



Neighborhood Connections: A Health Impact Assessment

Issue Brief • March 2016



Summary

Building street connections into an existing neighborhood is frequently controversial. Common ground exists between neighborhood residents and the City of Omaha for 1) keeping automobile trips on the streets where they belong -- local trips on local streets and regional trips on arterials -- and 2) reducing speeding in neighborhoods. Focusing on these two areas would protect neighborhood residents from injuries while increasing physical activity and decreasing air pollution and traffic congestion. Stronger guidance from the City of Omaha to developers on how and when to engage neighborhoods effectively, as well as a citizen's guide to the development review process, would reduce the stress experienced by nearby residents.

Background

The City of Omaha routinely faces controversy when deciding whether or not to build streets that connect a new real estate development to an existing neighborhood. While improved connectivity is a goal of Omaha's Master Plan, nearby residents frequently oppose these connections on the grounds that they will increase traffic and compromise safety for the neighborhood, especially for children. The issue is especially controversial if the new real estate development is commercial or multifamily housing.

As a result, the City of Omaha asked the Douglas County Health Department to serve as a neutral third party by conducting a Health Impact Assessment that would look more closely at the benefits and risks of building neighborhood connections from a health perspective. This effort was part of an ongoing collaboration between the Health Department and the City called *Build with Health*.

Purpose

There were two purposes guiding the Neighborhood Connections Health Impact Assessment. The first was to identify health and safety issues that should be considered in making well-grounded decisions for building or not building a street connection. The second was to determine if there could be improvements in how neighborhood residents were engaged in the development review process.

Description of the Approach

A key component of the Health Impact Assessment was involving both main stakeholder groups (City of Omaha staff and neighborhood residents) and the decision-maker (the Omaha City Council). Beginning in July 2015, the HIA Lead from the Health Department plus five City staff members from the Planning and Public Works Departments formed a team that met on a monthly basis to collaborate on the Health Impact Assessment.

To create a manageable yet representative group of neighborhood residents, the City and Health Department team selected three case-study neighborhoods that had been through a neighborhood connection decision within the past five years. The neighborhoods selected were **Candlewood** (near 120th & Dodge), **Royalwood Estates** (next to the Sterling Ridge development at 132nd and Pacific) and **Fire Ridge** (near 192nd and Dodge). To learn about the experience of neighborhood residents and listen to their concerns, the HIA Lead arranged interviews with representatives from all three neighborhoods -- typically a current or former president of the homeowners association. The results from these interviews were then shared with City staff and the three City Council members representing the case-study neighborhoods were briefed.

Following the interviews, the Douglas County Health Department held a forum where neighborhood representatives worked in small groups with City staff and their City Council members. The focus of the forum was understanding the perspectives for and against building a connection between an existing neighborhood and a new real estate development, plus determining what health and safety information was needed to weigh different tradeoffs. Recommendations for improving neighborhood engagement was also a top discussion topic at the forum.

Neighborhood Forum Results

Traffic volume and traffic speed impacts were key issues for both neighborhood residents and City of Omaha staff, but in different ways.

- For neighborhood residents, the focus is on potential cut-through traffic from the new development, resulting in increased traffic volumes and a higher number of cars speeding within the neighborhood. The concern is that an increased number of cars and cars speeding would put neighborhood residents (especially children) at risk while also creating an adverse environment that would inhibit social connections and walking, jogging, and biking in the neighborhood.
- For City staff, the focus is on keeping local traffic local to minimize congestion on arterial streets. Cut-through traffic is viewed as unlikely to occur and is therefore seen as a low risk to the neighborhood, especially compared to the risk of residents traveling on higher volume, higher speed arterials instead of making the same trip via local neighborhood streets. Increased traffic congestion and trip lengths are also a concern to City staff due to Omaha being close to exceeding EPA standards for air pollution.

Neighborhood residents reported experiencing a high level of stress as a result of not knowing how being connected to a new development would affect the safety and sense of community for their neighborhood.

- Neighborhood residents reported that this stress from the Development Review process was exacerbated by what they felt was a lack of early and substantive involvement.
 - In some cases, letters sent by the City of Omaha which are intended to be a meeting notification (before the Zoning Board of Appeals or Planning Board) were the first notification that nearby residents heard about a new development and its accompanying street connection decision.
 - Secondly, when developers did hold a meeting with neighborhood residents, there was frequently little flexibility for making changes in the development design to address concerns raised by neighbors.

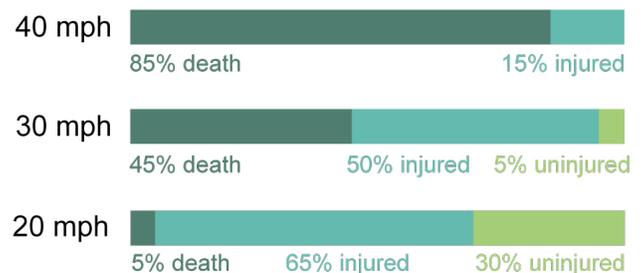
While stress experienced by nearby residents during the development review process is unavoidable, it should still be minimized. Excess stress keeps the body in a “fight or flight” mode that through the release of cortisol and other stress hormones that interfere with digestion, normal blood sugar levels, blood pressure, and the immune system in ways that can lead to a host of health complications ranging from sleep disruption to chronic diseases like diabetes and obesity. The stress response also narrows thinking in ways that can make communication and negotiation between City staff, developers, and neighborhood residents more challenging.

Key Findings

Speed is a more critical factor for safety on neighborhood streets than traffic volume.

