPOSED MITIGATION

The following mitigation commitments would be implemented:

- The City would acquire all ROW and temporary and permanent easements in accordance with the Uniform Act and NDOR's *Right of Way Manual*. (City)
- Impacts to fencing, landscaping, neighborhood monuments, and sprinklers would be handled in accordance with NDOR's *Right-of-Way Manual*. (City)
- ROW impacts would be minimized through the use of retaining walls, to reduce the additional grading needed on adjacent property. (City, Engineer)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process. (City)

Standard Specifications (NDOR, 2007):

- Standard Specification 104.05 - Scope of Work - Maintenance of Detours and Shooflies
    - Requires the Contractor, the extent practicable, to provide private dwellings, commercial properties, business, and public facilities access to the nearest public road.
- Standard Specification 104.08 - Scope of Work - Final Cleaning Up
    - Requires the Contractor to remove all rubbish, excess material, and equipment from the project site, and to leave the site in a neat and presentable condition. Also requires the Contractor to fill borrow sites.
- Standard Specification 105.12 - Control of Work - Use of Land
    - Requires the Contractor to leave any lands outside the ROW used for construction in a neat and presentable condition.
- Standard Specification 107.01 - Legal Relations and Responsibility to the Public – Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.
- Standard Specification 107.09 - Legal Relations and Responsibility to the Public - Preservation and Restoration of Property, Trees, Monuments, etc.
    - Requires the Contractor to preserve, protect, and prevent damage to all public and private property, including utilities, structures, and facilities, and shall be responsible for damage from neglect or misconduct.
- Standard Specification 107.12 - Legal Relations and Responsibility to the Public - Responsibility for Damage, Injury, or Other Claims
    - Requires the Contractor to be responsible for all damage to property used during construction resulting from neglect or misconduct. The Contractor shall also be required to meet with local government entities to advise them of their intentions to use local roads, and is responsible for damage from such use.

Special Provisions:

- Status of Right-of-Way
    - Requires the Contractor to work only within the ROW until property acquisition is complete and easements are obtained, and to also verify this with the Engineer prior to entering any private property.

3.5 PEDESTRIANS, BICYCLISTS, AND ACCESSIBILITY FOR INDIVIDUALS WITH DISABILITIES

The *Americans with Disabilities Act of 1990* (ADA) prohibits discrimination on the basis of disability in employment, State and local government, public accommodations, commercial facilities, transportation, and telecommunications. Other Federal laws affecting the design, construction, alteration, and operation of facilities include the *Architectural Barriers Act of 1968* (ABA), and *the Rehabilitation Act of 1973*, which apply to all federally funded facilities. The ADA applies to public facilities (title II), as well as private facilities (title III) that are not federally funded. Newly constructed and altered facilities covered by titles II and III of the ADA must be readily accessible to and usable by people with disabilities.

More specifically, the U.S. Department of Justice's (DOJ) regulations in 28 CFR 35, which implement title II of the ADA, describe the obligations of State and local governments for existing facilities and programs. For newly constructed or altered facilities, the DOJ regulations require title II entities (State and local government entities) to comply with either: the Uniform Federal Accessibility Standards (UFAS), the standard referenced in the ABA; or the Americans with Disabilities Act Accessibility Guidelines (ADAAG), developed by the U.S. Architectural and Transportation Barriers Compliance Board (the Access Board).

The Access Board is currently undergoing final rulemaking to eliminate differences between UFAS and ADAAG. These new regulations, referred to as the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), are expected to be finalized by the time this project is constructed, and would be used to develop accessible facilities for the project[12].

3.5.1 CURRENT CONDITIONS

Sidewalks

Existing sidewalks are located adjacent to each street as described below, and are shown on ***Figure 3.6.***

156th Street

- West side: from West Dodge Road to the north side of Burt/Cuming Streets, and from the north side of Blondo Street to Corby Street.
- East side: from West Dodge Road to Pepperwood Drive, Charles Street to approximately 130 feet north of the Bag 'N Save/Kwik Shop entrance (north of Blondo Street), and from approximately 420 feet south of Corby Street to Corby Street.

[12] More information on FHWA's role in accessibility can be found on their website at http://www.fhwa.dot.gov/civilrights.

Blondo Street

- North side: from the western project limits to the eastern project limits.
- South side: from the east side of 156th Street to the eastern project limits.

The intersections of 156th Street and Pepperwood Drive, Blondo Street, and Burt/Cumming Streets are currently signalized, with pedestrian crosswalks. There is also one direct access point (i.e. between houses) at the southwest corner of 156th and Blondo Streets.

It should also be noted that at the intersection of 156th and Blondo, the sidewalks along the northwest side of the intersection (200 feet to the west and 250 feet to the north) share the shoulder of the road with vehicles, due to the limited area for a separate sidewalk caused by the steep banks of the nearby creek. In particular, the segment along the north side of Blondo Street west of 156th Street is a gravel shoulder without a guardrail.

The current intermittent pattern of sidewalks is not conducive to pedestrian safety; it requires multiple crossings of 156th Street to stay on a paved sidewalk. Also, as described previously, within a mostly residential corridor, it is required by a City of Omaha ordinance to have sidewalks along both sides of the street.

Bicycle Trails

The City of Omaha and the Papio-Missouri River Natural Resources District (P-MRNRD) maintain the region's trail network, which includes over 130 miles of existing trails, and numerous additional miles of planned trails. The City has also recently hired a bicycle coordinator to improve efforts around the metro region to increase the number of bike lanes and improve pedestrian access.

There are currently no bicycle trails along the roadways within the Study Area. However, just outside the Study Area there are several existing bicycle trails along nearby creeks, through adjacent neighborhoods, and along various roadways. These trails are shown on ***Figure 3.6***. Also, according to the City of Omaha Parks, Recreation and Public Property Department and Carlos Morales, the City's bicycle coordinator, the City has plans to extend an existing bicycle trail along the north side of Blondo Street through the Study Area, continuing the trail system from the east, eventually connecting to the Big Papio Trail to the east, and West Papio Trail to the west (Carlos Morales, personal communication, January 17, 2012).

Bus Routes

There are currently no Omaha Metro bus routes along the project corridor, nor are any new routes currently being planned (Transit Authority of the City of Omaha, 2014).

Figure 3.6 Existing Sidewalks, Trails, and Parks

3.5.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no adverse impacts to pedestrians or bicyclists. However, there would be continued concerns from pedestrians and bicyclists about safety along the corridor, and a lack of connectivity to the regional trail system if sidewalks are not built along 156th and Blondo Streets and if a trail is not constructed along Blondo Street. The No-Action Alternative would have no impact on bus routes.

Proposed Alternative

The Proposed Alternative would include ADA compliant sidewalks along all portions of the corridor, in accordance with city ordinances, providing safe access for pedestrians and bicyclists, especially to the elementary school and shopping center. Temporary sidewalk closures during construction would be required, but accommodations would be made during this time to allow access. In addition, the Proposed Alternative would include a combined sidewalk/bicycle trail along the north side of Blondo Street to provide regional connectivity to the City's trail network. This trail would connect to the trail currently being planned and constructed along the north side of Blondo to the east of this project, which connects to an existing trail along Blondo Street that leads to the Big Papio Trail, and would also connect to existing sidewalks along the north side of Blondo Street (east of 160th Street) that ultimately connect to the West Papio Trail. The sidewalks and bicycle trail would have beneficial impacts by providing sidewalk and trail continuity throughout the project area, as well as providing continuity to existing and planned trails to the east, and for eventual connection to trails to the west. The Proposed Alternative would have no impact on bus routes.

3.5.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- During construction, existing pedestrian access would be maintained (i.e. sidewalks would be kept open) to the maximum extent practicable along the entire corridor. If closures are necessary, temporary alternate routes or advanced notice of closures would be provided for pedestrians and bicyclists. (City, Contractor)
- Residents would be provided access to their homes at all times during construction. (City, Contractor)
- Pedestrian access across 156th Street at Cuming/Burt Streets for Grace Abbott Elementary School would be maintained at all times when school is in session. (City, Contractor)
- Following construction, permanent signage would be provided at the northeast and southeast corners of the 160th/162nd and Blondo Streets intersection to direct pedestrians and bicyclists to use the sidewalks along 160th Street to access the West Papio Trail to head north, and to use the sidewalks along 162nd Street, Parker Street, and 164th Street to head south on the West Papio Trail. (City)
- Audible crossing signals for visually impaired persons would be installed if the individual requesting these devices provides the documentation required by the City’s policy. The City of

Omaha's policy regarding the installation of audible crossing signals requires that the City be presented with medical documentation from a physician, physician's assistant, or nurse practitioner for the individual's impairment prior to installing the device. (City)

- The City would identify persons with individual concerns for special access during construction (e.g. elderly or disabled persons temporarily affected by driveway or sidewalk reconstruction) by placing door hangers on affected property owners' front doors prior to construction. The City would coordinate directly with these individuals to arrange solutions to provide access during construction, which could including special timing, temporary paving, providing assistance for trips, or other acceptable measures. At this time, there is only one individual who has expressed concern about these impacts, and the City would coordinate with this individual directly. **If you or someone you know may require special access or provisions during construction, please contact the City at 402-444-5000.** (City, Contractor)

3.6 PARKS, RECREATION AREAS, AND SECTION 4(F) RESOURCES

Section 4(f) of the *U.S. Department of Transportation Act of 1966*, states that the FHWA "…may approve a transportation program or project…requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) ***only if***…there is no prudent and feasible alternative to using that land; and…the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use" (49 U.S.C. 303[c]) (emphasis added).

Section 4(f) protection applies to parks, recreation, and refuge areas where the property is publicly owned, open to the public, its major purpose must be for park, recreation, or refuge activities, and it must be significant. Section 4(f) protection applies to historic sites of national, state, or local significance that are on, or eligible for listing on, the National Register of Historic Places (NRHP), regardless of ownership.

A "use" of a Section 4(f) resource, as defined in 23 CFR 774.17, occurs: (1) when land is permanently incorporated into a transportation facility, (2) when there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purpose, or (3) when there is a "constructive" (i.e. indirect) use of land. A constructive use of a Section 4(f) resource, which is rare, occurs when the transportation project does not incorporate land from the Section 4(f) resource, but the project's proximity and impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. For example, a property considered a Section 4(f) resource based on peace and tranquility could have noise or vibration impacts form a nearby project.

3.6.1 CURRENT CONDITIONS

An assessment for potential Section 4(f) resources (i.e. parks, recreation areas, wildlife or waterfowl refuges, or historic properties) was conducted. A number of sources were consulted to determine if any

of these resources exist in the Study Area, including publicly available maps and data[13], conversations with local and state agencies, and public input. The result of this investigation was that several potential Section 4(f) resources are within the vicinity of the project. These resources were shown on ***Figure 3.6***, and specific determinations of whether or not they are considered Section 4(f) resources and whether or not they are affected by the Proposed Alternative are presented below. Properties outside the Study Area and that would not be affected in any way by the Proposed Alternative were considered, but are not described.

Outlot 295 in Huntington Park Subdivision, northwest of 156th and Blondo Streets Intersection

This property, situated northwest of the corner of 156th and Blondo Streets, is owned by SID #374, Huntington Park[14], but is not a publicly accessible park or recreation area. Its intended use is for drainage, and would therefore not be considered a Section 4(f) property. This determination was made based on consultation with the SID's attorney, Dennis Hogan, of Pansing, Hogan, Ernst & Bachman LLP (Dennis Hogan, personal communication, January 17, 2012).

Grace Abbott Elementary School Playground

There is a playground at Grace Abbott Elementary School that is located in the back (i.e. east side) of the school, adjacent to the Study Area. While it is publicly accessible, and available to be used outside school hours, there would be no direct, temporary, or constructive use of this property as a result of the Proposed Alternative; therefore, no further consideration is required.

Bent Creek Landscaping Outlot

This property, situated at the northwest corner of 156th Street and Cuming Street, is owned by the original private developer of the Bent Creek Subdivision, but is maintained by the Bent Creek HOA, and contains a monument entrance sign for the Bent Creek Subdivision. Conversations with representatives of the HOA indicate that the property is not open for public use or recreation. Because this area is privately owned and not intended for recreational use by the public, it would not be considered a Section 4(f) property.

Pepperwood Village Drainage Outlot

This outlot property, situated at the northeast corner of 156th Street and Pepperwood Drive, is owned by SID #300, Pepperwood, but is used for a stormwater detention basin. Because this area is not intended for recreational use by the public, it would not be considered a Section 4(f) property.

3.6.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no direct, temporary, or constructive use of parks, recreation areas, or other Section 4(f) resources.

[13] Several properties were evaluated for their potential to be Section 4(f) resources based on the their classification as "Open Space" on the City of Omaha's Future Land Use Maps, or due to their appearance as an "open space" with the potential for recreational uses.
[14] Because SIDs are considered a local governmental entity, property owned by the SID would be considered public, unless stated otherwise in the original development agreements between the SID and the County or City.

Proposed Alternative

The Proposed Alternative would have no direct, temporary, or constructive use of parks, recreation areas, or other Section 4(f) resources.

3.6.3 Proposed Mitigation

No mitigation is proposed.

3.7 Historic and Archeological Resources

Section 106 of the *National Historic Preservation Act of 1966* (NHPA) requires that Federal agencies take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. The ACHP regulations, *Protection of Historic Properties* (36 CFR 800), which were last revised on August 5, 2004, outline the guidelines for federal agencies to comply with Section 106. The *Archeological and Historic Preservation Act of 1960* (16 USC 469-470), and EO 11593 - *Protection and Enhancement of the Cultural Environment*, issued in 1971, provide additional directives to Federal agencies on historic preservation.

Generally, the Section 106 consultation process consists of the following steps:

1. Identify consulting parties (includes tribes and local historic preservation entities).
2. Identify and evaluate historic properties located within the Area of Potential Effect (APE) established for an undertaking.
3. Assess adverse effects to properties listed on, or eligible for listing on, the National Register of Historic Places (NRHP).
4. Consult with the State Historic Preservation Officer (SHPO) and, as appropriate, the ACHP and other interested parties to resolve adverse effects.

3.7.1 Current Conditions

An evaluation of archeological sites and standing structures was completed in March 2012 by the NDOR Highway Archeology Program. A review of the Nebraska State Historical Society (NSHS) Cultural Resources Geographic Information System (CRGIS) archeological resources database and historic maps indicated that there are no archeological sites recorded within the APE. An archeological survey was completed of the entire APE for direct construction impacts and no archeological sites were discovered. During the course of the archeological survey, standing structures were also evaluated. The APE was found to consist entirely of residential and commercial buildings constructed during the period from approximately 1985 to the present.

3.7.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no adverse impacts to historic or archeological resources.

Proposed Alternative

In compliance with state and federal regulations, FHWA and NDOR consulted with the NSHS and the Nebraska State Historic Preservation Officer (SHPO) to determine if there would be any impacts to cultural, historical or archeological resources in the APE. In a response dated April 2, 2012 (***Appendix A***) the SHPO concurred with FHWA's findings that there are no archeological sites, and that there would be "no historic properties affected." Therefore, no additional Section 106 consultation was required.

Additionally, tribal consultation was conducted for one Tribal Historic Preservation Officer (THPO) requesting to be consulted. In a response dated March 22, 2012 (***Appendix A***) the Iowa Tribe of Kansas and Nebraska concurred with FHWA's finding of "no historic properties affected."

3.7.3 PROPOSED MITIGATION

The following mitigation commitments would be implemented:

- During construction, the City and Contractor would follow standard provisions for the unintended discovery unknown artifacts, or unidentified human remains, in compliance with the *Nebraska Unmarked Human Burial Sites and Skeletal Remains Act*, and the *Native American Graves Protection and Repatriation Act*. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.
- Standard Specification 107.10 - Legal Relations and Responsibility to the Public - Archaeological and Paleontological Discoveries
    - In the event of a late discovery of archeological materials, this specification states "The Engineer would be promptly notified when any such articles are uncovered and the Contractor shall suspend operations in the area involved until such time that arrangements are made for their removal and preservation."

3.8 WATER RESOURCES AND WATER QUALITY

Potential impacts to water resources were considered with respect to surface water and groundwater resources, quantity and quality of runoff, and regulatory requirements. A number of agencies, including the United States Army Corps of Engineers (USACE), the Nebraska Department of Environmental Quality (NDEQ), the City of Omaha, and the P-MRNRD have primary responsibilities for these resources.

3.8.1 CURRENT CONDITIONS

Groundwater Resources

Nebraska's Wellhead Protection Program is a voluntary program which assists communities and other public water suppliers in preventing contamination of their water supplies. The Nebraska Legislature passed LB 1161 in 1998 (Neb. Rev. Stat. 46-1501 through 46-1509), authorizing the *Wellhead Protection Area Act*. This Act sets up a process for public water supply systems to use if they choose to implement a local Wellhead Protection Area (WHPA). NDEQ is the lead agency for approval of Wellhead Protection Plans (WHPP).

The goal of Nebraska's Wellhead Protection Program is to protect the land and groundwater surrounding public drinking water supply wells from contamination. Since approximately 85% of Nebraskans receive their drinking water from groundwater, preventing groundwater contamination is vital (NDEQ, 2012).

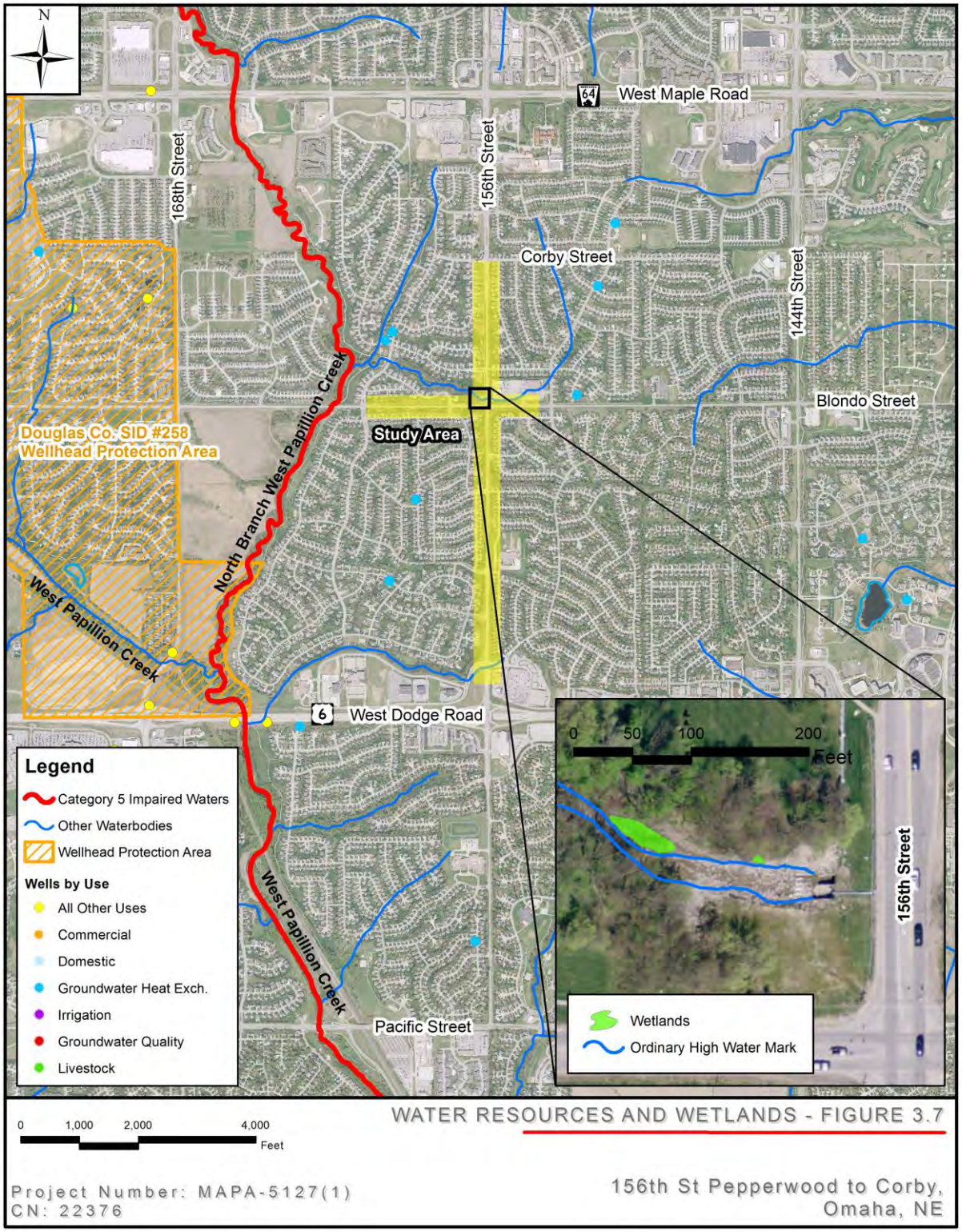
Within the vicinity of the Study Area, there is one Wellhead Protection Area; Douglas County SID #258 (***Figure 3.7***). This WHPA does not physically cross the Study Area, and does not have an approved WHPP. In addition, there are no private or public groundwater wells within the vicinity of the Study Area.

Surface Water Resources

The *Omaha Regional Stormwater Design Manual*, prepared by the Papillion Creek Watershed Partnership (Papio Partnership), a regional coalition of cities and municipalities, governs the design for stormwater runoff and conveyance systems, as well as requirements for improving stormwater quality in the Papillion Creek Watershed, which covers an area approximately 402 square miles in size (Papio Partnership, 2009).

The Study Area is within an approximately one-square-mile watershed consisting of residential and commercial development. Surface water in the Study Area generally flows to the intersection of 156th and Blondo Streets, and then into an unnamed tributary to the North Branch of West Papillion Creek. This tributary eventually flows to West Papillion Creek, then into Big Papillion Creek, and ultimately, into the Missouri River. This watershed has several factors currently affecting water quality, including an existing incised stream channel, eroding stream banks, and an enclosed stormwater system that carries large volumes of runoff to the intersection of 156th and Blondo Streets. This runoff is already affected by typical urban pollutants, such as hydrocarbons, fertilizers and pesticides, fecal coliforms, increased temperature, and increased volume. These factors, along with the amount of enclosed drainages draining toward the roadway corridor, have already degraded the unnamed tributary at 156th and Blondo Streets, and also contribute to overland flooding on adjacent properties, such as the Kwik Shop parking lot just northeast of the intersection.

Figure 3.7 Water Resources and Wetlands



Impaired Waters

Among other regulations and requirements, the *Clean Water Act of 1972* (CWA) requires states to prepare a list of impaired surface waters every even numbered year. From this list, referred to as the 303(d) List of Impaired Waters, states prepare Total Maximum Daily Loads (TMDLs) that include the pollution control goals and strategies necessary to improve the quality of these waters and remove the identified impairments. The waters on the 303(d) list do not support their assigned beneficial uses as listed in Nebraska Title 117 – *Nebraska Surface Water Quality Standards*. NDEQ is also required to provide a surface water quality report every two years, known as the Section 305(b) Water Quality Integrated Report, which describes the status and trends of existing water quality for all waters of the state and provides information as to the extent to which designated uses are supported (NDEQ, 2014).

NDEQ's *2014 Water Quality Integrated Report* and the accompanying 303(d) list were approved by the U.S. Environmental Protection Agency (EPA) on April 25, 2014. The 2014 Integrated Report identifies five categories of waters, with Category 5 being the most impaired[15]. The nearest impaired Category 5 waterway is the North Branch of West Papillion Creek, which is approximately one-half mile downstream from the intersection of 156th Street and Blondo Street (***Figure 3.7***). The North Branch flows into West Papillion Creek, which is also a Category 5 impaired waterway, just upstream of West Dodge Road. The listed impairment for both of these waterways is an advisory for fish consumption (NDEQ, 2014).

NPDES

The CWA also established the basic structure for regulating discharges of pollutants into the waters of the United States and regulating water quality standards for surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. The EPA regulates point discharges through the National Pollutant Discharge Elimination System (NPDES), the authority for which in Nebraska has been delegated to NDEQ. Point sources are discrete conveyances such as pipes or man-made ditches. Industrial, municipal, or other facilities must also obtain permits if they discharge directly to surface waters. In recent years, NPDES permits have been expanded to also cover construction sites and non-point sources of pollution flowing through municipal separate storm sewer systems (MS4s). Non-point source pollution occurs when rainfall, snowmelt, or irrigation runs over land (and construction sites) and transports pollutants and eroded sediment to surface waters.

Douglas County and the City of Omaha have received authorization from NDEQ to discharge stormwater under NPDES guidelines, in accordance with their regional MS4 Permit. MS4 permits authorize new or existing stormwater discharges in designated urbanized areas into waters of the state as defined by Nebraska Title 119 – *Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System*.

[15] Complete details of the 2014 Integrated Report are available at http://www.deq.state.ne.us/ by clicking on "TMDL's" under "Publications and Forms."

The terms and conditions of MS4 permits require all entities, including Douglas County and the City of Omaha, to develop specific Stormwater Management Programs (SWMP). The development of these programs increases the likelihood of maintaining and protecting local water quality conditions that are protected under the terms of Nebraska Title 117. Implementation of the SWMP constitutes compliance with the MS4 Permit.

Each jurisdiction is ultimately responsible for ensuring compliance with the SWMP conditions within the drainage in their jurisdictional limits; however, the MS4 permit requirements for these two entities have many similarities. Two primary elements include "Construction Site Stormwater Management Minimum Control Measures" and "Post-Construction Stormwater Management Control Measures." The common goals of these elements are discussed below:

> Construction Site Stormwater Management Minimum Control Measures – Reduce the amount of stormwater pollution from construction sites (sediment, building materials, oil, etc.). Require, review, inspect, and enforce proper management practices and material disposal on construction sites including procedures for site plan review, inspections during construction, and reporting protocols to the MS4 to evaluate compliance. Require the construction site owners or operators to implement erosion and sediment control Best Management Practices (BMPs) and to control other waste such as discarded building materials.
>
> Post–Construction Stormwater Management Minimum Control Measures – Develop and implement comprehensive planning procedures and enforcement controls to reduce the discharge of non-point source pollutants after construction is complete from areas of new development and significant redevelopment. Develop and implement strategies which include a combination of structural and/or non-structural BMPs; ensure adequate long-term operation and maintenance of BMPs.

These program elements outline the Construction and Post-Construction Stormwater Management minimum requirements that must be considered for proposed projects in the City of Omaha and Douglas County, including City-sponsored projects. The goals of these programs are to minimize water quality impacts to the maximum extent, conform to the requirements of the CWA, and comply with Nebraska Title 117.

It should be noted that the City of Omaha has made great strides to improve water quality through its Combined Sewer Overflow (CSO) program, which is separating sanitary and storm sewers throughout eastern Omaha, as well as through other educational initiatives and installation of structural and non-structural BMPs throughout the region. However, when it comes to implementing these measures on roadway projects, especially those with limited ROW (i.e. 100-foot-wide corridors), the costs for acquiring additional ROW and the potential for resulting adverse impacts such as residential and commercial relocations are not typically prudent. Therefore, the City attempts to improve water quality with structural BMPs, where it can and within reason, and continues to make other improvements to water quality. Other non-structural BMP's that the City has already implemented on a regional basis include

encouraging residents in the City to decrease the amount of fertilizer applications, to install rain barrels or rain gardens in their own yards, to pick up pet waste, and other educational measures to improve the water quality of urban runoff (Selma Kessler, City of Omaha, personal communication, May 21, 2014).

Localized Drainage Problems

As described previously, the area upstream of the box culvert under 156th Street, immediately north of Blondo Street, experiences localized drainage problems due to the size (i.e. undersized) and configuration of the box culvert, storm sewer inlets, and surrounding drainage conditions. This results in ponding following rain events in the Kwik Shop parking lot.

3.8.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no adverse or beneficial effects on groundwater or surface water quality, wellhead protection areas, or impaired waters. There would be no additional runoff; however, localized drainage in the Kwik Shop parking lot would continue to be a problem.

Proposed Alternative

The Proposed Alternative would not have any adverse or beneficial effects on groundwater quality or wellhead protection areas. However, due to the grading proposed for the roadway, there could be minor temporary impacts to surface water. This grading would require a NPDES permit from NDEQ for grading areas over one acre and compliance with the City and County MS4 permits. The Proposed Alternative would also result in a slightly larger impervious roadway surface, resulting in greater stormwater runoff. However, this increase in impervious area would be negligible when compared to its contribution to the immediate watershed, as well as the greater Papillion Creek Watershed. If the majority of the ROW for 156th Street and Blondo Street were considered to be impervious following construction, this would only represent an increase from approximately 9 acres of impervious surface to 18 acres of impervious surface of the immediate watershed. Furthermore, the conversion of roadside ditches to enclosed stormwater pipes would also represent only a minor change in the characteristics of the overall flow regime, considering that the rest of the watershed also drains into enclosed stormwater pipes.

Given the constraints and potential for adverse impacts to acquire additional land for permanent "offline" post-construction BMPs, the City proposes to install several "inline" structural BMPs (i.e. within the existing stormwater system) to improve water quality for the Proposed Alternative. These BMPs would be aimed at improving the capacity and timing of the system to better handle the runoff to get it off streets, parking lots and adjacent properties; and also to reduce the velocity of the outflow of the runoff as it enters the unnamed tributary northwest of the intersection of 156th and Blondo Streets. The capacity improvements would include additional or larger stormwater pipes, thus reducing the localized drainage problems in the Kwik Shop parking lot. The velocity reduction improvements would include a new combined headwall/outlet structure with an energy dissipater on the end of it, and would also include bank stabilization measures just downstream of the outlet. These measures would reduce the potential for bank erosion, reduce the occurrence of blowouts of the existing riprap downstream of this location, and stabilize the stream profile. The proposed velocity reduction measures are a cost-beneficial solution

to improving water quality in this area, and would satisfy the requirements of the City and County's MS4 permit (Selma Kessler, personal communication, June 12, 2014).

For all of the improvements on the 156th Street Project, the City would implement a Post-Construction Stormwater Management Plan (PCSMP), which would include submitting design plans, construction certifications, and a long-term maintenance commitment to the Environmental Quality Control Division of Public Works. Measures being taken to protect water quality during construction would include submitting for an NPDES permit from NDEQ, due to construction activities being greater than one acre. The NPDES permit would include requirements for monitoring, inspections, and closure of the permit once the site has been re-vegetated.

In addition, the Proposed Alternative would involve direct impacts to the tributary to the North Branch of West Papillion Creek. These impacts would include the extension of the box culvert and pipe under 156th Street, and the installation of bank stabilization measures. These impacts would require permits from the USACE (described in greater detail in ***Section 3.9, Wetland and Riparian Areas***) and Water Quality Certification from NDEQ under Nebraska Title 117.

3.8.3 PROPOSED MITIGATION

The following mitigation commitments would be implemented:

- The City would incorporate "inline" structural BMPs into the design of the stormwater system to improve the capacity and timing of the runoff entering the unnamed tributary northwest of the 156th and Blondo Streets intersection to reduce localized flooding on adjacent properties. The City would also include BMPs to reduce the velocity of runoff entering the unnamed tributary and install bank protection measures to reduce bank erosion and stream degradation. (City, Engineer)
- The City would implement a Post-Construction Stormwater Management Plan, which would include submitting design plans, construction certifications, and a long-term maintenance commitment to the Environmental Quality Control Division of Public Works. (City, Engineer)
- The City would obtain a Clean Water Act Section 402 NPDES permit from NDEQ for grading activities greater than one acre in size. The permit would require submission of a Stormwater Pollution Prevention Plan (SWPPP), a Notice of Intent (NOI), and a Notice of Termination (NOT) following re-vegetation of the site. All provisions of the permit would be incorporated into the construction specifications and would be implemented to minimize impacts to water quality. (City, Engineer, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public -
  Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

3.9 WETLAND AND RIPARIAN AREAS

Wetlands and other waters of the United States are regulated by the USACE under Section 404 of the CWA and are also protected under EO 11990 - *Protection of Wetlands*, which requires federal agencies (including FHWA) to implement "no net loss" measures for wetlands. These no net loss measures include a phased approach of wetland impact avoidance, then minimization of impacts if wetlands cannot be avoided, and finally mitigation.

Wetlands are areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated-soil conditions. In addition to providing ecological benefits, such as supporting commercial fisheries and performing water filtration, they provide habitat for many plant and animal species, including economically valuable waterfowl and one-third of the nation's endangered species.

Riparian areas are ecosystems at the interface between a river, stream or other waterbody and the surrounding uplands. Riparian areas also provide valuable wildlife habitat, serve as a buffer for runoff, provide shade to the adjacent waterbody, and other valuable benefits. While there are no federal laws that directly protect riparian areas, they are frequently afforded protection by the USACE if there are impacts to adjacent wetlands or other waters of the United States. In addition, the City of Omaha and the Papio Partnership also require protection of riparian areas meeting certain criteria as defined in the *Omaha Regional Stormwater Manual*.

3.9.1 CURRENT CONDITIONS

A Wetland Delineation was conducted to identify potential wetlands or other waters of the United States along the 156th and Blondo Street corridor. Two areas of potential wetlands and waters were identified. The first area is the unnamed tributary to the North Branch of West Papillion Creek. This tributary is an intermittent stream, and has two small areas of adjacent wetlands along it. The second area is an isolated wetland in the roadside ditch along the east side of 156th Street, north of Burt Street. More detailed descriptions of these areas are included in the Wetland Delineation in ***Appendix B***.

The USACE was asked to prepare a Preliminary Jurisdictional Determination for the identified areas, and concluded that the unnamed tributary to the North Branch of West Papillion Creek is jurisdictional, along with its adjacent wetlands. The area of wetlands in the ditch along 156th Street was determined to be non-jurisdictional by the USACE because it was formed in an upland roadside ditch and did not flow to or from any other jurisdictional areas. The jurisdictional wetlands and other waters of the United States are shown on ***Figure 3.7***.

3.9.2 ENVIRONMENTAL CONSEQUENCES

No-Action Alternative

The No-Action Alternative would have no impacts to wetlands or other waters of the United States.

Proposed Alternative

The Proposed Alternative would require impacts to the tributary to the North Branch of West Papillion Creek. These impacts would include extending the box culvert and pipe under 156th Street by approximately 70 feet, and installing bank stabilization measures along both sides of the tributary for an additional 90 feet. There would also be impacts to approximately 0.02 acre of wetlands adjacent to the tributary. These impacts are expected to be authorized by a Nationwide Permit (NWP), which would contain general and special conditions for its use. Because the impacts to the tributary are less than 100 feet in total loss of stream length, and because the loss of wetlands is less than 1/10 of one acre (0.10 ac), no compensatory stream or wetland mitigation is proposed.

3.9.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- Prior to starting construction, the City of Omaha would submit for and obtain a CWA Section 404 Permit for impacts to the unnamed tributary to the North Branch of West Papillion Creek and adjacent wetlands. (City, Engineer)
- All provisions of the permit would be incorporated into the construction specifications and would be implemented to minimize impacts to wetlands. (City, Contractor)
- BMPs for impacts to wetlands and waters of the U.S. would be implemented. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

3.9.4 Compliance with Executive Order 11990

The Proposed Alternative would impact approximately 0.02 acre of wetlands along the tributary to the North Branch of West Papillion Creek. The existing roadway is situated such that any improvements to widen the road would impact this stream to some degree, and all possible measures have been taken to minimize these impacts, while also taking into consideration the existing residences, businesses, and utilities in the vicinity. In particular, the centerline of Blondo has been shifted to the south to the maximum amount practicable, without adversely impacting homes along the south side of the road.

Based on the above considerations, it has been determined that there is no practicable alternative to the proposed construction in wetlands, and that the Proposed Alternative has included all practicable measures to minimize harm to wetlands which may result from such use.

3.10 FLOODPLAINS

EO 11988 – *Floodplain Management*, requires federal agencies to, among other directives, reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands, and facilities; (2) providing Federally undertaken, financed or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related resources planning, regulating, and licensing activities.

3.10.1 CURRENT CONDITIONS

The Federal Emergency Management Agency (FEMA) manages the National Flood Insurance Program (NFIP), and publishes and updates the Flood Insurance Rate Map (FIRM) to illustrate those areas susceptible to flooding, and therefore requiring federal flood insurance. The FIRM for Douglas County (***Figure 3.8***) shows one area of the Study Area as being within a special flood hazard area (100-year floodplain).

This area extends along the stream channel northwest of the intersection of 156th and Blondo Streets, and ends at the downstream end of the existing box culvert under 156th Street (FEMA, 2010).

3.10.2 ENVIRONMENTAL CONSEQUENCES

No-Action

The No-Action Alternative would have no impacts on the FEMA designated floodplain.

Proposed Alternative

Nebraska floodplain regulations require any project that crosses a Zone "A" Floodplain (100-year floodplain) to obtain a floodplain permit. Therefore, the Proposed Alternative would require a floodplain development permit from the P-MRNRD.