- The chances of a crash increase with higher speeds because drivers are less likely to see pedestrians when going faster and greater speeds increase the stopping distance needed to avoid a collision. The fatality rate is only 5% if a pedestrian is hit at 20 mph, but the chance of being killed goes up to 45% at 30 mph and 85% at 40 mph.
- In his seminal Livable Streets study, Donald Appleyard found that the major safety concern for people on a light traffic street (like residential streets in Omaha) was the occasional speeder rather than the number of cars. Appleyard also showed that increases in traffic volume can decrease the number of friends and acquaintances residents have; however, his comparisons were the equivalent of going from a local residential street (200 vehicles per peak hour) to an arterial road (1,600 vehicles per hour).
- More specifically, a study on child pedestrian injuries that was published in the Institute for Transportation Engineers Journal found that traffic speed was the greatest risk factor when also accounting for traffic volume, number of pedestrians, amount of multifamily housing and number of parked cars. The authors concluded “these results suggest that it is more important to control speed than vehicular volume to prevent child pedestrian injuries on residential streets.”

Pedestrian Injuries at Impact Speeds



Source: U.K. Department of Transportation, *Killing Speed and Saving Livings* (1987)

If the connection provides access to nearby destinations (within approximately a half-mile), then residents would likely make more trips by walking or biking which increases physical activity.

- For example, a study by the Federal Transit Administration found that about 40% of trips to a transit station were made by walking if the station was a half-mile away (compared to less than 10% walking at 1 mile).
- Data from the 2008 National Household Travel Survey showed that 40% of trips are made by walking when shops are within a mile compared to less than 1% when the distance is 3-4 miles.

Traffic calming measures like speed humps, speed tables, and traffic circles frequently achieve a 4-8 mph decrease in speeds, which has been shown to decrease injuries.

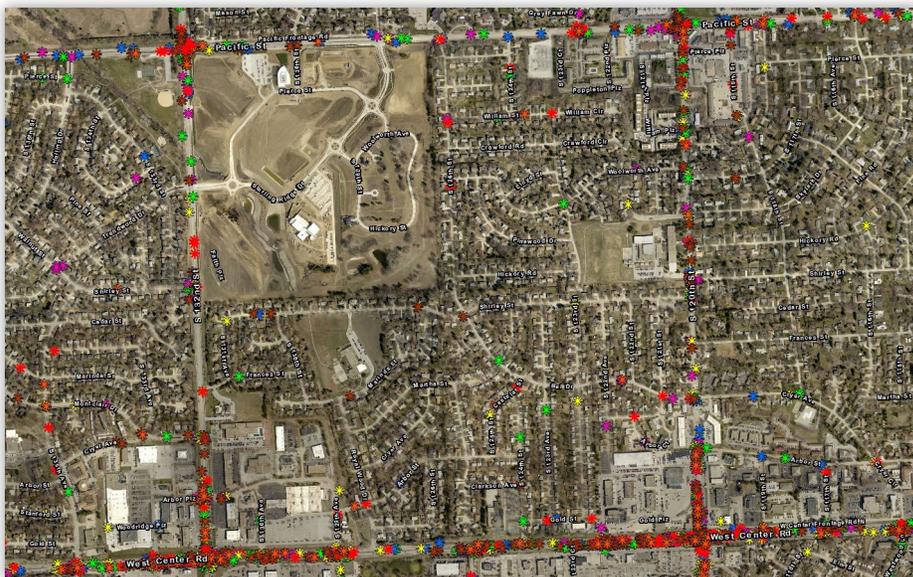
- A systematic review of 16 controlled before and after studies found an 11% reduction in injuries after traffic calming measures were undertaken.
- Other comparisons of before and after studies typically found a 15% to 25% decrease in injuries with some reaching as high as a 50% decrease.

Local Data

Arterial roads are more dangerous to make trips than local neighborhood streets due to their higher speeds and greater number of crashes.

- Local streets in west Omaha have speed limits at 25 mph and handle low volumes of traffic – often well under 250 cars per hour at peak which is the low threshold commonly used in traffic safety research. Arterial roads typically have a speed limit of 45 mph and often handle over a thousand cars per hour at peak.
- While the City of Omaha is working on a more comprehensive study of motor-vehicle crashes and injuries on neighborhood streets, maps of 6 years of crash data for the three case-study neighborhoods were used to create a conservative estimate. Based on this data, arterials have at least ten times more crashes than local streets (see map of Royalwood Estates above and Appendix A).

Crashes on Arterials vs. Neighborhood Streets (Crashes are color-coded by year 2008-2014)



Data source: City of Omaha Public Works (crashes are color-coded by year 2008 - 2014).

While the actual number of pedestrian fatalities (especially those involving children) are low, this issue is so important that steps should be taken to prevent any potential increase in traffic risk to children.

- In previous years, there had been no pedestrian fatalities for children 14 and under, but one 5 year old boy was killed in 2015 in south Omaha.
- Omaha has approximately 5 pedestrian fatalities per year out of about 25 total crash fatalities.
- For injuries, in a typical year, Omaha has about 175 pedestrians who are reported injured – about 35 of these being children under 14 years old.

Like the rest of metropolitan Omaha and the United States, west Omaha adults and children suffer from high rates of chronic diseases that could be reduced through neighborhoods that support physical activity.

- Only a third of west Omaha adults are at a healthy weight, over 8% have been diagnosed with diabetes, and over a fourth have high blood pressure.
- 54% of west Omaha adults and 47% of west Omaha children meet physical activity recommendations.
- Only about 15% of west Omaha students walk or ride their bike to school most days. 60% of parents said the school was too far away as the main reason why their child didn't walk or ride their bike more frequently.