3.10.3 PROPOSED MITIGATION

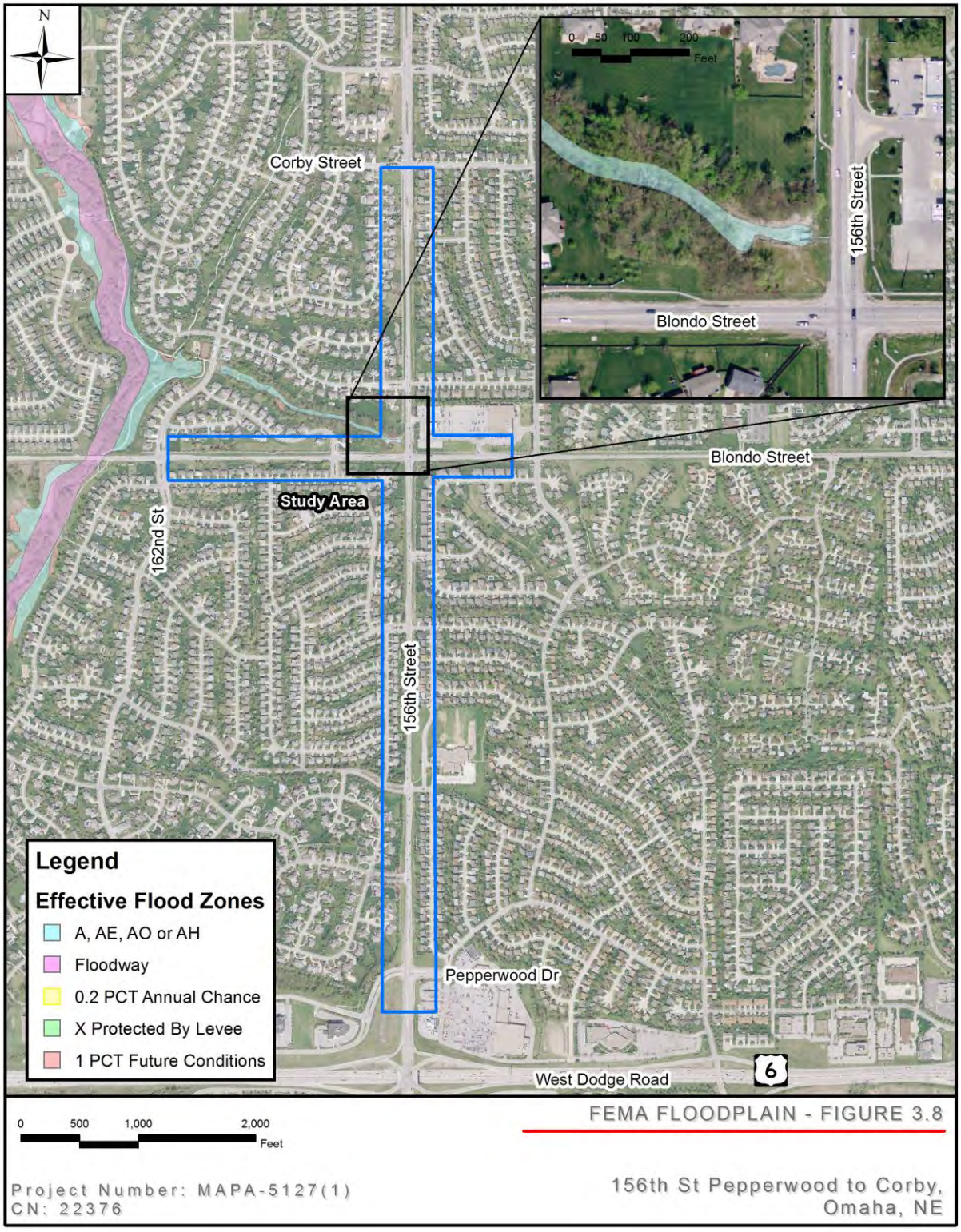
The following mitigation commitments would be implemented:

- The City of Omaha would acquire the proper floodplain permits, and would certify that the construction activities are in compliance with the State of Nebraska floodplain regulations, prior to starting construction. Standard provisions included in the required floodplain permit would be incorporated into the construction specifications, and would be followed to minimize impacts on the floodplain. (City, Contractor, Engineer)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

Figure 3.8 FEMA Floodplain



3.10.4 Compliance with Executive Order 11988

EO 11988 outlines an eight-step-process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. These eight steps, and how they have been followed for this project are presented below:

1. *Determine if the proposed action is in the base floodplain* – The proposed action is in the FEMA designated 100-year base floodplain (***Figure 3.8***).
2. *Conduct early public review, including public notice* – A public meeting was held on February 13, 2012. No floodplain concerns were brought up from the public or regulatory agencies.
3. *Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside the floodplain* - The existing drainage conditions result in the 100-year floodplain beginning at the outlet to the culvert under 156th Street just north of Blondo Street. Widening the roadway to the east at this location to avoid impacts to the floodplain would have resulted in impacts to the retail center to the east, as well as possibly to homes along the east side of 156th Street at Burdette Street. These alternatives would not be practicable.
4. *Identify impacts of the proposed action* – The proposed action would have minor impacts to the floodplain, resulting from the extension of an existing culvert to widen 156th Street.
5. *If impacts cannot be avoided, develop measures to minimize the impacts and restore and preserve the floodplain as appropriate* – There were no alternatives that completely avoid impacts to the floodplain. The culvert extension is the minimum length necessary to convey water using acceptable design criteria.
6. *Re-evaluate alternatives* – The Proposed Alternative has been designed to avoid additional impacts to the floodplain by shifting the centerline of Blondo Street as far south without impacting homes along the south side of the roadway.
7. *Present the findings and a public explanation* – A Public Hearing would be held to review this Draft EA prior to a final decision by FHWA.
8. *Implement the action* – Pending approval of the EA, a floodplain development permit would be applied for and all conditions of the permit would be incorporated into the construction specifications, which would be followed by the contractor to minimize impacts on the floodplain.

3.11 Vegetation, Wildlife, and Migratory Birds

3.11.1 Current Conditions

The 156th Street Study Area lies within the tall-grass prairie eco-region of Nebraska. Undisturbed portions of this region are characterized by rolling hills shaped by glaciers intersected by stream valleys. According to the Nebraska Natural Legacy Project - State Wildlife Action Plan, it is estimated that approximately two percent of Nebraska's tall-grass prairie remains mostly as remnants less than eighty acres in size. Typical vegetation historically included upland prairie grasses including Indian grass, switchgrass, big bluestem, and Canada wild-rye, and wildflowers including showy goldenrod, prairie blazing star, skyblue aster, and purple coneflower (NGPC, 2011). Additional vegetation types included woodlands, wet meadows, and riparian corridors.

Typical wildlife in this region includes nesting waterfowl such as wood ducks, mallards, and green herons, grassland birds such as dickcissel, bobolink, and Swainson's hawk, and woodland birds such as Bell's vireo, black-and-white warbler, orchard oriole and other common species. Mammals include plains pocket gopher, thirteen-lined ground squirrel, white-tailed deer, coyotes, red fox, and other common species such as raccoons, opossums and rabbits.

The Study Area is characterized by urban, developed land, with residential areas comprising the majority of the land uses. The ROW is predominantly mowed grasses, with scattered trees and bushes. Other than the deeply incised stream channel northwest of the intersection of 156th and Blondo Streets, there is no appreciable wildlife habitat. There is one area of volunteer trees that have grown up in the ROW along the west side of 156th Street between Cuming and Charles Streets.

Migratory Bird Treaty Act

Under the *Migratory Bird Treaty Act of 1918* (MBTA) (16 USC 703-712: Chapter 128 *as amended*) construction activities in grassland, wetland, stream, and woodland habitats, and those that occur on bridges or culverts (e.g. which may affect swallow nests on bridge girders) that would otherwise result in the taking of migratory birds, eggs, young, and/or active nests should be avoided.

3.11.2 Environmental Consequences

No Action Alternative

The No-Action Alternative would have no impact on vegetation, wildlife, or migratory birds.

Proposed Alternative

The Proposed Alternative does have the potential to remove trees and shrubs, specifically along the stream channel northwest of the intersection of 156th and Blondo Streets, and along the west side of Blondo Street between Cuming and Charles Streets. There would also be disturbances to existing vegetation from grading. However, with the mitigation measures described below, these impacts are not expected to be adverse.

3.11.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- If the proposed construction project would occur during the primary nesting season (April 1 – September 1) or any other time which may result in the "take" of migratory birds, a qualified biologist would conduct a field survey in accordance with NDOR's Avian Protection Plan (APP) and Special Prosecution and Progress for Migratory Birds (A-42-0807). (City)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process. (City)
- Tree impacts in the existing ROW would not be mitigated. Instead, the City of Omaha Public Works Department would continue its practice of providing funding to the Planning Department to create tree planting projects to implement as necessary to meet the requirements of the *Green*

Streets Plan for Omaha[16], in which 156th Street and Blondo Street are both classified as "Multi-lane, undivided, new/suburban" Major Arterials. (City)

The following standard specifications would be used to minimize the spread of invasive species and noxious weeds that could result from the ground disturbance and grading for the Proposed Alternative.

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01(6) Amended A-43-0210 - Legal Relations and Responsibility to the Public- Laws to be Observed
  - Requires the Contractor to prevent the transfer of invasive plant and animal species.
- Standard Specification 202.01(4)(d) - Clearing and Grubbing – Description
  - Trash, dead trees, and other vegetation in the ROW limits and beyond the limits of construction shall be disposed of by the Contractor.
- Standard Specification 803.02 - Seeding - Material Requirements
  - Specifies seeding methods, rates of application, and seed mixtures.
- Standard Specification 803.03 - Seeding - Construction Methods
  - Specifies planting seasons and methods.
- Standard Specification 806.02(4)(c) - Sodding - Material Requirements
  - Specifies that sod may not contain invasive plant species.
- Standard Specification 807 - Erosion Control
  - Specifies methods for erosion control.

3.12 THREATENED AND ENDANGERED SPECIES

Federally threatened and endangered species are protected under the *Endangered Species Act of 1973* (ESA) as amended (16 USC 1531 et seq.). Significant adverse effects to a federally listed species or its habitat would require consultation with the USFWS under Section 7 of the ESA. Section 7 requires federal agencies to ensure that actions which they authorize, fund, or carry out are not likely to jeopardize the continued existence of currently listed or proposed threatened or endangered species or result in the destruction or adverse modification of their critical habitat. State listed threatened and endangered species are protected by the Nebraska Game and Parks Commission (NGPC) under Nebraska's *Non-Game and Endangered Species Conservation Act* (Nebraska Revised State Statutes 37-801 to 37-811).

3.12.1 CURRENT CONDITIONS

There are no documented occurrences of state or federally listed threatened or endangered species in the Study Area, and no designated Critical Habitat.

[16] The *Green Streets Plan for Omaha* is a document that considers the nature of Omaha's street system as a public space, defines the City's proposed Green Street System, establishes design and landscape guidelines for the Green Streets network, presents maintenance concepts and standards for this part of the public landscape, and establishes a process to help city decision-maker and public and private funders set implementation priorities.

3.12.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no impacts to threatened and endangered species.

Proposed Alternative

In accordance with the NDOR/FHWA/USFWS/NGPC Biological Evaluation (BE) Matrix Process, a BE concurrence request was sent to NDOR on January 3, 2012. On January 20, 2012, NDOR and FHWA concurred that the Proposed Alternative would have "no effect" on state or federally listed species (***Appendix C***). On April 15, 2014, NDOR issued a re-evaluation for the project due to the recent proposed listing of the northern long-eared bat (*Myotis septentrionalis*) by the USFWS (***Appendix C***). NDOR determined that the proposed project "may affect, but is not likely to adversely affect" the northern long-eared bat, provided that specific conservation conditions are followed (see below).

3.12.3 Proposed Mitigation

The following "General Conservation Conditions" provided by NDOR would be incorporated into the specifications for this project, and implemented as appropriate (responsible parties are noted):

- All permanent seeding and plantings (excluding managed landscaped areas) shall use species and composition native to the project vicinity as shown in the Plan for the Roadside Environment. However, within the first 16 feet of the road shoulder, and within high erosion prone locations, tall fescue or perennial ryegrass may be used at minimal rates to provide quick groundcover to prevent erosion, unless state or federally listed threatened or endangered plants were identified in the project area during surveys. If listed plants were identified during survey, any seed mix requirements identified during resource agency consultations shall be used for the project. (NDOR Environmental)

- If species surveys are required for this project, results would be sent by NDOR to the USFWS, NGPC, and if applicable COE. FHWA would be copied on submittals. (NDOR Environmental, District Construction)

- If federal or state listed species are observed during construction, contact NDOR Environmental. Contact NDOR Environmental for a reference of federal and state listed species. (NDOR Environmental, District Construction, Contractor)

- Environmentally sensitive areas would be marked on the plans, in the field, or in the contract by NDOR Environmental for avoidance. (NDOR Environmental, District Construction)

- Conservation conditions are to be fully implemented within the project boundaries as shown on the plans. (District Construction, Contractor)

- The following project activities shall, to the extent possible, be restricted to the beginning and ending points (stationing, reference posts, mile markers, and/or section-township-range references) of the project, within the right-of-way designated on the project plans: borrow sites, burn sites, construction debris waste disposal areas, concrete and asphalt plants, haul roads, stockpiling areas, staging areas, and material storage sites. Any project related activities that occur outside of these areas must be environmentally cleared/permitted with the U. S. Fish and Wildlife Service and Nebraska Game and Parks Commission as well as any other appropriate agencies by the contractor and those clearances/permits submitted to the District Construction Project Manager prior to the start of the above listed project activities. The contractor shall submit information such as an aerial photo showing the proposed activity site, a soil survey map with the location of the site, a plan-sheet or drawing showing the location and dimensions of the activity site, a minimum of 4 different ground photos showing the existing conditions at the proposed activity site, depth to ground water and depth of pit, and the "Platte River depletion status" of the site. The District Construction Project Manager would notify NDOR Environmental which would coordinate with FHWA for acceptance if needed. The Contractor must receive notice of acceptance from NDOR, prior to starting the above listed project activities. These project activities would not adversely affect state and/or federally listed species or designated critical habitat. (NDOR Environmental, District Construction, Contractor).

- If there is a change in the project scope, the project limits, or environmental commitments, the NDOR Environmental Section must be contacted to evaluate potential impacts prior to implementation. Environmental commitments are not subject to change without prior written approval from the Federal Highway Administration. (District Construction, Contractor)

- Requests for early construction starts must be coordinated by the Project Construction Engineer with NDOR Environmental for approval of early start to ensure avoidance of listed species sensitive lifecycle timeframes. Work in these timeframes would require approval from the Federal Highway Administration and could require consultation with the USFWS and NGPC. (District Construction, Contractor)

- Construction waste/debris would be disposed of in areas or a manner which would not adversely affect state and/or federally listed species and/or designated critical habitat. (Contractor)

- Refueling would be conducted outside of those sensitive areas identified on the plans, in the contract, and/or marked in the field. (Contractor)

The following specific conservation conditions for northern long-eared bat would also be followed:

NLEB-1 Tree clearing, bridge deck joint replacements over the bridge deck, bridge/>5-ft box-culvert removal activities will be scheduled to occur between October 1st – March 31st to avoid impacts to the northern long-eared bat roosting period. (NDOR Environmental, Construction, Contractor)

OR

NLEB-2 If tree clearing, bridge deck joint replacement over the bridge deck, or removal of bridge/>5-ft box-culvert structures occurs during the northern long-eared bat maternal roosting period (April 1st – September 30th), NDOR or a qualified biologist will perform surveys prior to the start of these activities at the following locations: entire length of the project (location of suitable habitat). If the species is absent, work may proceed. If the species is found, NDOR Environmental Section will consult with the USFWS, NGPC, and FHWA prior to the start of construction. (NDOR Environmental, Construction, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 – Legal Relations and Responsibility to the Public – Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

3.13 UTILITIES

3.13.1 CURRENT CONDITIONS

Numerous public and private utilities are located within the Study Area. Some of these are within the existing ROW, and others are within separate utility easements that may run adjacent to or within the ROW. Utilities within separate easements typically consist of those operated by Cox Communication, Century Link, and OPPD. A utility coordination letter was sent on December 14, 2010 to all known utility companies that typically operate utilities in the Omaha area, including, but not limited to:

- Alltel Communications
- AT&T
- Black Hills Energy
- Cox Communications
- Galaxy/Dark Fiber Solutions
- MCI
- Northern Natural Gas
- Omaha Public Power District
- Metropolitan Utilities District
- Qwest Corporation (now CenturyLink)
- Sprint-Nextel
- Magellan Midstream Partners
- National Cooperative Refinery Association
- Verizon Company
- Windstream

Responses were received from, and/or facilities were determined to be present for the following:

Cox Communications has existing underground facilities that are:

- Parallel to both sides of 156th Street from south end of project to Blondo Street.
- Parallel to the east side of 156th Street from Blondo to north end of project
- Parallel to the south side of Blondo Street from the west end of project to the east end of project
- Parallel to the north side of Blondo Street from the west end to west of 157th Street.

Metropolitan Utility District has existing underground water and gas facilities that are:

- Parallel to both sides and underneath 156th Street from the south end of project to the north end of project.
- Parallel to both sides and underneath Blondo Street from the east end of project to the west end of project.

Omaha Public Power District has existing underground facilities that are:

- Parallel to both sides of 156th Street from the south end of the project to Blondo Street, crossing multiple times.
- Parallel to the east side of 156th Street from Burdette Street to the north end of project.
- Parallel to the south side of Blondo Street from the east end of the project to the west end, crossing multiple times.

OPPD also has existing above ground facilities that are:

- Parallel to the east side of 156th Street from the south end of project to the north end of the project.
- Parallel to both sides of Blondo Street from 156th Street to the east end of the project.
- Parallel to the north side of Blondo Street from the west end of the project to the east end of the project (high-mast transmission lines).

Verizon has existing underground facilities that run parallel to 156th Street from the south end of the project to the north end of the project.

Douglas County Emergency Management Agency operates an emergency warning siren (Site 522) on the south side of Blondo Street, approximately half way between 157th and 162nd Street.

3.13.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no impacts on public or private utilities.

Proposed Alternative

There are several areas of potential conflicts with utilities due to proposed grading work, retaining wall construction, and sanitary and storm sewer construction. A final determination of conflicts cannot be made until the final design phase; however, preliminary plans show probable conflicts with the following utilities:

- Cox facilities along the south side of Blondo Street, from 157th Street to the east end of project.
- Cox facilities along the east side of 156th Street, from the south end of the project to Burt Street.
- OPPD transformer boxes northeast of the 156th and Blondo Streets intersection.
- OPPD facilities along the south side of Blondo Street, from 157th Street to the east end of the project.

- OPPD high-mast transmission towers along the north side of Blondo Street at the intersection with 156th Street.
- MUD water and gas facilities at various points along Blondo and 156th Streets.
- Cox and OPPD facilities along the east side of 156th Street, from north of Burt Street to Blondo Street.
- Douglas County Emergency Management Warning Siren (Site 522)

There are not expected to be any impacts to Verizon's underground cables.

Utility impacts resulting from the Proposed Alternative include the potential for timing conflicts (i.e. where one utility would have to wait to relocate their lines until another utility had completed their relocation) where project construction and utility work are occurring in the same area, and also minor disruptions in service when utility companies "cut-over" to the new lines.