Health Impacts and Recommendations

Based on the available evidence, the table below highlights likely health impacts from different neighborhood connection scenarios and recommendations for promoting health benefits and minimizing potential harms. These recommendations are both evidence-based and directly grounded in the feedback received during the stakeholder forum and other engagement processes. (See Appendix F - Neighborhood Connections Decision Tree.)

Neighborhood Connections Scenarios	
Health Impacts	Recommendations
<p><u>No Connection</u> If a street or pedestrian-bike path connection is not built, people from both the new development and the existing neighborhood who can't drive (children, the elderly, or people with disabilities) are forced to walk along arterial roads to make local trips. This leads to:</p> <ul style="list-style-type: none"> • Increased risk of serious injury • Decreased likelihood of walking and decreased physical activity <p><u>Pedestrian-Bike Path Only</u> If a street connection is not built, people who can drive must use arterial roads for local trips, which increases trip length and congestion. As delays from congestion on arterials increase, the risk of cut-through traffic in neighborhoods increases. This leads to:</p> <ul style="list-style-type: none"> • Increased air pollution • Increased risk of serious injury <p><u>Street Connection Without Traffic Calming</u> If a street connection is built AND a shorter trip for arterial traffic in terms of time is created, cut-through traffic is more likely. This leads to:</p> <ul style="list-style-type: none"> • Increased risk of serious injury • Decreased likelihood of walking and decreased physical activity <p>If a street connection is built AND nearby streets already experience a high rate of speeding, additional speeding is likely to occur. This leads to:</p> <ul style="list-style-type: none"> • Increased risk of serious injury <p>If a street connection is built AND traffic volumes increase significantly, a "fence effect" is more likely. This leads to:</p> <ul style="list-style-type: none"> • Decreased social connections • Decreased likelihood of walking and decreased physical activity <p><u>Street Connection With Traffic Calming</u> If the street connection is built AND traffic is calmed on local streets to follow speed limits, a safer, more direct route is provided for local trips without compromising neighborhood safety. This leads to:</p> <ul style="list-style-type: none"> • Increased physical activity from walking and biking • Decreased pollution • Decreased risk of serious injury 	<p>Focus on two priorities for connection decisions: 1) keeping trips on the streets they belong — local trips on local streets and regional trips on arterials; and 2) minimizing speeding.</p> <ul style="list-style-type: none"> • Build street connections when: 1) access to nearby destinations is needed for local trips and 2) congestion or crashes on adjacent arterials is a concern based on available data. • Build pedestrian-bike path connections when: 1) access to nearby destinations is needed for local trips and 2) congestion or crashes on adjacent arterials are not a concern. (A street connection with barriers for cars could also be built if congestion is likely to be a concern in the future). <p>Mitigate potential risks from speeding (including speeding from cut-through traffic) by lowering the design speed of the street and adding traffic calming measures.</p> <p>Establish a threshold of traffic volume increase to neighborhood streets caused by a neighborhood street connection that would trigger mitigating traffic calming measures.</p> <p>Focus on the PM peak for traffic speed and volume studies involving residential neighborhoods to more accurately assess the safety risk to children playing after school.</p> <p>Strengthen guidance to developers to ensure that neighborhood residents are engaged prior to the City sending out meeting notifications. Priority should be given to promoting this engagement at a point when decision-making flexibility for the developer still exists and at least before they submit a formal application to Planning staff.</p>

Conclusions

1. The crux of the controversy over street connections between City staff and neighborhood residents is over determining tradeoffs between 1) creating safer, more direct routes for local trips with less congestion on arterial roads (City staff) versus 2) minimizing safety risks from additional traffic including potential cut-through drivers (Neighborhood residents).
2. City staff and neighborhood residents have two areas of common ground for reconciling these tradeoffs. The first overlap is keeping trips on the streets where they belong – local trips on local streets and regional trips on arterial roads. The second overlap is reducing speeding on neighborhood streets. Using the Neighborhood Connections Decision Tree to focus on the areas of common ground would result in decisions that protect neighborhood residents from injuries while increasing physical activity and decreasing air pollution and traffic congestion.
3. Stronger guidance from the City of Omaha to developers on how and when to engage neighborhoods effectively, as well as a citizen's guide to the development review process, would reduce the stress experienced by nearby residents.



Build with Health is a collaboration between the Douglas County Health Department, the City of Omaha, and eight other partners (Omaha by Design, MAPA, Live Well Omaha, CHI Health, Omaha Healthy Kids Alliance, Nebraska Department of Health and Human Services, UNMC College of Public Health, and ONE Omaha). *Build with Health* focuses on using community design and neighborhood engagement to create healthy, thriving places throughout Omaha.

For more information on *Build with Health* or Health Impact Assessments, please contact:

Andy Wessel, MPH
Douglas County Health Department
(402) 444-7225
andy.wessel@douglascounty-ne.gov

Supplemental Information for this HIA is available in the Appendices -- see attached or go to <http://www.douglascountyhealth.com/healthy-community/health-impact-assessments>

This Health Impact Assessment was supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The opinions expressed are those of the Douglas County Health Department and do not necessarily reflect the views of the Health Impact Project, Robert Wood Johnson Foundation or the Pew Charitable Trusts.



Neighborhood Connections HIA Supplemental Information March 2016

The report for the Neighborhood Connections Impact Assessment (HIA) was intentionally designed in an issue brief format to be readable and engaging for community members and other stakeholders. As a result, a large amount of the information generated during the HIA was not included. The following appendices make this information available to those who are interested in exploring these areas in more depth.

<i>Full-size Visuals</i>	<i>Appendix A</i>
• <i>Candlewood Crash Map</i>	
• <i>Royalwood Estates Crash Map</i>	
• <i>Fire Ridge Crash Map</i>	
<i>HIA Methodology & Monitoring</i>	<i>Appendix B</i>
<i>Neighborhood Connections Forum Notes</i>	<i>Appendix C</i>
<i>Nebraska State Statutes on Notification Requirements</i>	<i>Appendix D</i>
<i>References</i>	<i>Appendix E</i>
<i>Neighborhood Connections Decision Tree</i>	<i>Appendix F</i>

Individuals who are interested in conducting a similar HIA – or local stakeholders who have questions or comments about the HIA methodology or findings – are welcome to contact the Douglas County Health Department to learn more.

Primary Contact:
Andy Wessel, MPH
Community Health Planner
Douglas County Health Department
(402) 444-7225
andy.wessel@douglascounty-ne.gov

Appendix A



Full-sized Visuals

Candlewood Crash Map: January 2008 - May 2014 (Crashes are color-coded by year)



Fire Ridge Crash Map: January 2008 - May 2014 (Crashes are color-coded by year)



Parts of Fire Ridge map are outside City of Omaha boundaries so not all crashes are reflected.

Appendix B

HIA Methodology & Monitoring

HIA Methodology and Monitoring

The Neighborhood Connections Health Impact Assessment (HIA) was conducted under Build with Health – a collaboration between the Douglas County Health Department, the City of Omaha, and over a half dozen other partners. Build with Health focuses on using community design and neighborhood engagement to create healthy, thriving places throughout Omaha.

The core principles of Build with Health are:

- All neighborhoods – no matter where they are in Omaha – should provide a healthy environment.
- Because the effects from housing, transportation, and real estate development decisions will last for decades, it is important to weigh health impacts at the time of decision-making.
- Using health as a shared value can help bridge silos and improve communication in order to develop solutions and collaborate more effectively.

The Health Impact Assessment (HIA) work for Deer Park was conducted by members of a working group created for this HIA who included:

- Andy Wessel, Community Health Planner (Douglas County Health Department)
- Derek Miller, Transportation Planner (City of Omaha Planning Department)
- Chad Weaver, Long Range Planning Manager (City of Omaha Planning Department)
- Todd Pfitzer, City Engineer (City of Omaha Public Works Department)
- Murthy Koti, City Traffic Engineer (City of Omaha Public Works Department)
- Ryan Haas, Private Plans Engineer (City of Omaha Public Works Department)

As discussed below, several neighborhood-level leaders played a key role in supporting this HIA. They included.

- Dorothy Beer (Candlewood Homeowners Association)
- Clint Schutt (Candlewood Homeowners Association)
- Mark Ringsdorf (Fire Ridge Homeowners Association)
- Rich Henningsen (Royalwood Estates Homeowners Association)
- Julie Smith (ONE Omaha)

Lastly, three City Councilmembers, who represented the areas that are most frequently experiencing connectivity decisions, dedicated their time to provide guidance to this HIA.

- Rich Pahls (District 5)
- Franklin Thompson (District 6)
- Aimee Melton (District 7)

Screening

The Neighborhood Connection HIA was selected for three reasons. First, the decisions about connectivity between existing neighborhoods and new real estate development are frequently controversial with both neighborhood residents and City of Omaha staff using different aspects of health and safety to oppose or support street connections. Second, these decisions occur routinely so the findings and recommendations from the HIA could be used repeatedly rather than for only one project. Lastly, this HIA provided an opportunity to improve the neighborhood engagement process for connectivity decisions as well as for others projects that must go through the Development Review process.

This HIA was requested by both the City of Omaha Planning Department and the Public Works Department who agreed these connectivity decisions affect health outcomes related to safety, physical activity, and air quality. ONE Omaha and the two neighborhood alliances in west Omaha were active partners for improving how neighborhoods are engaged by the City of Omaha and real estate developers.

Scoping

The HIA working group (see above), met several times to determine the priority issues for City staff in deciding whether or not to build a street connection between a new development and an existing neighborhood. To begin involving neighborhood residents more directly, this working group developed a list of potential case study neighborhoods. Three neighborhoods (Candlewood, Fire Ridge, and Royalwood Estates) were chosen because they were recent examples where the neighborhood connection issue had become controversial. Additionally, each neighborhood represented a different City Council district.

The HIA Lead then conducted in-person interviews with at least one representative from each case study neighborhood. These interviewees were people who had been involved in a leadership capacity with the neighborhood connection issue -- frequently as the current or former homeowner association president. The HIA Lead then shared the notes from these interviews with the City staff on the working group and also briefed the three City Council representatives on what was learned.

The information gathered from these in-person interviews – in combination with the meetings with Planning and Public Works staff and City Council representatives – established the scope for this health impact assessment, which focused on informing two aspects of neighborhood connection decisions: 1) the health and safety criteria used to decide whether or not the connection should be built; and 2) options for improving engagement of existing neighborhood residents during the development review process.

As the lead for the HIA, the Douglas County Health Department was responsible for ensuring a thorough literature review and baseline assessment was conducted. It also oversaw the stakeholder engagement activities to ensure diverse and substantive participation.

The City of Omaha – principally the Planning and Public Works Departments – was responsible for 1) compiling residential neighborhood crash data as well as 2) providing information on the procedures involved in the development review process.

Assessment

To further clarify what health and safety information would be credible to neighborhood residents, City staff, and City Councilmembers, the Douglas County Health Department hosted a forum to further discuss the perspectives of each group. This forum was also used to begin developing recommendations for improving the neighborhood engagement process. The stakeholder forum was held in the evening at the Boys Town Hospital West, which was near all three case study neighborhoods. All three City Council members, the representatives from each of the three case study neighborhoods, and staff from both Planning and Public Work were all involved and they were seated in mixed small groups to allow for deeper discussion.