3.13.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- During final design, the City would ensure that the OPPD high-mast transmission towers along the north side of Blondo are not impacted, except for the two at the intersection of 156th and Blondo Streets that would be affected by the widening of the intersection. (City, Engineer)
- The City would notify utility companies of the need for relocation during the design stage of the project. The City would coordinate with Cox Communications, OPPD and MUD to relocate utilities ahead of roadway construction. Where relocations are required, designs to relocate the utility would be developed by the utility company. The cost of utility relocation and each party's responsibilities would be determined through coordination with each utility company and evaluations of past agreements between the City of Omaha and each utility company. The City's Construction Division would coordinate utility agreements with the utility companies prior to construction. (City, Engineer)
- The Contractor shall follow the guidelines of NDOR's *Policy for Accommodating Utilities on State Highway ROW* (NDOR, 2001). (Contractor)
- Contractor would be responsible for notifying utility companies of relocation needs during the construction phase of the Project for utilities that were not relocated prior to construction. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 105.06 – Control of Work – Cooperation with Utilities
    - Requires the City to notify all utility companies, pipeline owners, railroads, or other parties affected by the proposed work.
- Standard Specification 107.09 – Legal Relations and Responsibility to the Public – Preservation and Restoration of Property, Trees, Monuments, etc.
    - Requires the Contractor to preserve, protect, and prevent damage to all public and private property.

- Standard Specification 107.16 – Legal Relations and Responsibility to the Public – Contractor's Responsibility for Utility Property and Services
    - Requires the Contractor to verify the location of existing utilities.
- Standard Specification 107.12 – Legal Relations and Responsibility to the Public – Responsibility for Damage, Injury, or Other Claims
    - Requires the Contractor to be responsible for all damage to property used during construction resulting from neglect or misconduct. The Contractor shall also be required to meet with local government entities to advise them of their intentions to use local roads, and is responsible for damage from such use.

Special Provisions:

- Status of Utilities
    - Presents a detailed plan for utility company coordination, including names, telephone numbers, stationing for utility conflicts, schedules, and other pertinent information for the Contractor.

3.14 NOISE IMPACTS

Title 23, Section 772 of the U.S. Code of Federal Regulations (23 CFR 772) was written by FHWA to provide procedures for noise studies, and noise abatement measures to help protect the public health and welfare, to supply Noise Abatement Criteria (NAC), and to establish requirements for traffic noise information to be given to those officials who have planning and zoning authority in the project area. 23 CFR 772 contains the NAC, which are based on the Equivalent Continuous Noise Level (Leq) descriptor. Leq(h) is the equivalent steady-state sound level, which during the hour under consideration contains the same acoustic energy as the time-varying traffic sound level during that same hour. ***Figure 3.9*** shows the range of common noise levels from everyday activities for a point of reference.

Table 3.4 contains the upper limits of hourly Leq desirable noise levels that are part of the NAC established by 23 CFR 772. Any noise levels that approach or exceed these criteria would not be desirable, and would be referred to as a noise impact.

Figure 3.9 Typical Sound Pressure Level (dBA)

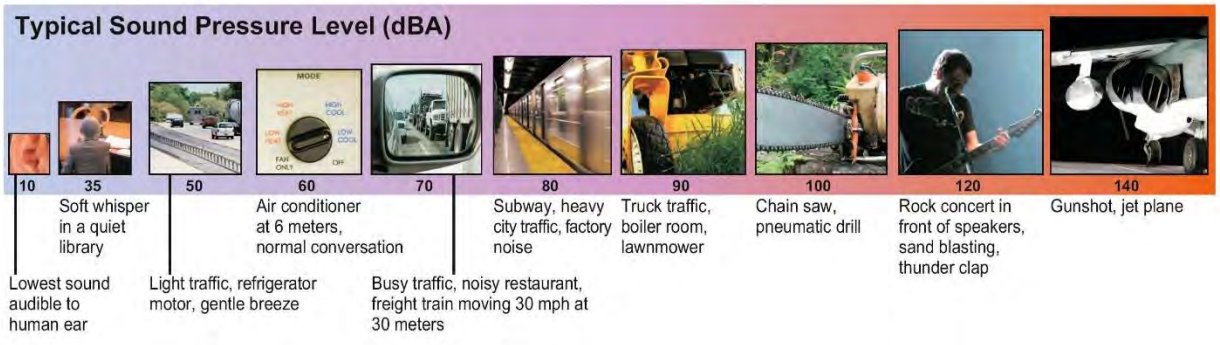


Table 3.4 Noise Abatement Criteria, Hourly A-Weighted Sound Level (in decibels) from 23 CFR 772

Activity Category	Activity [1] Leq(h)	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential homes.
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, television studios.
E[2]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	-----	-------	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities, (water resources, water treatment, electrical), and warehousing.
G	-----	-------	Undeveloped lands.

[1] - The Leq(h) Activity Criteria values are Hourly A-weighted Sound Level decibels, dB(A). The NAC are for impact determination only and are not design standards for noise abatement.
[2] - Includes undeveloped lands permitted for this activity category.

3.14.1 CURRENT CONDITIONS

To analyze the potential impacts of traffic noise, a *Traffic Noise Study Report* (Noise Study) was completed for the proposed project, which evaluated the existing noise levels, proposed noise levels in the design year, and also evaluated the feasibility and reasonableness of noise abatement measures to reduce noise levels for impacted receivers. The Noise Study (***Appendix D***) was completed using NDOR's *Noise Analysis and Abatement Policy* (NDOR, 2011). NDOR approved the Noise Study on April 16, 2014.

The Noise Study evaluated approximately 250 receptors in the Study Area. Two are commercial receptors, one is an elementary school, and the remaining receptors are residential. It should be noted that the study area for the Noise Study included all portions of this proposed project, including an area previously evaluated for the 144th and Blondo Streets Project (identified as "Location 1"), to account for any possible noise impacts that would be created by the combination of the two projects, and to satisfy a mitigation commitment in the Final EA for the 144th and Blondo Streets Project.

3.14.2 Environmental Consequences

No-Action Alternative

The future noise impacts of the No-Action Alternative were not analyzed. According to NDOR's Noise Policy, traffic noise impacts are based only on the "design year build condition noise levels." Furthermore, no abatement measures were evaluated as part of the No-Action Alternative.

Proposed Alternative

According to the Noise Study (***Appendix D***), 110 of the analyzed receptors are anticipated to have a noise impact in the year 2035 due to noise levels approaching or exceeding FHWA's NAC. Abatement measures were evaluated for all impacted receptors, the results of which are presented in the following paragraphs.

Noise abatement measures (i.e. noise walls) were evaluated for ten sites along the project corridor where the potential existed to reduce noise levels below the NAC in the future year 2035. Noise walls were found to be feasible and reasonable for six (6) sites (***Figure 3.10***). These six sites were able to provide protection for 82 of 110 impacted receptors. The remaining four (4) sites were either not feasible (i.e. did not meet acoustic reduction requirements and/or did not meet engineering design requirements), or were not reasonable (i.e. did not meet the cost effective threshold of $40,000 per benefitted receptor). A wall along Location 1 was also determined to be feasible and reasonable. Details about impacted and benefitted receivers, as well as preliminary designs for each noise wall site are provided in the Noise Study in ***Appendix D***.

A stakeholder meeting was held on May 8, 2014 between 6:30 pm and 8:00 pm at Grace Abbott Elementary School to discuss the noise impacts with benefited receivers at the six (6) feasible and reasonable sites, as well as for Location 1, and to offer them an opportunity to vote on the approval and construction of noise abatement measures. The City of Omaha followed NDOR's July 2011 Noise Policy for the voting of benefitted receivers to determine which noise walls would be approved, and provided benefitted receivers a 30-day voting period, during which time two separate letters were sent to inform them of the voting process. According to NDOR's Noise Policy, only those sites receiving 75 percent approval of the returned ballots from all benefited receivers behind each wall location would ultimately be constructed. Following the voting process, all seven walls (i.e. NB01, NB02, NB04, SB02, SB03, EB01, and Location 1) were approved by the respective benefitted receivers. Therefore, all of these walls are proposed to be designed and constructed along with the Proposed Alternative.

Noise wall designs would be consistent with other similar noise walls constructed recently within the City, and would include stamped or colored concrete, stone façades, or other similar materials, as shown on ***Figure 3.11***. The front of the noise walls would be stained concrete, while the back side of the walls would be left unfinished.

Figure 3.10 Proposed Noise Wall Locations

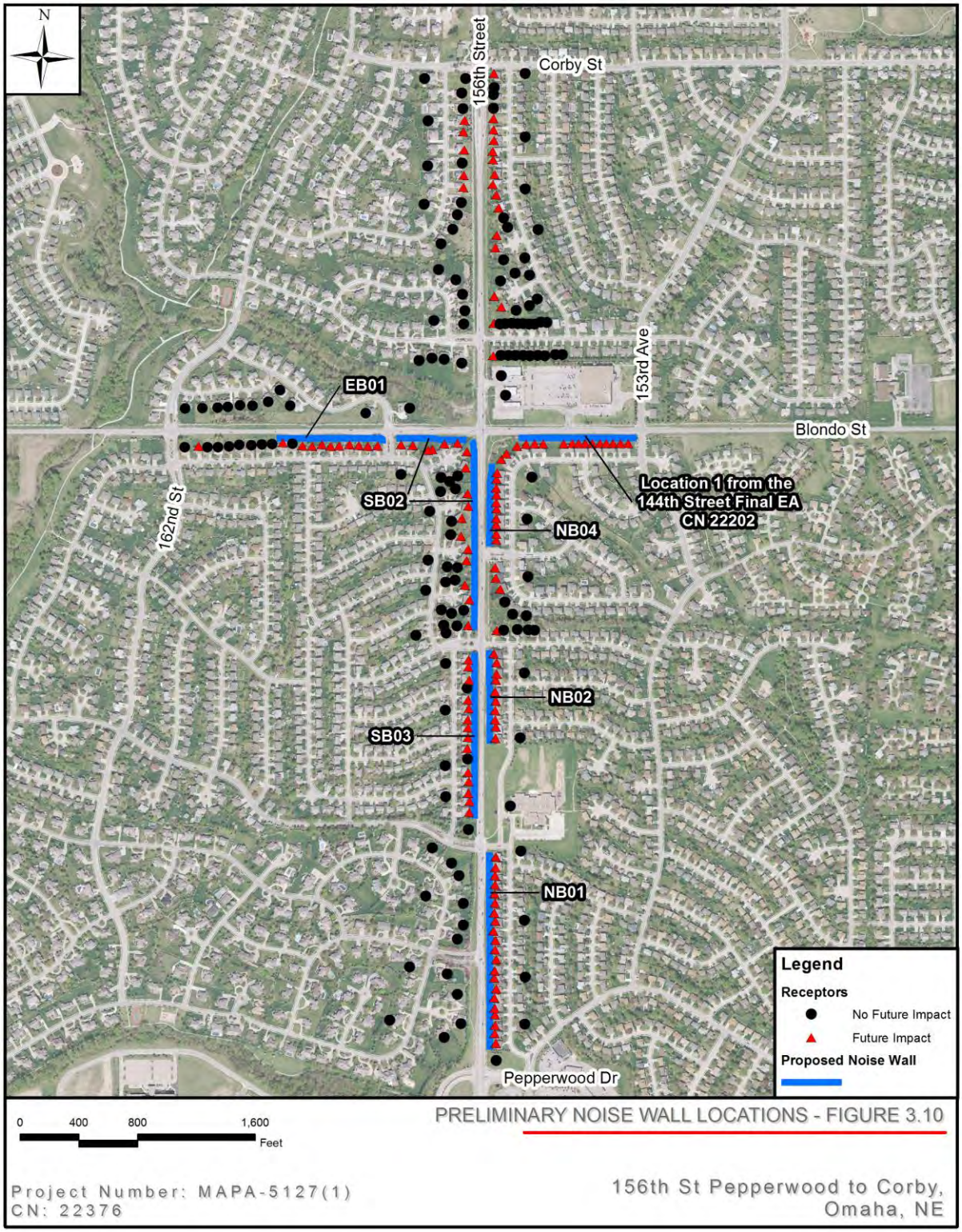


Figure 3.11 Typical Noise Walls

3.14.3 PROPOSED MITIGATION

The following mitigation commitments would be implemented:

- Noise walls would be constructed at the following locations: NB01, NB02, NB04, SB02, SB03, EB01, and Location 1, and would be consistent with the preliminary design plans presented during the voting process. (City, Engineer)
- Noise wall designs would be consistent with other similar noise walls constructed recently around the City, and would consist of stamped or colored concrete, stone façades, or other similar materials. The front of the noise walls would be stained concrete, while the back side of the walls would be left unfinished. (City, Engineer, Contractor)

3.15 AIR QUALITY, MOBILE SOURCE AIR TOXICS, AND GREENHOUSE GASES

Motor vehicle emissions are one of the major sources of air pollution. Such emissions vary with traffic volumes, distances traveled, travel speeds, and vehicle types. This section[17] focuses on the current air quality of the Study Area to determine the potential for air quality degradation with an increase in vehicles, due both to background socioeconomic growth and improvements that increase a facility's attractiveness to drivers.

The *Federal Clean Air Act* (CAA) of 1970, and last amended in 1990, forms the basis for the national air pollution control effort. Basic elements of the act include National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutants standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions. Under the CAA, the EPA regulates air

[17] The discussion of air quality in this section was developed in coordination with NDOR, and also utilizes guidance developed by FHWA for analysis of effects on regional air quality, mobile source air toxics, and greenhouse gases.

quality. Areas of the country where air pollution levels persistently exceed that NAAQS may be designated as "non-attainment" areas.

3.15.1 Regional Air Quality

All portions of the Study Area are currently in attainment, or un-classifiable with respect to all pollutants for which a National Ambient Air Quality Standard (NAAQS) exists. According to EPA's National Criteria Pollutant Maps, Douglas County is designated as "maintenance" for one NAAQS pollutant (i.e. lead) (EPA 2013). In 1992 Omaha was designated as non-attainment for this pollutant; however, the area was re-designated as being in attainment in 2001 (NDEQ, 2008).

In 2004, NDOR, FHWA, and NDEQ signed an Air Quality Memorandum of Understanding (MOU) identifying the minimum threshold requirements for detailed air quality analysis on federal-aid roadway projects in the State of Nebraska (NDOR, NDEQ, and FHWA, 2004). According to the MOU, a detailed analysis only needs to be conducted on federal-aid projects when the 20-year projected daily traffic volume exceeds 100,000 vehicles per day.

The highest projected traffic volumes in the 20-year future conditions (i.e. 2035) along any segment within the Proposed Alternative, is approximately 38,000 vpd, which is well below the 100,000 vpd threshold agreed to by NDOR, FHWA, and NDEQ for a detailed air quality analysis. Therefore, a detailed air quality analysis does not need to be completed.

3.15.2 Mobile Source Air Toxics

FHWA's *Interim Guidance on Mobile Source Air Toxic Analysis* identifies three categories for analyzing MSATs in NEPA documents, depending on the potential for MSAT effects. The 156th Street Improvements project is categorized as level 2, or "projects with low potential MSAT effects," and therefore requires a qualitative assessment. The project is not anticipated to create a potential for meaningful increases of MSATs or MSAT effects for the following reasons:

- As a widening project there would not be a significant increase in vehicle miles traveled (VMT).
- This widening project is intended to improve traffic movement, and would not add substantial new capacity.
- This project does not serve any intermodal facilities
- The projected design year traffic would not reach 140,000 vehicles per day.

Two alternatives are being examined in this EA: the No-Build Alternative (i.e. No-Action Alternative) and the Build Alternative (i.e. Proposed Alternative). For each alternative, the amount of MSATs emitted would be proportional to the VMT assuming that other variable such as fleet mix are the same for each alternative.

The VMT for the Proposed Alternative would be slightly higher than that for the No-Action Alternative because the additional capacity would increase the efficiency of the roadway and attract rerouted trips

from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the Proposed Alternative along the project corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. Additionally, the emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds (according to EPA's MOVES2010b model, emissions of all of the priority MSAT decrease as speed increases).

The traffic volume along the corridor is expected to increase regardless of whether the project is built; meaning VMT along the corridor would also increase. Although the future VMT would be would be slightly higher for the Proposed Alternative than the No-Action, widening the roadway would improve traffic movement and decrease congestion (which are both associated with lower MSAT emissions).

Overall, the Proposed Alternative would slightly increase MSAT emissions in the project area. However, future MSAT emissions are expected to be lower than present levels as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent by the year 2050. Although local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the Study Area are likely to be lower in the future in nearly all cases.

3.15.3 Greenhouse Gas Emissions

FHWA has developed four main mitigation strategies to reduce transportation greenhouse gas (GHG) emissions:

1. Improve system and operational efficiencies by optimizing the design, construction, operation, and use of transportation networks.
2. Reduce travel activity by reducing growth in vehicle-miles traveled.
3. Introduce low-carbon fuels.
4. Increase fuel efficiency by advancing and bringing to market advanced engine and transmission designs, lighter-weight materials, improved aerodynamics, and reduced rolling resistance.

Additionally, the EPA and National Highway Traffic Safety Administration, on behalf of the USDOT, have issued rules to reduce GHG emissions and improve fuel economy for light-duty vehicles. Over the lifetime of the model year (MY) 2017-2025 standards, this program is projected to save approximately 4 billion barrels of oil and 2 billion metric tons of GHG emissions (EPA, 2013).

While there would be an increase in traffic volume and VMT along the corridor due to future growth, the Proposed Alternative would improve the system and operational efficiencies of 156th Street by improving traffic movement and decreasing backups, which would ultimately decrease idling and reduce energy use and GHG emissions.

3.16 Hazardous Materials and Recognized Environmental Conditions

Environmental risk sites are those facilities and/or locations where hazardous substances, hazardous waste, or petroleum products were or can be released into the ground water, surface soils, or subsurface

sediments. The term "Recognized Environmental Conditions" (RECs) means the presence of, or likely presence of, any hazardous substances or petroleum products on a property under consideration that may indicate an existing release, past release, or a material threat of a release of any hazardous substance or petroleum into the groundwater, surface water of that property or neighboring properties. RECs do not include "de minimis" conditions that do not present a threat to human health or the environment and that generally would not be subject to enforcement or regulation.

3.16.1 CURRENT CONDITIONS

The Study Area was evaluated for RECs and for their potential to impact, or be impacted by, the Proposed Alternative. A *Hazardous Materials Technical Memorandum* describing these efforts is included in ***Appendix E***. A regulatory agency database report, provided by Environmental Data Resources, Inc. (EDR) of Milford, Connecticut, was reviewed for information regarding reported releases of hazardous substances and petroleum products on or near the Study Area. The center of the search radius for the project was the intersection of 156th and Blondo Streets, and EDR conducted a search using appropriate search radii in general conformance with the scope and limitations of American Society of Testing and Materials (ASTM) Standard Practice E 1527-05.