The priority health and safety considerations that emerged from scoping interviews and a stakeholder forum were: 1) safety impacts from traffic volume and speed; 2) physical activity and air pollution impacts from access to destinations; and 3) stress from the development review process. Furthermore, the information that was prioritized by stakeholders was: 1) traffic crash and injury data; 2) before and after data on traffic and crime; and 3) more information on the planned development and possible traffic calming options (See Appendix C).

For collecting the information identified by the forum, three main sources of data were used. First, City of Omaha traffic data was mapped for each of the three case study neighborhoods (See Appendix A). [The City of Omaha also initiated a broader study to compare crash data for neighborhood streets versus surrounding arterials]. Second, baseline health data was collected from a 2011 Community Health Needs Assessment of adults and a 2012 Community Health Needs Assessment for children. The Community Health Needs Assessments were used because they have sufficient sample size to drill down to west Omaha data. Third, a literature review was conducted which focused on traffic safety for residential streets (especially for children) as well as possible traffic calming alternatives (See Appendix E). Because post-development traffic studies are not typically done and because crime was outside the scope of this HIA, the literature review also provided evidence for likely before and after impacts of street connections.

While the findings and recommendations made in this HIA are based in the evidence collected from these three data sources, they are also directly grounded in the feedback received during the stakeholder forum and other engagement processes.

Recommendations and Reporting

See Neighborhood Connections HIA Brief report and Decision Tree (Appendix F).

Evaluation and Monitoring

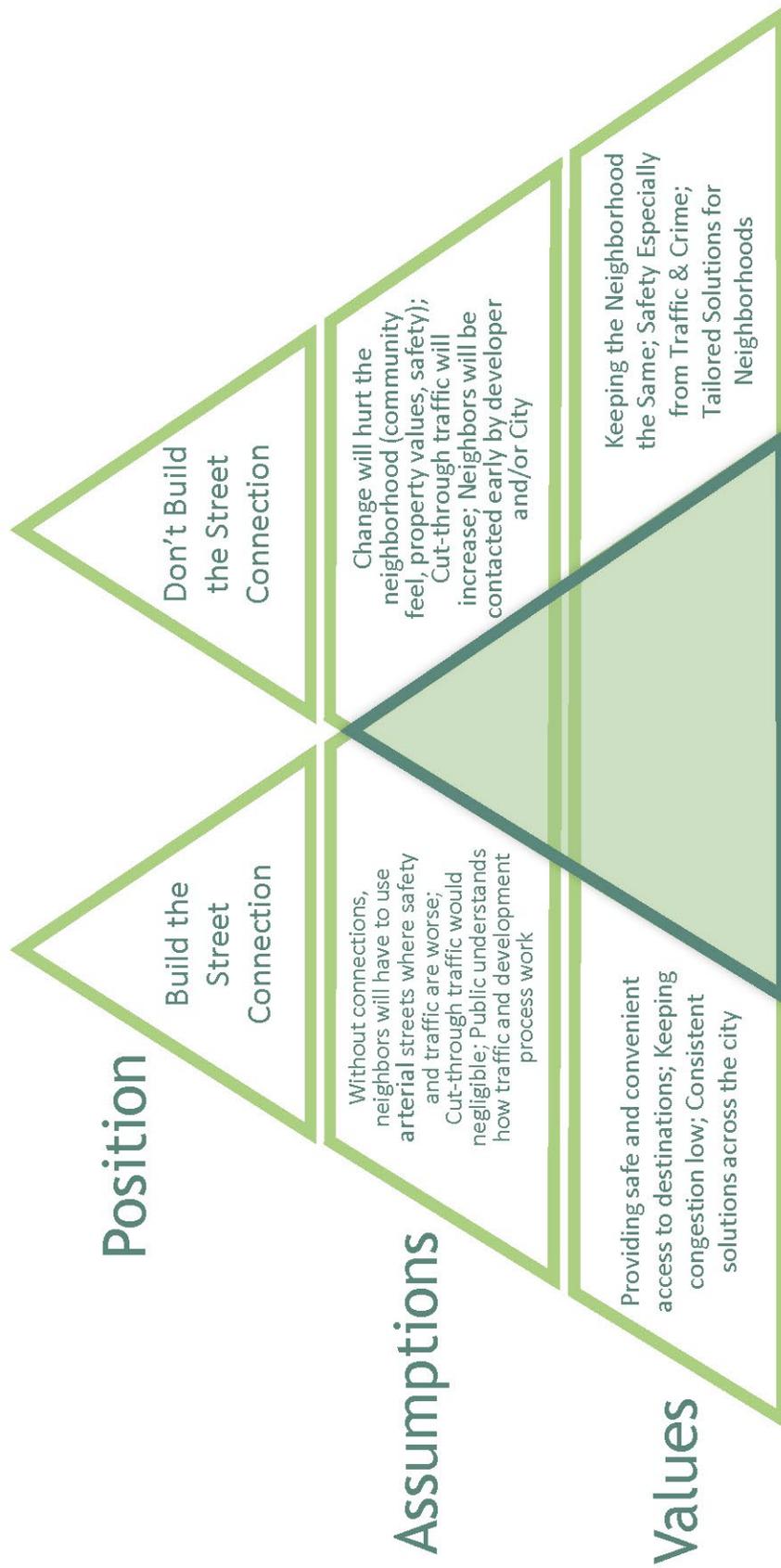
Both process and impact evaluations will be completed for this HIA. A key area for monitoring is determining the traffic volume and speed impacts following the construction of a street connection. If the recommendation from the forum to require a post traffic study was followed, this would allow for tracking the actual impacts compared to anticipated impacts from the pre traffic study, which should be reported to impacted neighborhoods and the City Council. Additionally, the data sources used for this HIA are updated regularly so it will be possible for Health Department and City staff to determine changes in population-level health data for west Omaha or neighborhood level crash data.

As a result of this HIA, the City of Omaha developed a map of all neighborhoods that have planned street connections so the City can more closely monitor upcoming situations where the findings and recommendations from HIA – including the Decision Tree – could be utilized. Also, through its partnership with ONE Omaha and the City of Omaha, the Douglas County Health Department will continue to be involved in creating improvements to the neighborhood engagement process. This partners will afford opportunities to engage neighborhood residents to see if the stress created by the Development Review notification is diminishing.

Appendix C

Neighborhood Connections Forum Notes

Getting to Values & Common Ground



Priorities

Early Involvement of Neighborhoods

- Will help with fear of change if done well.
- Want developer to listen to neighbors when still flexibility
- Notifications should include neighborhood leaders
- 300 ft may be too small an area for notification
- Clarify that notification is occurring early (3-4 weeks after application)
- Provide checklist/recommendations made to developer around neighborhood involvement
- Prefer City to developer for engagement

Safety

Neighborhood Integrity

Health & Safety Considerations

- Stress from Unknown
- Speed of Traffic; Number of Crashes, Child Safety (Crossing Street & Exiting School Buses)
 - Crime
- Social Connectedness
- Walking/Biking vs Physical Inactivity
 - Noise & Air Pollution
 - Residential or Commercial Development
- Unique Assets/Aesthetics

Necessary Information

- Traffic Crash/Injury Data
 - Before and After Traffic Study Data
 - Before and After Crime Data
- Development Info-Type, Density, Destinations etc.
- Traffic Calming Alternatives



Appendix D

Nebraska State Statutes on Notification Requirements

State Statutes on Notification Requirements

Summary from the Nebraska Planning Handbook

In municipalities, when a change of zoning is proposed for less than all of the properties in a zoning district, requirements for notice of the public hearings by both the planning commission and the legislative body are as follows (Neb. Rev. Stat. § 19-905):

1. A notice of the time and place of each hearing must be published at least one time ten days prior the each hearing in a newspaper of general circulation in the municipality.
2. Also, property owners in the area need to be notified in one of two ways:
 - a. A notice may be posted in a conspicuous place on or near the property on which action is pending. State law stipulates that such notice on the property shall not be less than eighteen inches in height and twenty-four inches in width with a white or yellow background and black letters not less than one and one-half inches in height. The notice must be posted so that it is easily visible from the street nearest the property, and the notice must be posted at least ten days prior to the date of hearing(s).
 - b. In lieu of posting the sign, and at the option of the city council or village board of trustees, the owners or occupants of the real estate to be zoned or rezoned and all real estate within 300 feet may be personally served with written notice at least 10 days prior to the date of the hearing.

Many municipalities not only post a sign, but also send notices to all persons within 300 feet of the proposed change (i.e., they fulfill both “a” and “b” described here).

Relevant Nebraska State Statutes

19-904. Building zones and regulations; creation; hearing; notice.

The legislative body of such municipality shall provide for the manner in which such regulations and restrictions, and the boundaries of such districts, shall be determined, established, and enforced, and from time to time amended, supplemented, or changed. The legislative body shall receive the advice of the planning commission before taking definite action on any contemplated amendment, supplement, change, modification, or repeal. No such regulation, restriction, or boundary shall become effective until after separate public hearings are held by both the planning commission and the legislative body in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. Notice of the time and place of such hearing shall be given by publication thereof in a paper of general circulation in such municipality at least one time ten days prior to such hearing.

19-905. Building zones and regulations; changes; protest; notice; publication; posting; mailing; personal service; when not applicable.

Regulations, restrictions, and boundaries authorized to be created pursuant to sections [19-901](#) to [19-915](#) may from time to time be amended, supplemented, changed, modified, or repealed. In case of a protest against such change, signed by the owners of twenty percent or more either of the area of the lots included in such proposed change, or of those immediately adjacent on the sides and in the rear thereof extending three hundred feet therefrom, and of those directly opposite thereto extending three hundred feet from the street frontage of such opposite lots, and such change is not in accordance with the comprehensive development plan, such amendment shall not become effective except by the favorable vote of three-fourths of all the members of the legislative body of such municipality. The provisions of section [19-904](#) relative to public hearings and official notice shall apply equally to all changes or amendments. In addition to the publication of the notice therein prescribed, a notice shall be posted in a conspicuous place on or near the property on which action is pending. Such notice shall not be less than eighteen inches in height and twenty-four inches in width with a white or yellow background and black letters not less than one and one-half inches in height. Such posted notice shall be so placed upon such premises that it is easily visible from the street nearest the same and shall be so posted at least ten days prior to the date of such hearing. It shall be unlawful for anyone to remove, mutilate, destroy, or change such posted notice prior to such hearing. Any person so doing shall be deemed guilty of a misdemeanor. If the record title owners of any lots included in such proposed change be nonresidents of the municipality, then a written notice of such hearing shall be mailed by certified mail to them addressed to their last-known addresses at least ten days prior to such hearing. At the option of the legislative body of the municipality, in place of the posted notice provided above, the owners or occupants of the real estate to be zoned or rezoned and all real estate located within three hundred feet of the real estate to be zoned or rezoned may be personally served with a written notice thereof at least ten days prior to the date of the hearing, if they can be served with such notice within the county where such real estate is located. Where such notice cannot be served personally upon such owners or occupants in the county where such real estate is located, a written notice of such hearing shall be mailed to such owners or occupants addressed to their last-known addresses at least ten days prior to such hearing. The provisions of this section in reference to notice shall not apply (1) in the event

of a proposed change in such regulations, restrictions, or boundaries throughout the entire area of an existing zoning district or of such municipality, or (2) in the event additional or different types of zoning districts are proposed, whether or not such additional or different districts are made applicable to areas, or parts of areas, already within a zoning district of the municipality, but only the requirements of section [19-904](#) shall be applicable.