A limited review of the unmapped (also known as "orphan sites") listings within the database report was also conducted, cross-referencing available address information and facility names, where feasible. Unmapped sites are listings that could not be plotted by EDR with confidence, but are potentially in the vicinity of the Study Area, based on the partial street address, city, or zip code that is provided. Any unmapped site that was identified as being within the approximate minimum search distance[18] from the Study Area based on the site reconnaissance and/or cross-referencing to mapped listings was also evaluated. A copy of the EDR regulatory agency database report is provided in the technical memorandum in ***Appendix E***.

Based on the results of the 156th Street corridor database review, site reconnaissance, NDEQ file search, and historical research information as provided in the technical memorandum included in ***Appendix E*** (approved by NDOR on August 29, 2012), the only potential environmental risk sites located within the vicinity of the project corridor were the following:

- Kwik Shop #665 – 15556 Blondo Street (A spill of approximately 30 gallons of gasoline in 2003 from a customer's ruptured gasoline tank. The NDEQ file was closed in 2004 with a "No Further Action" letter.)
- Max I Walker dry cleaners – 15627 West Dodge Road (located outside Study Area)
- Anderson Amoco – 15635 West Dodge Road (located outside Study Area)
- Jensen Tire & Auto – 15737 West Dodge Road (located outside Study Area)

[18] Minimum search distances vary by the type of database being searched, and the type of hazardous material being searched for, which are outlined in the ASTM Standard Practice E 1527-05. Minimum search distances used in this evaluation are included in Appendix E.

Based on their current regulatory status, the age of the facilities, and/or their distance from the project corridor, none of these sites are considered a REC. Therefore, no further assessment of parcels located within the corridor was recommended.

3.16.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no impacts on or from hazardous materials or RECs.

Proposed Alternative

There are no RECs within the Study Area. Therefore, there would be no impacts to, or from, RECs, and no special mitigation measures are proposed.

3.16.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- If contaminated soils and/or water or hazardous materials are encountered, then all work within the immediate area of the discovered hazardous material would stop until NDOR/FHWA is notified and a plan to dispose of the Hazardous Materials has been developed. Then DEQ would be consulted and a remediation plan would be developed for this project. (City, Contractor)
- The potential exists to have contaminants present resulting from minor spillage during fueling and service associated with construction equipment. Should contamination be found on the project during construction, the DEQ would be contacted for consultation and appropriate actions be taken. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 as Amended A-43-0210 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to notify the Engineer if previously unidentified hazardous materials are encountered during construction. Also requires the Contractor to handle and dispose of contaminated material in accordance with applicable laws.

3.17 Visual Impacts and Aesthetic Considerations

3.17.1 Current Conditions

The surrounding area is primarily residential, with a few commercial and retail uses. The majority of the homes along the corridor face away from the roadway, and are shielded by fences and trees. However, there are several features associated with the neighborhoods that warrant consideration. There are several neighborhood entrance signs or monuments (Barrington Park, Bent Creek, Windridge Hills, Huntington Park, Diamond Head, and Farmington Woods) present in the Study Area, and represent significant investment by the original developers and the current SID or HOA groups that maintain them. In addition, several of these neighborhoods have consistent and continuous neighborhood fences that run along the entire length of their neighborhood (Diamond Head, Windridge Hills, Barrington Park, Farmington Woods, and Huntington Park), several of which have large brick columns in the fence

(Barrington Park, Farmington Woods, and Huntington Park). These features contribute to the overall character of the area, and provide an individual identity to each neighborhood.

3.17.2 Environmental Consequences

No-Action Alternative

The No-Action Alternative would have no visual impacts.

Proposed Alternative

The Proposed Alternative would follow Nebraska Department of Road's *Right of Way Manual* for impacts to fencing, monuments, landscaping, and sprinkler systems. Any of these items located on private property are valued as part of the appraisal process and are included in the good faith offer made to the property owners during the acquisition of property, and during the acquisition of permanent or temporary easements.

The Proposed Alternative would require grading outside the existing roadway to widen and create the new roadway profile. This grading may result in the removal of existing fences and volunteer vegetation that has grown along the right-of-way. Noise walls, where constructed, would block the view of the roadway from adjacent residential properties, and would also block the view of the residential houses from the roadway.

3.17.3 Proposed Mitigation

The following mitigation commitments would be implemented:

- Lighting would be designed to avoid intrusion into the back yards of residences. Specifically, lighting would only be installed at intersections. Lighting between intersections would be reviewed by OPPD and installed if needed for safety. (City)
- Disturbed areas would be re-vegetated with native species where appropriate. (City, Contractor)
- Noise walls and retaining walls, where constructed, would use current NDOR and City of Omaha design criteria and would be similar to other recently constructed walls in the City (i.e. pre-cast concrete walls textured with a painted, false stone façade, or other similar aesthetic treatment), and reflect the aesthetics of the existing fences, walls, and the surrounding community. (City)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process for permanent and temporary easements. (City)
- Landscaping and fences removed by the project would be mitigated through the acquisition process, in coordination with the appropriate HOA or homeowner, whichever owns the landscaping or fencing. (City)
- Neighborhood monument signs impacted by the project would be replaced in accordance with NDOR's *Right-of-Way Manual.* (City)
- Tree impacts in the existing ROW would not be mitigated. Instead, the City of Omaha Public Works Department would continue its practice of providing funding to the Planning Department to create tree planting projects to implement as necessary to meet the requirements of the *Green*

Streets Plan for Omaha, in which 156th Street and Blondo Street are both classified as "Multi-lane, undivided, new/suburban" Major Arterials. (City)

3.18 TEMPORARY CONSTRUCTION RELATED CONSIDERATIONS

Temporary construction impacts typically include the following types of impacts: work zone traffic control, project phasing, detours and alternate routes, and minor and temporary air quality or water quality impacts. Temporary impacts to other natural and socio-economic resources are discussed in their respective sections elsewhere in this document.

3.18.1 ENVIRONMENTAL CONSEQUENCES

No-Action Alternative

The No-Action Alternative would have no temporary construction related impacts.

Proposed Alternative

The Proposed Alternative would result in minor and temporary construction-related impacts. Those that would generally be confined to the Study Area and immediately adjacent properties include increased noise levels, dust, vibration, restricted or modified access, removal and replacement of vegetation or landscaping, and removal and replacement of fences. Mail and trash service would not be affected. Temporary impacts to the traveling public, or to those people farther removed from the project area, may include restriction or modification of travel lanes and access to side streets, lane closures, reduced speeds, and modified pedestrian access.

The Proposed Alternative would be constructed in phases. The proposed timeline for completion is two construction seasons, with construction currently planned to begin in 2016. Utility relocations would likely begin in the spring of the first season, with construction continuing through the fall of the second construction season. A detailed phasing plan would be developed during the final design, following the public hearing and public comments on this Draft EA. This plan would take into consideration: right-of-way impacts, property and business access, existing traffic using these routes, utility relocations, and a contractor's necessary work zone to complete the construction activities within a defined time frame. Current plans for phasing include maintaining traffic in each direction along existing routes where feasible; however, it would be necessary to close a segment of 156th Street between Burt Street and Charles Street, and a segment of Blondo Street between 158th Street and 160th Street in order to lower the roadway profile. These closures would be done during the summer to avoid conflicts with school traffic. In general, closures would be kept to the minimum length and time necessary, and are currently only planned for the re-construction of segments with significant profile changes.

Alternate routes would be available during the closures of the segments of 156th Street and Blondo Street, and would use 144th Street, 168th Street, West Maple Road, or West Dodge Road. No improvements would be made to these routes.

During construction, the existing vehicular access at Burt Street for Grace Abbott Elementary would be maintained; however, if this is not possible due to phasing, access would be provided using Charles Street

and 155th Avenue. Pedestrian access across 156th Street for Grace Abbott Elementary would be provided at all times while school is in session.

The following properties along the side streets of 156th Street would have minor and temporary access restrictions during construction in order to reconstruct their driveways: 15560 Charles Street, 15606 Charles Street, 15537 Seward Street, 15548 Burdette Street, 15549 Burdette Street, 15550 Burdette Street, and 15605 Burdette Street. These individuals would be contacted directly by the City to discuss specific accommodations that could made to maintain access to their properties during construction. However, it should be noted that there would likely be some times when complete access cannot be provided (i.e. while pouring a new driveway or sidewalk). These times would be kept to an absolute minimum by micro-phasing, which would be worked out in coordination with the resident and contractor, and include such accommodations as only pouring half of a driveway at a time.

3.18.2 Proposed Mitigation

The following mitigation commitments would be implemented:

- Impacts to properties along the roadway would be mitigated by a variety of BMPs that may include restricted work hours, watering during dry periods, special equipment, erosion control measures (e.g. seeding, mulching, and blankets), sediment containment (e.g. silt fences, hay bales, and inlet protection), special provisions for access, temporary fencing, and replacing vegetation, landscaping and fencing following construction. (City, Contractor)
- Temporary fences would be installed upon removal of existing fences and maintained throughout construction until permanent fences are installed. Impacts to fencing, landscaping, and sprinklers would be handled in accordance with NDOR's Right-of-Way Manual. (Contractor)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process for permanent and temporary easements. (City)
- Landscaping and fencing removed by the project would be mitigated through the acquisition process, in coordination with the appropriate HOA or homeowner, whichever owns the landscaping or fencing. (City)
- Neighborhood monument signs impacted by the project would be replaced in accordance with NDOR's *Right-of-Way Manual.* (City)
- Dust emissions would be controlled throughout the construction project in compliance with Nebraska State Code (Title 129, Chapter 32). (Contractor)
- For those driveways that are being reconstructed in place (15560 Charles Street, 15606 Charles Street, 15537 Seward Street, 15548 Burdette Street, 15549 Burdette Street, 15550 Burdette Street, and 15605 Burdette Street), the driveways would be constructed in phases (i.e. one side of the driveway would be removed and re-poured, and the other side would be removed and re-poured several days later to allow the concrete to cure) allowing for vehicular access at all times. These individuals would be contacted directly by the City to discuss specific accommodations that could made to maintain access to their properties during construction. (City, Contractor)

- The City of Omaha would notify the trash hauler (currently Deffenbaugh) and the United States Postal Service prior to construction, and would make accommodations for the removal and replacement of mailboxes during the acquisition process. Trash pickup[19] and mail delivery would not be disrupted. (City)
- For individuals with concerns for special access (e.g. elderly or disabled persons affected by driveway or sidewalk reconstruction) along the project corridor, the City of Omaha would identify these individuals by placing door hangers on affected property owners' front doors prior to construction and holding pre-construction meetings to discuss special provisions, access, and timing. The City would coordinate with these individuals directly during the final design phase to work out solutions to provide access during construction. Examples of solutions may include special timing, temporary paving, providing assistance for trips, or other measures. At this time, there is only one individual who has expressed concern about these impacts, and the City would continue to coordinate with this individual directly. **If you or someone you know may require special access or provisions during construction, please contact the City at 402-444-5000.** (City, Contractor)
- Temporary impacts to the traveling public would be mitigated by providing signage and information prior to lane closures, modifying side street access, making temporary alternate routes (i.e. detours) available using adjacent major roadways (e.g. 144th and 168th Streets, West Maple Road, West Dodge Road), and/or other acceptable measures to provide safe vehicular access. No improvements would be made to the temporary alternate routes. (City, Contractor)
- Pedestrian access would be maintained at all times in priority areas, particularly by maintaining a pedestrian crossing at 156th and Cuming Streets at all times for Grace Abbott Elementary School when school is in session. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 104.05 - Scope of Work - Maintenance of Detours and Shooflies
    - Requires the Contractor, the extent practicable, to provide private dwellings, commercial properties, business, and public facilities access to the nearest public road.
- Standard Specification 104.08 - Scope of Work - Final Cleaning Up
    - Requires the Contractor to remove all rubbish, excess material, and equipment from the project site, and to leave the site in a neat and presentable condition. Also requires the Contractor to fill borrow sites.
- Standard Specification 105.12 - Control of Work - Use of Land
    - Requires the Contractor to leave any lands outside the ROW used for construction in a neat and presentable condition.
- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed

[19] For updated information regarding trash service, visit http://www.wasteline.org/ or call 402-444-5238.

- Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

- Standard Specification 205.02 - Excavation and Embankment - Material Requirement
  - Specification for earthwork materials and borrow sites.
- Standard Specification 208 - Borrow and Waste Site Restoration
  - Specifications for restoration of borrow sites.
- Standard Specification 301.02(1a, 1b) - General Requirements - Equipment
  - Requires the Contractor to keep equipment in satisfactory working condition and to operate equipment in the manner it was intended.

Special Provisions:

- Disposition of Materials
  - Requirements for the Contractor to deliver surplus materials to the City, and disposal of all other waste materials.

3.19 SECONDARY AND CUMULATIVE IMPACTS

In compliance with NEPA and CEQ regulations, the secondary and cumulative impacts of a project should be examined as part of the analysis of environmental consequences.

The CEQ defines secondary (or indirect) effects as:

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

The CEQ defines a cumulative impact as one that:

> "…results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time." (40 CFR 1508.7)

Additionally, Section 106 of the NHPA requires that a federal agency evaluate adverse effects to historic properties, including "reasonably foreseeable effects caused by an undertaking that may occur later in time, be farther removed in distance or be cumulative" (36 CFR 800.5 (a)(1)).

Key concepts for the assessment of secondary and cumulative impacts are as follows:

Geographic Extent

The geographic extent is the extent to which impacts to the environment could reasonably be expected to be accounted for, and from which the impacts from the Proposed Alternative would have a measurable

effect. For instance, impacts from a proposed commercial development in eastern Omaha would not have to be accounted for in this assessment, nor would the Proposed Alternative be expected to have a measurable effect on alleviating traffic issues in the same area.

Therefore, the geographic extent used for this assessment was an area approximately nine square miles in size, extending one-half-mile beyond each of the following roadways: West Dodge Road on the south, West Maple Road on the north, 144th Street on the east, and 168th Street on the west. Consistent with the requirements of Section 106 of the NHPA, this geographic extent includes the APE as described in ***Section 3.7, Historic and Archeological Resources***.

Time Period

The assessment of secondary and cumulative impacts should focus on projects in the recent past, the current time period, or foreseeable future. The time period for assessment of secondary and cumulative impacts should also be somewhat consistent with the time period of the Proposed Alternative. Therefore, the time period for this assessment is the past and future 20 years from the currently programmed construction year (i.e. 2016), thus spanning from approximately 1995 to 2035. This time period generally coincides with the suburban development of the area used in this assessment.

Available Data

This assessment has been conducted using readily available data, observed local trends, and discussions with knowledgeable persons. It has not included developing specific predictive modeling or other tools. Examples of these data sources include many documents that have been described previously in this document, such as the MAPA 2035 Long Range Transportation Plan, the City's Master Plan, discussions with local officials from the City of Omaha, the P-MRNRD, Douglas County, NDOR, other consulting engineers, local business leaders, the public, and other individuals contacted during the development of this document.

Past projects in this geographic extent and time period include the development of many of the suburban neighborhoods along 156th, 168th, 144th, West Dodge Road, West Maple Road, and Blondo Streets, and the construction of the Bag 'N Save grocery store commercial area, Pepperwood Village, West Dodge Health Campus, Eagle Run shopping center, and other commercial areas along West Maple Road and West Dodge Road. This area has been for the last 20 years in a rapid development phase, with private development leading the way. As these subdivisions were developed, additional projects, utilities, and other minor roadway improvements were also constructed, resulting in additional impacts to environmental resources.

While there are not any currently planned residential or commercial developments, currently proposed transportation projects for the next 20 years within the geographic extent of this assessment include the following (dates for each project are taken from the MAPA 2035 LRTP):

- 144th Street between West Dodge Road and West Maple Road from two-lanes to four-lanes (2013-2014). Additionally, 144th Street between West Maple Road and State Street would be re-

constructed from two-lanes to four-lanes (between 2021 and 2025), and eventually it would be expanded to six-lanes from West Maple Road to Harrison Street (between 2026 and 2030).

- Blondo Street from east of 144th Street to 156th Street (2013-2014) and eventually to 192nd Street (between 2021 and 2025).
- 168th Street between West Dodge Road and West Maple Road from a two-lane roadway to a four-lane roadway (2018).
- 168th Street between West Maple Road and State Street from two-lanes to four-lanes (between 2031 and 2035)
- 156th Street between Pacific Street and West Dodge Road from two-lanes to three-lanes (2017)
- Blondo Street between 156th and 168th from two-lanes to four-lanes (2019)
- 156th Street between West Maple Road and Fort Street from two-lanes to four-lanes (2017)
- 144th Street between West Maple Road and Harrison Street four-lanes to six-lanes (between 2026 and 2030)
- Blondo Street Trail connection to West Papio Creek Trail (planned, but not funded at this time)

Secondary Impacts

The Proposed Alternative would result in a four-lane roadway with adjacent sidewalks, a shared pedestrian/bicycle trail, improved lighting, and improved intersection configurations. The direct impacts and secondary impacts, where applicable, for these improvements have been described elsewhere in this document. Additional secondary impacts resulting from these improvements would likely include improved traffic circulation, increased commerce at the commercial area and gas station, reduced "cut-through" traffic through adjacent neighborhoods currently trying to avoid 156th Street during peak hours, increased pedestrian/bicycle use, and fewer accidents, or at least a reduction in the number of "near-misses" as vehicles attempt to exit the adjacent neighborhoods onto 156th and Blondo Streets.

Cumulative Impacts

As shown above, the Proposed Alternative is one of several roadway projects in the general vicinity of 156th and Blondo Streets. The combination of these multiple projects and potentially additional commercial and residential developments would result in cumulative impacts to environmental and social resources in the area. These cumulative impacts may include increases in noise, stormwater runoff and traffic, removal of trees and other vegetation, and impacts to wetlands, streams and riparian areas.

Past impacts to these resources have indeed occurred, including stream crossings, wetland impacts, increased traffic, and increased noise. One example of these impacts can be seen with the unnamed tributaries to the North Branch of West Papillion Creek. These streams used to be open waterways, but were enclosed in a series of stormwater conveyances through the Diamond Head and Farmington Woods subdivisions, as well as through the Bag 'N Save Grocery Store commercial area. These past impacts have resulted in higher flows and increased erosion downstream of 156th Street, and increased localized flooding in back yards, and the commercial area parking lot. While the proposed project does include extending the box culvert and pipe under 156th Street, there would also be additional detention and erosion control measures added to the stormwater system, resulting in reduced flows, less erosion, and

reduced flooding in the residential area and parking lot. In addition, while policies in the past actually encouraged streams to be enclosed, or allowed for larger wetland and stream impacts, the current policies of the Papio Partnership and the USACE require streams to be buffered and left open to provide habitat and flood mitigation, and encourage wetlands to be avoided. While future projects in the area would likely have similar impacts, they would also be subject to similar requirements, which would not result in significant cumulative losses to wetlands or streams.