14-420. Request for change in zoning; notice; requirements; failure to give; effect.

- (1) A city of the metropolitan class shall provide written notice of any properly filed request for a change in the zoning classification of a subject property to the owners of adjacent property in the manner set out in this section.
- (2) Initial notice of the proposed zoning change on the subject property shall be sent to the owners of adjacent property by regular United States mail, postage prepaid, to the owner's address as it appears in the records of the office of the register of deeds, postmarked at least ten working days prior to the planning board public hearing on the proposed change. The initial notice shall also be provided at least ten working days prior to the hearing to any registered neighborhood association when the subject property is located within the boundary of the area of concern of such association in the manner requested by the association. Each neighborhood association desiring to receive such notice shall register with the city the area of concern of such association and provide the name of and contact information for the individual who is to receive notice on behalf of such association and the requested manner of service, whether by email or regular, certified, or registered mail. The registration shall be in accordance with any rules adopted and promulgated by the city. Such notice shall describe the subject property or give its address, describe the nature of the zoning change requested, and contain the date, time, and location of the planning board hearing.
- (3) A second notice of the proposed zoning change on the subject property shall be sent to the same owners of adjacent property who were provided with notice under subsection (2) of this section. Such notice shall be sent by regular United States mail, postage prepaid, to the owner's address as it appears in the records of the office of the register of deeds, postmarked at least ten working days prior to the city council public hearing on the proposed change. Such notice shall describe the subject property or give its address, describe the nature of the zoning change requested, and contain the date, time, and location of the city council public hearing.
- (4) No additional or further notice beyond that required by subsections (2) and (3) of this section shall be necessary in the event that the scheduled planning board or city council public hearing on the proposed zoning change is adjourned, continued, or postponed until a later date.
- (5) The requirements of this section shall not apply to proposed changes in the text of the zoning code itself or any proposed changes in the zoning code affecting whole classes or classifications of property throughout the jurisdiction of the city.

14-420. Request for change in zoning; notice; requirements; failure to give; effect. (continued)

- (6) Except for a willful or deliberate failure to cause notice to be given, no zoning decision made by a city of the metropolitan class either to accept or reject a proposed zoning change with regard to a subject property shall be void, invalidated, or affected in any way because of any irregularity, defect, error, or failure on the part of the city or its employees to cause notice to be given as required by this section if a reasonable attempt to comply with this section was made. No action to challenge the validity of the acceptance or rejection of a proposed zoning change on the basis of this section shall be filed more than one year following the date of the formal acceptance or rejection of the zoning change by the city council.
- (7) Except for a willful or deliberate failure to cause notice to be given, the city and its employees shall not be liable for any damage to any person resulting from any failure to cause notice to be given as required by this section when a reasonable attempt was made to provide such notice. No action for damages resulting from the failure to cause notice to be provided as required by this section shall be filed more than one year following the date of the formal acceptance or rejection of the proposed zoning change by the city council.
- (8) For purposes of this section:
 - (a) Adjacent property shall mean any piece of real property any portion of which is located within three hundred feet of the nearest boundary line of the subject property or within one thousand feet of the nearest boundary line of the subject property if the proposed zoning change involves a heavy industrial district classification;
 - (b) Owner shall mean the owner of a piece of adjacent property as indicated on the records of the office of the register of deeds as provided to or made available to the city no earlier than the last business day before the twenty-fifth day preceding the planning board public hearing on the zoning change proposed for the subject property; and
 - (c) Subject property shall mean any tract of real property located within the boundaries of a city of the metropolitan class or within the zoning jurisdiction of a city of the metropolitan class which is the subject of a properly filed request for a change of its zoning classification.