3.20 PERMITS AND APPROVALS

A number of permits and approvals would be required for the Proposed Alternative. ***Table 3.5*** lists the anticipated permits required for construction.

Table 3.5 Anticipated Permits and Approvals

Permit Name/Type	Permit Description	Issuing Agency	Permit Requirements
Clean Water Act – Section 404 (Wetlands and Waters of the U.S. Department of the Army Permit)	Regulates discharge of dredged or fill material into Waters of the United States	USACE	Submit plans and proposed impacts to USACE. Impacts less than 0.1 do not require mitigation. Impacts less than 0.5 can be authorized by one or more Nationwide Permits (NWP).
Clean Water Act – Section 401 (Water Quality Certification), and Title 117 of the State of Nebraska Administrative Code (Nebraska Surface Water Quality Standards)	Water quality verification and compliance with state statues	NDEQ	Submit plans and proposed impacts to NDEQ. If impacts are authorized by a NWP from the USACE that is per-certified by NDEQ, no further action is required. Otherwise follow conditions in Individual water quality certification.
Floodplain Development Permit	Regulates floodplain development (i.e. placement of fill material into the 100-year regulatory floodplain)	City of Omaha and P-MRNRD	Submit plans showing the proposed contours, hydrology studies, and a permit application to the City of Omaha and the P-MRNRD.
Clean Water Act – Section 402 (NPDES for construction grading)	Regulates discharges of pollutants from non-point sources and construction sites greater than 1 acre.	NDEQ/City of Omaha/Papio Partnership	Submit design plans and a Stormwater Pollution Prevention Plan (SWPPP) to NDEQ along with a Notice of Intent (NOI). Follow up during construction with inspections as required by the permit, and then submit a Notice of Termination (NOT) following construction.
Post-Construction Stormwater Management Plan (Local Agency Approval)	Regulates post-construction stormwater management activities	City of Omaha Environmental Quality Control Division of the Public Works Department	Submit application, design plans, owner's certification, proposed maintenance activities, long-term maintenance schedule, as-built plans, and engineer's certificate.

SECTION 4 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

In accordance with NEPA, and following guidelines provided by FHWA, NDOR and the City of Omaha, several opportunities for the public and resource agencies to provide input have been provided. This input helped develop the purpose and need for the project, the alternatives considered, the potential for impacts, as well as design modifications and enhancements for the Proposed Alternative.

4.1 RESOURCE AGENCY COORDINATION

The project was presented to NDOR and FHWA at a project scoping meeting at NDOR on September 9, 2010. The purpose of the meeting was to develop the scope of analysis and determine major issues that would need to be analyzed in this EA. Following the NDOR LPA Guidelines, coordination with resource agencies was handled by NDOR under several existing agreements and procedures. Specific resource agency coordination efforts and the results of that coordination are shown in ***Table 4.1***. Copies of supporting information and agency concurrence letters are included in the noted ***Appendices***.

Table 4.1 Resource Agency Concurrences Obtained

Agency	Type of Coordination	Result of Coordination	Required Mitigation	Supporting Information
SHPO/THPO	NDOR/FHWA Concurrence Request	"No historic properties affected"	Follow state and federal laws regarding discovery of unmarked burials or human remains.	***Appendix A***
USACE	Preliminary Jurisdictional Determination	Unnamed tributary to North Branch of West Papillion Creek and adjacent wetlands are jurisdictional. Small wetland area by Grace Abbot Elementary School is not jurisdictional	Submit Section 404 Permit Application for impacts to tributary and adjacent wetlands.	***Appendix B***
USFWS/NGPC	NDOR/FHWA Concurrence Request	"No Effect" to all state and Federal listed species	Follow "General Conservation Conditions for All Projects"	***Appendix C***

4.2 PUBLIC INVOLVEMENT

4.2.1 PUBLIC MEETING

A public meeting was held on February 13, 2012 from 6:00 pm to 8:00 pm at Grace Abbot Elementary School to solicit input from the public. The purpose of the meeting was to inform the public on the extent of the project and to address questions and concerns. The meeting was advertised on January 4, 2012, January 18, 2012, and February 1, 2012, in accordance with NDOR and City of Omaha standards, and the meeting place was ADA accessible. The meeting was also publicized in the Grace Abbott Elementary School news letter sent home with students on February 3, 2012 and February 8, 2012, and message boards were placed along 156th and Blondo Streets one week prior to the meeting. Approximately 150 people signed in at the meeting. The meeting was held in an open house format. A slide show presentation was displayed throughout the meeting, handouts were made available, and tables were set up which displayed project plans and traffic and noise information. Personnel from the City of Omaha

Public Works Department and Alfred Benesch & Company were present at the meeting to answer questions and discuss the project. A detailed description of the meeting proceedings and comments received are contained in ***Appendix F***. A summary of the comments and responses is provided below.

Notices for the public meeting were also sent to representatives of the following neighborhood organizations, several of which posted the notice to their websites:

- Huntington Park HOA (http://www.hpomaha.com)
- Farmington Woods HOA (http://www.fwhaomaha.com)
- SID 206, includes Farmington Woods, Eldorado, Stonehenge (http://www.sid206.com)
- Diamond Head HOA/SID (http://diamondheadhomeowners.org)
- Pepperwood HOA (http://www.ourpepperwood.com)
- Barrington Park HOA (Patrick Morgan President)
- Windridge Hills HOA (Michelle Tibbels, Treasurer)[20]
- Bent Creek HOA (http://www.bentcreekomaha.org)

Comments received as a result of this neighborhood outreach were collected during the public meeting time period, and are included in the summary below. Several of these neighborhood groups were also represented in person at the public meeting, and provided additional specific information about neighborhood property, fencing, sprinkler systems, and landscaping (see ***Appendix F***).

Table 4.2 presents the individual written comments that were received at the public meeting (or shortly thereafter) and responses.

Table 4.2 Individual Comments Received at Public Information Meeting February 13, 2012

Commenter	Comment	Response
Commenter # 1	Would like the sidewalk between 15610 Parker Circle and 15604 Parker Circle to be removed.	The City of Omaha's Trails Coordinator has indicated that this sidewalk provides existing connectivity to the neighborhood and should be left in place.
Commenter #2	Feels the proposed plan will cut off access to the Bag 'N Save and the Kwik Shop.	The access points to the Bag 'N Save and the Kwik Shop are being maintained or closed in accordance with City of Omaha policies and design guidelines from the Transportation Element of the Omaha Master Plan. The existing access to Kwik Shop is currently right-in/right-out only, and there would be a traffic light for access to the shopping center from Blondo Street at 153rd Avenue, which would be constructed as part of the 156th Street "Phase 1" project (Blondo Street from ElDorado Boulevard to just west of 153rd Avenue)

[20] It was later determined that the Windridge Hills HOA has been dissolved, there is no website or communications, and there are no other official neighborhood representatives.

Commenter	Comment	Response
		beginning in the fall of 2014. Additionally, the southbound leg (as well as the northbound leg) of the 156th and Blondo Streets intersection would allow U-turns, enabling southbound drivers to also use the shopping center after making a U-turn and heading northbound.
Commenter #3 Commenter #4 Commenter #5	Would like the road closed entirely to construct the project faster.	The proposed timeline for completion of this project is two construction seasons, which is based on the amount of work estimated at this time. Utility relocations would likely begin early in the spring of the first season, with construction continuing through the fall of the second construction season. Depending on the availability of funds and time necessary to obtain right-of-way, this project may be started sooner or later than originally anticipated. The current plans for phasing include maintaining through traffic in each direction for a majority of the project. There would be one segment of 156th Street, between Burt Street and Charles Streets, and one segment of Blondo Street, between 158th Street and 160th Street, that would need to be closed to through traffic in order to lower the roadway profile. These closures would be done during the summer to avoid conflicts with school traffic. Full closure of the entire project would have unnecessary impacts to other resources including schools and businesses.
Commenter #6	Concerned about safety for buses and schools.	The City of Omaha takes pedestrian safety, especially for children in and around school areas, very seriously, and improving it is a top priority on public works projects. This project would replace the existing sidewalks, add additional sidewalks where none exist today, add a bike path along the north side of Blondo Street, and replace the school crosswalk at Burt/Cumming Streets. These improvements would enhance pedestrian safety, and reduce the potential for accidents from pedestrians utilizing the streets or grassed areas along 156th and Blondo Streets. The City would maintain pedestrian access at Cuming/Burt Streets when school is in session. If, for any reason due to construction phasing, it is not

Commenter	Comment	Response
		possible to maintain vehicular access to Grace Abbott Elementary School at Cuming/Burt Streets when school is in session, access would be provided at Charles Street and 155th Avenue.
Commenter #7	Project needs to be done sooner than 2015.	At this time, according to the MAPA Transportation Improvement Plan (TIP) the project is currently planned to begin construction in 2016. The project is scheduled based on the best estimate of when it would make it through the State/Federal approval process and when funding would be available. The TIP is updated regularly as projects are being completed, and projects may slide within a reasonable time period.
Commenter #8	Would like a traffic light at Charles Street and 156th Street.	The current project does not include installing traffic lights at this intersection because it does not meet the volume criteria for lights in the future. The City regularly conducts traffic studies and a traffic light could be installed if and when this intersection meets the criteria.
Commenter #9	Will there be an overpass constructed for the kids walking to school?	The City of Omaha's current practice is to avoid constructing pedestrian overpasses on projects due to their poor safety record. The issue involves meeting the ADA requirements on these structures, thus making them very long to meet the acceptable grade requirements. Pedestrians often avoid these overpasses due the additional distance that one has to walk, and instead cross at the street level below the structure (i.e. "Jaywalking" at unauthorized locations) creating safety hazards. The school PTO has, in the past, hired a dedicated crossing guard to oversee this intersection during the morning and afternoon hours, and the City recommends that this practice should continue in the future.

Commenter	Comment	Response
Commenter #9	Will my property value decrease?	Property values are determined by a number of factors, including size, age, construction materials, and comparable properties. However, property value is also a subjective measure of how much someone would be willing to pay for a particular house in a particular area. Being close to certain amenities (e.g. shopping, schools, major roadways) may be perceived as a property "value" increase or decrease, depending on the individual buying a particular house. In reference to actual assessed values of homes along a major roadway corridor, according to the Douglas County Assessor, houses along major roadways in Omaha already have a modifier on their property values if they back to major roadways, thus decreasing the assessed value of a home, which in turn results in lower property taxes paid by the homeowner. This could be viewed by some as a benefit to buying a home along a major roadway, as opposed to the same house across the street.
Commenter #9	Will my property taxes increase?	There would be no increase in property taxes as a result of this project. The City of Omaha and Douglas County provide funds to road projects through their general fund and through bonds that are voted on by the residents of the City and County. This project is 80% federally funded from the Federal Highway Administration, with the City and County providing the remaining 20% of the funds needed.
Commenter #9	Will exhaust from cars increase?	Exhaust from cars may increase as the volume of traffic increases, with or without the proposed project. The proposed project is intended to improve traffic flow for these increased traffic volumes, thus reducing idling and wait times, which are usually associated with increased exhaust. In addition, as cars become more fuel efficient and as regulations decrease the allowable emissions, vehicle exhaust may actually decrease over time. For more information, see **Section 3.15 – Air Quality, Mobile Source Air Toxics, and Greenhouse Gases**.

Commenter	Comment	Response
Commenter #9	Once started, how long will it take?	The proposed timeline for completion of this project is two construction seasons, which is based on the amount of work estimated at this time. Utility relocations would likely begin early in the spring of the first season, with construction continuing through the fall of the second construction season. Depending on the availability of funds and time necessary to obtain right-of-way, this project may be started sooner or later than originally anticipated.
Commenter #9	Trying to sell house and says that people are concerned with noise and the safety of children going to the school.	A Noise Study completed for the proposed project indicates that noise impacts would occur at some locations. The study also indicates the reasonability (i.e. cost) and feasibility (i.e. technical ability to be constructed) of walls at several locations that would reduce these impacts. If a wall meets the reasonability and feasibility criteria, residents would be contacted individually to vote on the construction of noise walls, following NDOR's current Noise Policy, which is available online at http://www.nebraskatransportation.org/projdev/docs/noise-pol.pdf. The City of Omaha takes pedestrian safety, especially for children in and around school areas, very seriously, and improving it is a top priority on public works projects. This project would replace the existing sidewalks, add additional sidewalks where none exist today, add a bike path along the north side of Blondo Street, and replace the school crosswalk at Burt/Cumming Streets. These improvements would enhance pedestrian safety, and reduce the potential for accidents from pedestrians utilizing the streets or grassed areas along 156th and Blondo Streets. The City would maintain pedestrian access at Cuming/Burt Streets when school is in session.

Commenter	Comment	Response
Commenter #10	Does not want one project to begin until the other project is completed (referring to the 156th Street "Phase 1" project along Blondo Street from ElDorado Boulevard to just west of 153rd Avenue). Also requests not to completely shut down Blondo Street (at least keep it open to local traffic only) as it would present a problem for the residents nearby.	The 156th Street "Phase 1" project (Blondo Street from ElDorado Boulevard to just west of 153rd Avenue) will begin in the fall of 2014, and would be completed within 14 months. The proposed beginning of the "Phase 2" project (156th Street from Pepperwood to Corby and Blondo Street from just west of 153rd Avenue to 160th Street) would not begin until at least the spring of 2016, so there would not be any overlap of the projects. The current plans for phasing include maintaining traffic in each direction for a majority of the project. There would be one segment of 156th Street, between Burt Street and Charles Streets, and one segment of Blondo Street, between 158th Street and 160th Street, that would need to be closed to through traffic in order to lower the roadway profile. These closures would be done during the summer to avoid conflicts with school traffic, and are being kept to the minimum length and time necessary. Alternate routes would be available for motorists by using other major roadways (168th Street, 144th Street, West Maple Road, and West Dodge Road), which would be open to traffic during construction.
Commenter #11	Concerned about losing driveway access during construction.	The City of Omaha is committed to providing reasonable access to residents affected by construction. This individual would be contacted to discuss specific accommodations that can be made available to maintain access to their property during construction. However, it should be noted that there would simply be some times when complete access cannot be provided (i.e. while pouring a new driveway or sidewalk). These times would be kept to an absolute minimum by micro-phasing, which would be worked out in coordination with the resident and contractor, and include such accommodations as only pouring half of a driveway at a time in order to maintain usage of the other half and allow vehicular access at all times.

Commenter	Comment	Response
Commenter #12	Concerned that both accesses to Bag 'N Save will be right-in/right-out only.	The access points to the Bag 'N Save and the Kwik Shop are being maintained in accordance with City of Omaha policies and design guidelines from the Transportation Element of the Omaha Master Plan. The existing access to Kwik Shop is currently right-in/right-out only, and there would be a traffic light for access to the shopping center from Blondo Street at 153rd Avenue, which would be constructed as part of the 156th Street "Phase 1" project (Blondo Street from ElDorado Boulevard to just west of 153rd Avenue) in 2014. Additionally, the southbound leg (as well as the northbound leg) of the 156th and Blondo Streets intersection would allow U-turns, enabling drivers to also access the shopping center from 156th Street.
Commenter #13	Favors segmented closure of 156th Street and recommends summer closure for portions needing full closure.	The current plans for phasing include maintaining through traffic in each direction for a majority of the project. There would be one segment of 156th Street, between Burt Street and Charles Streets, and one segment of Blondo Street, between 158th Street and 160th Street, that would need to be closed to through traffic in order to lower the roadway profile. These closures would be done during the summer to avoid conflicts with school traffic. Segmented closure would be reviewed as a possibility to decrease the overall construction timeline during Final Design.
Commenter #14	Suggests looking at impacts to other adjacent corridors that may result from closures of 156th Street.	The current plans for phasing include maintaining through traffic in each direction for a majority of the project. There would be one segment of 156th Street, between Burt Street and Charles Streets, and one segment of Blondo Street, between 158th Street and 160th Street, that would need to be closed to through traffic in order to lower the roadway profile. These closures would be done during the summer to avoid conflicts with school traffic. Closures are being kept to the minimum length and time necessary, and are only planned for the re-construction of segments with significant profile changes. Alternate routes would be available for motorists by using other major roadways (168th Street, 144th Street, West Maple Road,

Commenter	Comment	Response
		and West Dodge Road), which would be open to traffic during construction.
Commenter #15 Commenter #16 Commenter #17 Commenter #18 Commenter #19 Commenter #20 Commenter #21	Opposed to closure of median at Decatur Street.	The median at Decatur Street is being closed in accordance with City of Omaha policies and design guidelines from the Transportation Element of the Omaha Master Plan. A traffic light for access to the neighborhood from Blondo Street at 153rd Avenue will be constructed as part of the Phase 1 project in 2014. Additionally, the northbound leg (as well as the southbound leg) of the 156th and Blondo Streets intersection would allow U-turns, enabling drivers to more safely exit their neighborhood from Decatur onto 156th Street northbound, and then travel south after making a U-turn at the Blondo Street intersection. For more information, see **Section 3.2 – Social and Economic Considerations**.
Commenter #15 Commenter #16 Commenter #17 Commenter #20 Commenter #21 Commenter #22	Concerned about impacts to fencing. Would like to see similar materials used to replace impacted fences, and would like to see retaining walls and/or noise walls be constructed of similar materials.	Fences would be replaced in accordance with NDOR's *Right-of-Way Manual* which requires compensation for impacted fences, sprinklers, and landscaping in accordance with the Uniform Act, and also requires coordination between the contractor and homeowners for unforeseen impacts. For more information, see **Section 3.4 – Right-of-Way, Acquisitions, and Relocations**. Retaining walls would be constructed of segmental, interlocking block and noise walls would be constructed of pre-cast concrete panels with an imprinted stone block pattern. The front of the noise walls would be stained, and the back would be left unstained. Combination noise/retaining walls may also be used where they are needed.
Commenter #16	Great to see bike trails incorporated into the plan.	No response needed.
Commenter #20	Concerned about increased traffic in the Pepperwood neighborhood and safety of children as a result of the closure of the median at Decatur Street.	The median at Decatur Street is being closed in accordance with City of Omaha policies and design guidelines from the Transportation Element of the Omaha Master Plan. Currently, due to the conditions on 156th Street, numerous drivers utilize neighborhood streets to avoid delays during peak hours, which increases the potential for accidents and unsafe conditions for pedestrians and children. The Proposed Alternative would improve

Commenter	Comment	Response
		mobility on 156th and Blondo Streets, thus reducing the potential for cut-through traffic.
Commenter #23	Concerned about impacts to neighborhood entrances, including the monument, lights, landscaping, and sprinklers. Would like to see the entrances restored to their previous state as much as possible.	Neighborhood monuments, lights, landscaping, and sprinklers affected by construction would be repaired or replaced in kind in coordination with the neighborhood. For more information, see **Section 3.4 – Right-of-Way, Acquisitions, and Relocations**.
Commenter #24	Suggests relocating all utilities in advance. Also suggests using 1-year contracts for contractors in order to avoid partial completion over winter months, as well as to provide a more economical use of tax money.	The proposed timeline for completion of this project is two construction seasons, which is based on the amount of work estimated at this time. Utility relocations would likely begin early in the spring of the first season, with construction continuing through the fall of the second construction season. Depending on the availability of funds and time necessary to obtain right-of-way, this project may be started sooner or later than originally anticipated. Phasing plans and "Prosecution and Progress" Special Provisions would be developed in Final Design to minimize the construction time period required and to provide methods for the project to maintain the proposed schedule.
Commenter #25	Concerned about closure of median at Burdette Street. Also concerned about increased traffic in the neighborhood and safety of children as a result of the closure of the median at Burdette.	The median at Burdette Street is being closed in accordance with City of Omaha policies and design guidelines from the Transportation Element of the Omaha Master Plan. A traffic light for access to the neighborhood from Blondo Street at 153rd Avenue will be constructed as part of the "Phase 1" project (Blondo Street from ElDorado Boulevard to just west of 153rd Avenue) beginning in the fall of 2014. Additionally, the southbound leg (as well as the northbound leg) of the 156th and Blondo Streets intersection would allow U-turns, enabling drivers to more safely exit their neighborhood from Burdette onto 156th Street southbound, and then travel north after making a U-turn at the Blondo Street intersection. For more information, see **Section 3.2 – Social and Economic Considerations**.
Commenter #25	Concerned about removal of trees and landscaping without compensation.	This homeowner would not have any of their trees or landscaping removed, nor would their fence be impacted. The community landscaping on the street side of their fence would be removed for the construction of an approximately 2-foot-tall, modular block

Commenter	Comment	Response
		retaining wall. Any right-of-way impacts (including fences, landscaping, sprinklers, and neighborhood monuments) would be mitigated in accordance with NDOR's *Right-of-Way Manual.* Temporary and permanent property acquisitions would occur in accordance with NDOR's *Right-of-Way Manual* and the Uniform Act. Impacts to adjacent homeowners has been minimized to the extent possible through the use of retaining walls, to reduce the amount of grading necessary.
Commenter #25	Concerned about additional noise to our home and vibration. Wants restrictions on trucks accessing 156th Street that make deliveries to Hy-Vee and Bag 'N Save.	This homeowner's modeled noise levels are anticipated to increase by approximately 4.6 decibels, which is not considered a substantial increase according to the NDOR Noise Policy. In addition, the modeled future noise levels are less than 66.0 decibels, which is the threshold for being impacted under NDOR's noise abatement criteria; therefore, no noise abatement measures were considered for this location. For more information, see **Section 3.14 – Noise Impacts** and **Appendix D**. According to the Traffic Study (**Appendix G**), the current percentages of trucks on 156th Street and Blondo Street are typical for these types of roadways, and are not expected to increase beyond typical levels in the future; therefore, vibration impacts are not expected. In addition, 156th Street is not a designated truck route. Furthermore, the City cannot impose restrictions on trucks using 156th Street for deliveries to local businesses.
Commenter #26	Questions about the construction timing and phasing. Also concerned with access and construction in front of Bag 'N Save	The proposed timeline for completion of this project is two construction seasons, which is based on the amount of work estimated at this time. Utility relocations would likely begin early in the spring of the first season, with construction continuing through the fall of the second construction season. Depending on the availability of funds and time necessary to obtain right-of-way, this project may be started sooner or later than originally anticipated.

Commenter	Comment	Response
Commenter #27	Requested clarification on the process and schedule.	At this time, according to the MAPA Transportation Improvement Plan (TIP) the project is currently planned to begin construction in 2016. The project is scheduled based on the best estimate of when it would make it through the State/Federal approval process and when funding would be available. Currently construction is planned to begin in 2016, and is scheduled to last two construction seasons. The proposed timeline for completion of this project is two construction seasons, which is based on the amount of work estimated at this time. Utility relocations would likely begin early in the spring of the first season, with construction continuing through the fall of the second construction season.
Commenter #27	Questions regarding neighborhood entrances, signs, and green space.	If impacted, neighborhood monuments, lights, landscaping, and sprinklers affected by construction would be repaired or replaced in-kind in coordination with the neighborhood. For more information, see **Section 3.4 – Right-of-Way, Acquisitions, and Relocations**.
Commenter #28 Commenter #29 Commenter #30 Commenter #31 Commenter #32 Commenter #33	These commenters were not able to attend the meeting and requested more information.	Handouts and comment sheets from the public meeting were sent to these commenters.

4.2.2 PUBLIC HEARING

The City would hold a public hearing on the proposed project and Draft EA. Public notices, letters and door-hangers would be prepared to inform members of the public and interested agencies of the upcoming meeting details. The first legal notice of the hearing would be provided approximately 31 days prior to the hearing, and again 14 and 7 days prior to the hearing.

The City would provide an accessible meeting facility for all persons. Reasonable accommodations would be made for people who are hearing and visually challenged or who have limited English proficiency. The City would specifically invite all those that would be directly affected by the proposed project.

Design information would be displayed and personnel from the City would be present to answer questions and receive comments about the project. This hearing would be held as a coordination and fact-gathering meeting for the NEPA document, as well as to provide and receive information regarding environmental

impacts. The project study team would be present to receive design input regarding the project. Design plans would be developed further after the public hearing.

The Draft EA would be available for public review at the hearing. Copies of the Draft EA would also be available at:

- City of Omaha – Public Works 1819 Farnam Street, 6th Floor Omaha, Nebraska
- City of Omaha – Equipment Maintenance 5225 Dayton Street Omaha, Nebraska
- Saddlebrook Library, 14850 Laurel Avenue, Omaha, Nebraska
- NDOR District 2 Office 108th Street Omaha, Nebraska
- NDOR Headquarters 1500 Highway 2 Lincoln, Nebraska
- FHWA Nebraska Division 100 Centennial Mall North Lincoln, Nebraska

Prior to the public hearing, the Draft EA would also be made available on the internet at www.transportation.Nebraska.gov/projects/, by clicking on the link for the "156th Street, Pepperwood to Corby" project.

There would be a 30-day comment period for the Draft EA document, after which the Final EA would be prepared in errata format (i.e. only errors, corrections, and changes would be documented).

SECTION 5 MITIGATION MEASURES AND ENVIRONMENTAL COMMITMENTS

This section provides a summary of the mitigation measures and environmental commitments contained in this Draft Environmental Assessment. Final environmental commitments would be contained in the Final Environmental Assessment and Finding of No Significant Impact, if issued. They would also be included on "Green Sheets" that would be used during construction to ensure compliance during routine inspections. Commitments are listed in order following the format of ***Section 3, Affected Environment and Environmental Consequences***. Responsible parties for each commitment are also listed.

Social and Economic Considerations

- Individuals directly affected by construction, Grace Abbott Elementary School, neighborhood associations, and the businesses at the corner of 156th and Blondo Streets would be notified of the construction schedule approximately four weeks prior to construction. (City)
- The City would notify the general public of the start of construction by placing notices in the newspaper at least 10 calendar days prior to construction, and electronic message boards would be used prior to the beginning of construction activities. (City)
- The City would notify emergency services such as police and fire departments before construction activities begin, as well as maintain continued coordination throughout construction. Emergency services providers would be invited to the pre-construction meeting for this project. (City)
- Throughout construction the City would continue to coordinate with neighborhood associations, the businesses at the corner of 156th and Blondo Streets, and Grace Abbott Elementary School to provide up-to-date information regarding construction timing and maintenance of pedestrian and vehicular access. (City)
- Temporary access would be provided for residents temporarily affected by construction through the use of existing side streets and on-street parking. (City, Contractor)
- Phasing would be used to construct the portion of 156th Street between Cuming/Burt Street and Charles Street during the summer, when school is out of session. (City, Contractor)
- Pedestrian access across 156th Street at Cuming/Burt Streets would be maintained at all times when school is in session. (City, Contractor)
- The City would maintain the 25mph "school zone" on 156th Street for Grace Abbott Elementary School, and would also configure the pedestrian crossing time to consider the speed of children walking across 156th Street at the Cuming/Burt Street intersection. (City)
- Vehicular access to Grace Abbott Elementary School at Burt Street will be maintained at all times when school is in session. If, for unforeseen reasons, it is not possible to maintain vehicular access at this location when school is in session, access would be provided at Charles Street and 155th Street. (City, Contractor)
- Access to the businesses at the corner of 156th and Blondo Streets would be maintained at all times during construction, from either 156th Street or Blondo Street. (City, Contractor)
- The City would allow U-turns on 156th Street at the intersection of 156th Street and Blondo Street, and on Blondo Street at the intersection of 153rd Avenue and Blondo Street. (City, Engineer)

Right-of-Way, Acquisitions, and Relocations

- The City would acquire all ROW and temporary and permanent easements in accordance with the Uniform Act and NDOR's *Right of Way Manual*. (City)
- Impacts to fencing, landscaping, neighborhood monuments, and sprinklers would be handled in accordance with NDOR's *Right-of-Way Manual*. (City)
- ROW impacts would be minimized through the use of retaining walls, to reduce the additional grading needed on adjacent property. (City, Engineer)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process. (City)

Standard Specifications (NDOR, 2007):

- Standard Specification 104.05 - Scope of Work - Maintenance of Detours and Shooflies
    - Requires the Contractor, the extent practicable, to provide private dwellings, commercial properties, business, and public facilities access to the nearest public road.
- Standard Specification 104.08 - Scope of Work - Final Cleaning Up
    - Requires the Contractor to remove all rubbish, excess material, and equipment from the project site, and to leave the site in a neat and presentable condition. Also requires the Contractor to fill borrow sites.
- Standard Specification 105.12 - Control of Work - Use of Land
    - Requires the Contractor to leave any lands outside the ROW used for construction in a neat and presentable condition.
- Standard Specification 107.01 - Legal Relations and Responsibility to the Public – Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.
- Standard Specification 107.09 - Legal Relations and Responsibility to the Public - Preservation and Restoration of Property, Trees, Monuments, etc.
    - Requires the Contractor to preserve, protect, and prevent damage to all public and private property, including utilities, structures, and facilities, and shall be responsible for damage from neglect or misconduct.
- Standard Specification 107.12 - Legal Relations and Responsibility to the Public - Responsibility for Damage, Injury, or Other Claims
    - Requires the Contractor to be responsible for all damage to property used during construction resulting from neglect or misconduct. The Contractor shall also be required to meet with local government entities to advise them of their intentions to use local roads, and is responsible for damage from such use.

Special Provisions:

- Status of Right-of-Way
    - Requires the Contractor to work only within the ROW until property acquisition is complete and easements are obtained, and to also verify this with the Engineer prior to entering any private property.

Pedestrians, Bicyclists, and Accessibility for Individuals with Disabilities

- During construction, existing pedestrian access would be maintained (i.e. sidewalks would be kept open) to the maximum extent practicable along the entire corridor. If closures are necessary, temporary alternate routes or advanced notice of closures would be provided for pedestrians and bicyclists. (City, Contractor)
- Residents would be provided access to their homes at all times during construction. (City, Contractor)
- Pedestrian access across 156th Street at Cuming/Burt Streets for Grace Abbott Elementary School would be maintained at all times when school is in session. (City, Contractor)
- Following construction, permanent signage would be provided at the northeast and southeast corners of the 160th/162nd and Blondo Streets intersection to direct pedestrians and bicyclists to use the sidewalks along 160th Street to access the West Papio Trail to head north, and to use the sidewalks along 162nd Street, Parker Street, and 164th Street to head south on the West Papio Trail. (City)
- Audible crossing signals for visually impaired persons would be installed if the individual requesting these devices provides the documentation required by the City's policy. The City of Omaha's policy regarding the installation of audible crossing signals requires that the City be presented with medical documentation from a physician, physician's assistant, or nurse practitioner for the individual's impairment prior to installing the device. (City)
- The City would identify persons with individual concerns for special access during construction (e.g. elderly or disabled persons temporarily affected by driveway or sidewalk reconstruction) by placing door hangers on affected property owners' front doors prior to construction. The City would coordinate directly with these individuals to arrange solutions to provide access during construction, which could including special timing, temporary paving, providing assistance for trips, or other acceptable measures. At this time, there is only one individual who has expressed concern about these impacts, and the City would coordinate with this individual directly. **If you or someone you know may require special access or provisions during construction, please contact the City at 402-444-5000.** (City, Contractor)

Historic and Archeological Resources

- During construction, the City and Contractor would follow standard provisions for the unintended discovery unknown artifacts, or unidentified human remains, in compliance with the *Nebraska Unmarked Human Burial Sites and Skeletal Remains Act*, and the *Native American Graves Protection and Repatriation Act*. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.
- Standard Specification 107.10 - Legal Relations and Responsibility to the Public - Archaeological and Paleontological Discoveries
    - In the event of a late discovery of archeological materials, this specification states "The Engineer would be promptly notified when any such articles are uncovered and the Contractor shall suspend operations in the area involved until such time that arrangements are made for their removal and preservation."

Water Resources and Water Quality

- The City would incorporate "inline" structural BMPs into the design of the stormwater system to improve the capacity and timing of the runoff entering the unnamed tributary northwest of the 156th and Blondo Streets intersection to reduce localized flooding on adjacent properties. The City would also include BMPs to reduce the velocity of runoff entering the unnamed tributary and install bank protection measures to reduce bank erosion and stream degradation. (City, Engineer)
- The City would implement a Post-Construction Stormwater Management Plan, which would include submitting design plans, construction certifications, and a long-term maintenance commitment to the Environmental Quality Control Division of Public Works. (City, Engineer)
- The City would obtain a CWA Section 402 NPDES permit from NDEQ for grading activities greater than one acre in size. The permit would require submission of a Stormwater Pollution Prevention Plan (SWPPP), a Notice of Intent (NOI), and a Notice of Termination (NOT) following re-vegetation of the site. All provisions of the permit would be incorporated into the construction specifications and would be implemented to minimize impacts to water quality. (City, Engineer, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

Wetlands and Riparian Areas

- Prior to starting construction, the City of Omaha would submit for and obtain a CWA Section 404 Permit for impacts to the unnamed tributary to the North Branch of West Papillion Creek and adjacent wetlands. (City, Engineer)
- All provisions of the permit would be incorporated into the construction specifications and would be implemented to minimize impacts to wetlands. (City, Contractor)
- BMPs for impacts to wetlands and waters of the U.S. would be implemented. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

Floodplains

- The City of Omaha would acquire the proper floodplain permits, and would certify that the construction activities are in compliance with the State of Nebraska floodplain regulations, prior to starting construction. Standard provisions included in the required floodplain permit would be incorporated into the construction specifications, and would be followed to minimize impacts on the floodplain. (City, Contractor, Engineer)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

Vegetation, Wildlife, and Migratory Birds

- If the proposed construction project would occur during the primary nesting season (April 1 – September 1) or any other time which may result in the "take" of migratory birds, a qualified biologist would conduct a field survey in accordance with NDOR's Avian Protection Plan (APP) and Special Prosecution and Progress for Migratory Birds (A-42-0807). (City)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process. (City)
- Tree impacts in the existing ROW would not be mitigated. Instead, the City of Omaha Public Works Department would continue its practice of providing funding to the Planning Department to create tree planting projects to implement as necessary to meet the requirements of the *Green Streets Plan for Omaha*, in which 156th Street and Blondo Street are both classified as "Multi-lane, undivided, new/suburban" Major Arterials. (City)

The following standard specifications would be used to minimize the spread of invasive species and noxious weeds that could result from the ground disturbance and grading for the Proposed Alternative.

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01(6) Amended A-43-0210 - Legal Relations and Responsibility to the Public- Laws to be Observed
    - Requires the Contractor to prevent the transfer of invasive plant and animal species.
- Standard Specification 202.01(4)(d) - Clearing and Grubbing – Description
    - Trash, dead trees, and other vegetation in the ROW limits and beyond the limits of construction shall be disposed of by the Contractor.

- Standard Specification 803.02 - Seeding - Material Requirements
    - Specifies seeding methods, rates of application, and seed mixtures.
- Standard Specification 803.03 - Seeding - Construction Methods
    - Specifies planting seasons and methods.
- Standard Specification 806.02(4)(c) - Sodding - Material Requirements
    - Specifies that sod may not contain invasive plant species.
- Standard Specification 807 - Erosion Control
    - Specifies methods for erosion control.

Threatened and Endangered Species

The following "General Conservation Conditions" provided by NDOR would be incorporated into the specifications for this project, and implemented as appropriate (responsible parties are noted):

- All permanent seeding and plantings (excluding managed landscaped areas) shall use species and composition native to the project vicinity as shown in the Plan for the Roadside Environment. However, within the first 16 feet of the road shoulder, and within high erosion prone locations, tall fescue or perennial ryegrass may be used at minimal rates to provide quick groundcover to prevent erosion, unless state or federally listed threatened or endangered plants were identified in the project area during surveys. If listed plants were identified during survey, any seed mix requirements identified during resource agency consultations shall be used for the project. (NDOR Environmental)

- If species surveys are required for this project, results would be sent by NDOR to the USFWS, NGPC, and if applicable COE. FHWA would be copied on submittals. (NDOR Environmental, District Construction)

- If federal or state listed species are observed during construction, contact NDOR Environmental. Contact NDOR Environmental for a reference of federal and state listed species. (NDOR Environmental, District Construction, Contractor)

- Environmentally sensitive areas would be marked on the plans, in the field, or in the contract by NDOR Environmental for avoidance. (NDOR Environmental, District Construction)

- Conservation conditions are to be fully implemented within the project boundaries as shown on the plans. (District Construction, Contractor)

- The following project activities shall, to the extent possible, be restricted to the beginning and ending points (stationing, reference posts, mile markers, and/or section-township-range references) of the project, within the right-of-way designated on the project plans: borrow sites, burn sites, construction debris waste disposal areas, concrete and asphalt plants, haul roads, stockpiling areas, staging areas, and material storage sites. Any project related activities that

occur outside of these areas must be environmentally cleared/permitted with the U. S. Fish and Wildlife Service and Nebraska Game and Parks Commission as well as any other appropriate agencies by the contractor and those clearances/permits submitted to the District Construction Project Manager prior to the start of the above listed project activities. The contractor shall submit information such as an aerial photo showing the proposed activity site, a soil survey map with the location of the site, a plan-sheet or drawing showing the location and dimensions of the activity site, a minimum of 4 different ground photos showing the existing conditions at the proposed activity site, depth to ground water and depth of pit, and the "Platte River depletion status" of the site. The District Construction Project Manager would notify NDOR Environmental which would coordinate with FHWA for acceptance if needed. The Contractor must receive notice of acceptance from NDOR, prior to starting the above listed project activities. These project activities would not adversely affect state and/or federally listed species or designated critical habitat. (NDOR Environmental, District Construction, Contractor).

- If there is a change in the project scope, the project limits, or environmental commitments, the NDOR Environmental Section must be contacted to evaluate potential impacts prior to implementation. Environmental commitments are not subject to change without prior written approval from the Federal Highway Administration. (District Construction, Contractor)

- Requests for early construction starts must be coordinated by the Project Construction Engineer with NDOR Environmental for approval of early start to ensure avoidance of listed species sensitive lifecycle timeframes. Work in these timeframes would require approval from the Federal Highway Administration and could require consultation with the USFWS and NGPC. (District Construction, Contractor)

- Construction waste/debris would be disposed of in areas or a manner which would not adversely affect state and/or federally listed species and/or designated critical habitat. (Contractor)

- Refueling would be conducted outside of those sensitive areas identified on the plans, in the contract, and/or marked in the field. (Contractor)

The following specific conservation conditions for northern long-eared bat would also be followed:

NLEB-1 Tree clearing, bridge deck joint replacements over the bridge deck, bridge/>5-ft box-culvert removal activities will be scheduled to occur between October 1st – March 31st to avoid impacts to the northern long-eared bat roosting period. (NDOR Environmental, Construction, Contractor)

OR

NLEB-2 If tree clearing, bridge deck joint replacement over the bridge deck, or removal of bridge/>5-ft box-culvert structures occurs during the northern long-eared bat maternal roosting period (April 1st – September 30th), NDOR or a qualified biologist will perform surveys prior to the start of these

activities at the following locations: entire length of the project (location of suitable habitat). If the species is absent, work may proceed. If the species is found, NDOR Environmental Section will consult with the USFWS, NGPC, and FHWA prior to the start of construction. (NDOR Environmental, Construction, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 – Legal Relations and Responsibility to the Public – Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

Utilities

- During final design, the City would ensure that the OPPD high-mast transmission towers along the north side of Blondo are not impacted, except for the two at the intersection of 156th and Blondo Streets that would be affected by the intersection. (City, Engineer)
- The City would notify utility companies of the need for relocation during the design stage of the project. The City would coordinate with Cox Communications, OPPD and MUD to relocate utilities ahead of roadway construction. Where relocations are required, designs to relocate the utility would be developed by the utility company. The cost of utility relocation and each party's responsibilities would be determined through coordination with each utility company and evaluations of past agreements between the City of Omaha and each utility company. The City's Construction Division would coordinate utility agreements with the utility companies prior to construction. (City, Engineer)
- The Contractor shall follow the guidelines of NDOR's *Policy for Accommodating Utilities on State Highway ROW* (NDOR, 2001). (Contractor)
- Contractor would be responsible for notifying utility companies of relocation needs during the construction phase of the Project for utilities that were not relocated prior to construction. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 105.06 – Control of Work – Cooperation with Utilities
    - Requires the City to notify all utility companies, pipeline owners, railroads, or other parties affected by the proposed work.
- Standard Specification 107.09 – Legal Relations and Responsibility to the Public – Preservation and Restoration of Property, Trees, Monuments, etc.
    - Requires the Contractor to preserve, protect, and prevent damage to all public and private property.
- Standard Specification 107.16 – Legal Relations and Responsibility to the Public – Contractor's Responsibility for Utility Property and Services
    - Requires the Contractor to verify the location of existing utilities.

- Standard Specification 107.12 – Legal Relations and Responsibility to the Public – Responsibility for Damage, Injury, or Other Claims
    - Requires the Contractor to be responsible for all damage to property used during construction resulting from neglect or misconduct. The Contractor shall also be required to meet with local government entities to advise them of their intentions to use local roads, and is responsible for damage from such use.

Special Provisions:

- Status of Utilities
    - Presents a detailed plan for utility company coordination, including names, telephone numbers, stationing for utility conflicts, schedules, and other pertinent information for the Contractor.

Noise Impacts

- Noise walls would be constructed at the following locations: NB01, NB02, NB04, SB02, SB03, EB01, and Location 1. (City, Engineer)
- Noise wall designs would be consistent with other similar noise walls constructed recently around the City, and would consist of stamped or colored concrete, stone façades, or other similar materials. The front of the noise walls would be stained concrete, while the back side of the walls would be left unfinished. (City, Engineer, Contractor)

Hazardous Materials and Recognized Environmental Conditions

- If contaminated soils and/or water or hazardous materials are encountered, then all work within the immediate area of the discovered hazardous material would stop until NDOR/FHWA is notified and a plan to dispose of the Hazardous Materials has been developed. Then DEQ would be consulted and a remediation plan would be developed for this project. (City, Contractor)
- The potential exists to have contaminants present resulting from minor spillage during fueling and service associated with construction equipment. Should contamination be found on the project during construction, the DEQ would be contacted for consultation and appropriate actions be taken. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 107.01 as Amended A-43-0210 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to notify the Engineer if previously unidentified hazardous materials are encountered during construction. Also requires the Contractor to handle and dispose of contaminated material in accordance with applicable laws.

Visual Impacts and Aesthetic Considerations

- Lighting would be designed to avoid intrusion into the back yards of residences. Specifically, lighting would only be installed at intersections. Lighting between intersections would be reviewed by OPPD and installed if needed for safety. (City)

- Disturbed areas would be re-vegetated with native species where appropriate. (City, Contractor)
- Noise walls and retaining walls, if constructed, would use current NDOR and City of Omaha design criteria and would be similar to other recently constructed walls in the City (i.e. pre-cast concrete walls textured with a painted, false stone façade, or other similar aesthetic treatment), and reflect the aesthetics of the existing fences, walls, and the surrounding community. (City)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process for permanent and temporary easements. (City)
- Landscaping and fencing removed by the project would be mitigated through the acquisition process, in coordination with the appropriate HOA or homeowner, whichever owns the landscaping or fencing. (City)
- Neighborhood monument signs impacted by the project would be replaced in accordance with NDOR's *Right-of-Way Manual.* (City)
- Tree impacts in the existing ROW would not be mitigated. Instead, the City of Omaha Public Works Department would continue its practice of providing funding to the Planning Department to create tree planting projects to implement as necessary to meet the requirements of the *Green Streets Plan for Omaha*, in which 156th Street and Blondo Street are both classified as "Multi-lane, undivided, new/suburban" Major Arterials. (City)

Temporary Construction Impacts

- Impacts to properties along the roadway would be mitigated by a variety of BMPs that may include restricted work hours, watering during dry periods, special equipment, erosion control measures (e.g. seeding, mulching, and blankets), sediment containment (e.g. silt fences, hay bales, and inlet protection), special provisions for access, temporary fencing, and replacing vegetation, landscaping and fencing following construction. (City, Contractor)
- Temporary fences would be installed upon removal of existing fences and maintained throughout construction until permanent fences are installed. Impacts to fencing, landscaping, and sprinklers would be handled in accordance with NDOR's Right-of-Way Manual. (Contractor)
- Impacts to trees on private property would be mitigated by compensating the owner during the acquisition process for permanent and temporary easements. (City)
- Landscaping and fencing removed by the project would be mitigated through the acquisition process, in coordination with the appropriate HOA or homeowner, whichever owns the landscaping or fencing. (City)
- Neighborhood monument signs impacted by the project would be replaced in accordance with NDOR's *Right-of-Way Manual.* (City)
- Dust emissions would be controlled throughout the construction project in compliance with Nebraska State Code (Title 129, Chapter 32). (Contractor)
- For those driveways that are being reconstructed in place (15560 Charles Street, 15606 Charles Street, 15537 Seward Street, 15548 Burdette Street, 15549 Burdette Street, 15550 Burdette Street, and 15605 Burdette Street), the driveways would be constructed in phases (i.e. one side of the driveway would be removed and re-poured, and the other side would be removed and re-poured several days later to allow the concrete to cure) allowing for vehicular access at all times.

These individuals would be contacted directly by the City to discuss specific accommodations that could made to maintain access to their properties during construction. (City, Contractor)

- The City of Omaha would notify the trash hauler (currently Deffenbaugh) and the United States Postal Service prior to construction, and would make accommodations for the removal and replacement of mailboxes during the acquisition process. Trash pickup and mail delivery would not be disrupted. (City)
- For individuals with concerns for special access (e.g. elderly or disabled persons affected by driveway or sidewalk reconstruction) along the project corridor, the City of Omaha would identify these individuals by placing door hangers on affected property owners' front doors prior to construction and holding pre-construction meetings to discuss special provisions, access, and timing. The City would coordinate with these individuals directly during the final design phase to work out solutions to provide access during construction. Examples of solutions may include special timing, temporary paving, providing assistance for trips, or other measures. At this time, there is only one individual who has expressed concern about these impacts, and the City would continue to coordinate with this individual directly. **If you or someone you know may require special access or provisions during construction, please contact the City at 402-444-5000.** (City, Contractor)
- Temporary impacts to the traveling public would be mitigated by providing signage and information prior to lane closures, modifying side street access, making temporary alternate routes (i.e. detours) available using adjacent major roadways (e.g. 144th and 168th Streets, West Maple Road, West Dodge Road), and/or other acceptable measures to provide safe vehicular access. No improvements would be made to the temporary alternate routes. (City, Contractor)
- Pedestrian access would be maintained at all times in priority areas, particularly by maintaining a pedestrian crossing at 156th and Cuming Streets at all times for Grace Abbott Elementary School when school is in session. (City, Contractor)

Standard Specifications (NDOR, 2007):

- Standard Specification 104.05 - Scope of Work - Maintenance of Detours and Shooflies
    - Requires the Contractor, the extent practicable, to provide private dwellings, commercial properties, business, and public facilities access to the nearest public road.
- Standard Specification 104.08 - Scope of Work - Final Cleaning Up
    - Requires the Contractor to remove all rubbish, excess material, and equipment from the project site, and to leave the site in a neat and presentable condition. Also requires the Contractor to fill borrow sites.
- Standard Specification 105.12 - Control of Work - Use of Land
    - Requires the Contractor to leave any lands outside the ROW used for construction in a neat and presentable condition.
- Standard Specification 107.01 - Legal Relations and Responsibility to the Public - Laws to be Observed
    - Requires the Contractor to be fully informed of and observe local, state and federal laws and regulations.

- Standard Specification 205.02 - Excavation and Embankment - Material Requirement
    - Specification for earthwork materials and borrow sites.
- Standard Specification 208 - Borrow and Waste Site Restoration
    - Specifications for restoration of borrow sites.
- Standard Specification 301.02(1a, 1b) - General Requirements - Equipment
    - Requires the Contractor to keep equipment in satisfactory working condition and to operate equipment in the manner it was intended.

Special Provisions:

- Disposition of Materials
    - Requirements for the Contractor to deliver surplus materials to the City, and disposal of all other waste materials.

SECTION 6 LIST OF PREPARERS AND REVIEWERS

This Environmental Assessment was prepared by a number of qualified individuals, and reviewed by City, State and Federal officials. Their names, qualifications and positions are listed below.

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Craig Mielke, PWS: Environmental Scientist/NEPA Technical Lead. B.S. Agriculture (1998), Natural Resources and Environmental Science, Purdue University. (Contributions: Primary Author, Purpose and Need, Alternatives, Land Use, Socio-Economics, Pedestrians and Bicyclists, Parks and Recreation, Section 4(f) Resources, Section 106, Environmental Justice, Wetlands, Wildlife and Endangered Species, Wetlands, Water Quality, Floodplains, Secondary and Cumulative Impacts, Public Involvement)

Steven McCullough, PE: Roadway Design Engineer/Senior Project Manager. B.S. Civil Engineering (1994), University of Nebraska Lincoln. (Contributions: Project Manager, Preliminary Engineering, Utilities, ROW, Public Involvement)

James Jussel, PE, PTOE: Transportation Planner/Traffic Engineering Technical Lead. B.S. Civil Engineering (1995), University of Nebraska Lincoln. (Contributions: Traffic Engineering)

Patrick Sward, JD: Environmental Scientist. Juris Doctor Law (1986) University of Nebraska. B.S. Agriculture (1981) University of Nebraska. (Contributions: Hazardous Materials)

Austin Yates, PE: Transportation Engineer. B.S. Civil Engineering (2007), University of Nebraska Omaha. (Contributions: Traffic Forecasting, Traffic Engineering, Noise Study, GIS Mapping, Document Preparation)

Chris Hennings, EI: Roadway Design Engineer. B.S. Civil Engineering (2010), University of Nebraska Omaha. (Contributions: Preliminary Engineering, Utilities, ROW, Phasing)

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Stephanie Dostal, IAP2: Public Involvement Specialist. B.A. English (1993) Wayne State College. Contributions: Public Involvement)

City of Omaha Public Works

Jon Meyer, PE: Engineer III. (Reviewer and Responsible Charge)

Kirk Pfeffer, PE: Design Engineer. (Reviewer)

Murthy Koti, PE: City Traffic Engineer. (Reviewer)

Todd Pfitzer, PE: City Engineer. (Reviewer)

Douglas County

Dan Kutilek, PE: County Traffic Engineer. (Reviewer)

Nebraska Department of Roads

Jon Barber: Highway Environmental Program Manager. (Reviewer)

Zach Cunningham: Highway Environmental Biologist. (Contributions/Approvals: Biological Evaluation)

Rob Bozell: Highway Archeology Program Manager. (Contributions: Archeological/Historical Evaluation)

Jason Jurgens: Environmental Section Manager. (Contributions/Approvals: Hazardous Materials)

Will Packard: Environmental Analyst II. (Contributions/Approvals: Noise Study)

Christopher Hassler: Highway Civil Rights Specialist. (Contributions/Approvals: Environmental Justice)

Federal Highway Administration

Melissa Maiefski: Program Delivery Team Leader. (Reviewer)

Frank Rich, PE: Local Projects Engineer. (Reviewer)

Molly Lamrouex: Environmental Protection Specialist. (Reviewer)

Justin Luther, AICP: Transportation Planner. (Reviewer)

SECTION 7 LIST OF ACRONYMS, ABBREVIATIONS, AND TERMS

IN ORDER OF APPEARANCE

Federal Highway Administration (FHWA)
Nebraska Department of Roads (NDOR)
Metropolitan Planning Agency (MAPA)
Transportation Improvement Plan (TIP)
Long Range Transportation Plan (LRTP)
Environmental Assessment (EA)
National Environmental Policy Act of 1969 (NEPA)
Council on Environmental Quality (CEQ)
Code of Federal Regulations (CFR)
United States Department of Transportation (USDOT)
Finding of No Significant Impact (FONSI)
City of Omaha Capital Improvement Program (CIP)
Level of Service (LOS)
National Cooperative Highway Research Program (NCHRP)
vehicles per day (vpd)
Transportation System Management (TSM)
high-occupancy vehicle (HOV)
Intelligent Transportation Systems (ITS)
Traffic Management Center (TMC)
Traffic Operations Center (TOC)
Americans with Disabilities Act (ADA)
Omaha Public Power District (OPPD)
Local Public Agency (LPA)
Sanitary Improvement District (SID)
Homeowners Associations (HOA)
Millard Public Schools (MPS)
Omaha Public Schools (OPS)
Parent Teacher Organization (PTO)
Executive Order (EO)
Environmental Justice (EJ)
American Community Survey (ACS)
English Language Learners (ELL)
right-of-way (ROW)
United States Code (USC)
Architectural Barriers Act (ABA)
Department of Justice (DOJ)
Uniform Federal Accessibility Standards (UFAS)

Americans with Disabilities Act Accessibility Guidelines (ADAAG)
Papio-Missouri River Natural Resources District (P-MRNRD)
National Historic Preservation Act of 1966 (NHPA)
Advisory Council on Historic Preservation (ACHP)
Area of Potential Effect (APE)
National Register of Historic Places (NRHP)
State Historic Preservation Officer (SHPO)
Nebraska Sate Historic Society (NSHS)
Tribal Historic Preservation Officer (THPO)
Nebraska Department of Environmental Quality (NDEQ)
Wellhead Protection Area (WHPA)
Wellhead Protection Plans (WHPP)
Clean Water Act of 1977 (CWA)
Total Maximum Daily Loads (TMDLs)
Environmental Protection Agency (EPA)
National Pollutant Discharge Elimination System (NPDES)
Municipal Separated Storm Sewer System (MS4)
Stormwater Management Programs (SWMP)
Best Management Practices (BMPs)
Stormwater Pollution Prevention Plan (SWPPP)
United States Army Corps of Engineers (USACE)
Nationwide Permit (NWP)
Federal Emergency Management Agency (FEMA)
National Flood Insurance Program (NFIP)
Flood Insurance Rate Map (FIRM)
Migratory Bird Treaty Act (MBTA)
Avian Protection Plan (APP)
United States Fish and Wildlife Service (USFWS)
Endangered Species Act of 1973 (ESA)
Nebraska Game and Parks Commission (NGPC)
Biological Evaluation (BE)
Noise Abatement Criteria (NAC)
Equivalent Continuous Noise Level (Leq)
Recognized Environmental Conditions (RECs)

ALPHABETICALLY

Architectural Barriers Act (ABA)
Advisory Council on Historic Preservation (ACHP)
American Community Survey (ACS)
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Americans with Disabilities Act Accessibility Guidelines (ADAAG)
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Best Management Practices (BMPs)
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National Cooperative Highway Research Program (NCHRP)
Noise Abatement Criteria (NAC)
National Environmental Policy Act of 1969 (NEPA)
National Flood Insurance Program (NFIP)

National Historic Preservation Act of 1966 (NHPA)
National Pollutant Discharge Elimination System (NPDES)
National Register of Historic Places (NRHP)
Nationwide Permits (NWPs)
Nebraska Department of Environmental Quality (NDEQ)
Nebraska Department of Roads (NDOR)
Nebraska Game and Parks Commission (NGPC)
Nebraska Sate Historic Society (NSHS)
Omaha Public Power District (OPPD)
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United States Code (USC)
United States Department of Transportation (USDOT)
United States Fish and Wildlife Service (USFWS)
vehicles per day (vpd)
Wellhead Protection Area (WHPA)
Wellhead Protection Plans (WHPP)

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APPENDIX A

SECTION 106 AND TRIBAL COORDINATION/CONCURRENCE

APPENDIX B

WETLANDS EVALUATION AND PRELIMINARY JURISDICTIONAL DETERMINATION

APPENDIX C

THREATENED & ENDANGERED SPECIES COORDINATION/CONCURRENCE

APPENDIX D

TRAFFIC NOISE STUDY

APPENDIX E

HAZARDOUS MATERIALS TECHNICAL MEMORANDUM

APPENDIX F

PUBLIC INFORMATION MEETING DOCUMENTATION

APPENDIX G

TRAFFIC ANALYSIS TECHNICAL MEMORANDUM

APPENDIX H

ENVIRONMENTAL JUSTICE AND LIMITED ENGLISH PROFICIENCY APPROVAL