Appendix E

References

References

- Agran P, et al. **The Role of the Physical and Traffic Environment in Child Pedestrian Injuries.** *Pediatrics.* 1996; 98 (6): 1096-1103. American Academy of Pediatrics. **Policy Statement – Pedestrian Safety.** *Pediatrics.* 2009; 124 (2): 802-812.
- American Public Health Association. **At the Intersection of Public Health and Transportation: Promoting Healthy Transportation Policy.** April 2009.
- Anderson G et al. **Dangerous by Design 2014.** *Smart Growth America & National Complete Streets Coalition.* May 2014.
- Appleyard B. **Livable Streets for Schoolchildren.** *NCBW Forum.* March 2005.
- Appleyard D. **Livable Streets.** *Berkeley, CA: University of California Press.* 1981. Print.
- Belden, Russonello & Stewart, LLC. **The 2011 Community Preference Survey: What Americans Are Looking for When Deciding Where to Live.** *National Association of Realtors.* March 2011.
- Berryman D, et al. **Street Connectivity: Improving the Function and Performance of Your Local Streets.** *Lehigh Valley Planning Commission.* June 2011.
- Brownson R, Boehmer T, Luke D. **Declining Rates of Physical Activity in the United States: What Are the Contributors?** *Annual Review of Public Health.* 2005; 26: 421-43.
- Brownson R, Boehmer T. **Patterns and Trends in Physical Activity, Occupation, Transportation, Land Use, and Sedentary Behavior.** *Transportation Research Board Special Report 282.* 2005. Washington, DC: National Academy of Sciences.
- Bunn F, et al. **Traffic Calming for the Prevention of Road Traffic Injuries: Systematic Review and Meta-Analysis.** *Injury Prevention.* 2003; 9: 200-204.
- Campoli J. **Made for Walking: Density and Neighborhood Form.** *Cambridge, MA: Lincoln Institute of Land Policy.* 2012. Print.
- Cao X, Mokhtarian P, Handy S. **Examining the Impacts of Residential Self-Selection on Travel Behaviour: A Focus on Empirical Findings.** *Transport Reviews.* 2009; 29 (3): 359-395.
- Carlson C, et al. **Complexity in Built Environment, Health, and Destination Walking: A Neighborhood-Scale Analysis.** *Journal of Urban Health.* 2012; 89 (2): 270-284.
- CDC National Center for Chronic Disease Prevention and Health Promotion – Division of Nutrition, Physical Activity, and Obesity. **More People Walk to Better Health.** *CDC Vital Signs.* August 2012.
- Centers for Disease Control and Prevention. **Vital Signs: Walking Among Adults – United States, 2005 and 2010.** *Morbidity and Mortality Weekly Report.* 2012; 61 (31): 595-601.
- Chatman D. **Does TOD Need the T?** *Journal of the American Planning Association.* 2013; 79 (1): 17-31.
- Cortright J. **Walking the Walk: How Walkability Raises Home Values in U.S. Cities.** *CEOs for Cities.* Aug 2009.
- Ding D, Gebel K. **Built Environment, Physical Activity, and Obesity: What Have We Learned from Reviewing the Literature?** *Health & Place.* 2012; 18: 100-105.
- du Toit L, et al. **Does Walking in the Neighbourhood Enhance Local Sociability?** *Urban Studies.* 2007; 44(9): 1677-1695.
- Ewing R. **Traffic Calming: State of the Practice.** *U.S. Department of Transportation – Federal Highway Administration.* August 1999.
- Ewing R, Bartholomew K. **Eight Qualities of Pedestrian- and Transit-Oriented Design.** *Urban Land Institute.* 2013.
- Ewing R, Cervero R. **Travel and the Built Environment: A Meta-Analysis.** *Journal of the American Planning Association.* 2010; 76 (3): 265-294.
- Fehr & Peers. **Signalized Intersection Enhancements That Benefit Pedestrians.** *America Walks.* 2012.
- Frank L, Engelke P, Schmid T. **Health and Community Design: The Impact of the Built Environment on Physical Activity.** Washington D.C.: Island Press. 2003. Print.
- Frank L, et al. **Linking Objectively Measured Physical Activity with Objectively Measured Urban Form: Findings from SMARTRAQ.** *American Journal of Preventive Medicine.* 2005; 28 (2S2): 117-125.
- Frank L, et al. **Stepping Towards Causation: Do Built Environments or Neighborhood and Travel Preferences Explain Physical Activity, Driving, and Obesity?** *Social Science & Medicine.* 2007; 65: 1898-1914.
- Frank L, et al. **A Hierarchy of Sociodemographic and Environmental Correlates of Walking and Obesity.** *Preventive Medicine.* 2008; 47: 172-178.
- Franzini L et al. **Influences of Physical and Social Neighborhood Environments on Children’s Physical Activity and Obesity.** *American Journal of Public Health.* 2009; 99 (2): 271-278.
- Frumkin H, Frank L, Jackson R. **Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities.** Washington D.C.: Island Press. 2004. Print.
- Giles-Corti B, et al. **Encouraging Walking for Transport and Physical Activity in Children and Adolescents: How Important is the Built Environment.** *Sports Medicine.* 2009; 39 (12): 995-1009.
- Giles-Corti B, et al. **Increasing Walking: How Important is Distance to, Attractiveness, and Size of Public Open Space?** *American Journal of Preventive Medicine.* 2005; 28: 169-176.
- Giles Corti B, Donovan R. **The Relative Influence of Individual, Social and Physical Environment Determinants of Physical Activity.** *Social Science & Medicine.* 2002; 54: 1793-1812.
- Goldberg D, et al. **New Data for a New Era - A Summary of the SMARTRAQ Findings: Linking Land Use, Transportation, Air Quality and Health in the Atlanta Region.** *Smart Growth America.* 2007.
- Hanibuchi T, et al. **Does Walkable Mean Sociable? Neighborhood Determinants of Social Capital Among Older Adults in Japan.** *Health & Place.* 2012; 18 (2): 229-239.
- Handy SL, et al. **How the Built Environment Affects Physical Activity: Views from Urban Planning.** *American Journal of Preventative Medicine.* 2002; 23 (2S): 64-73.

- Harkey D, Zegeer C. **PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System.** U.S. Department of Transportation – Federal Highway Administration. September 2004.
- Heath GW, et al. **The Effectiveness of Urban Design and Land Use and Transport Policies and Practices to Increase Physical Activity: A Systematic Review.** *Journal of Physical Activity and Health.* 2006; 3 (Supp 1): S55-S76.
- Heinonen J, Eck J. **Pedestrian Injuries and Fatalities.** U.S. Department of Justice – Community Oriented Policing Services. October 2007.
- Holt-Lunstad J, Smith TB, Layton JB. **Social Relationships and Mortality Risk: A Meta-analytic Review.** *PLoS Medicine.* 2010; 7 (7): 1-20.
- Hotz G, et al. **Preventing Pediatric Pedestrian Injuries.** *Trauma.* 2009; 66: 1492-1499.
- Institute of Transportation Engineers, Congress for the New Urbanism. **Designing Walkable Urban Thoroughfares: A Context Sensitive Approach.** 2010.
- Jacobsen P, et al. **Child Pedestrian Injuries on Residential Streets: Implications for Traffic Engineering.** *Institute of Transportation Engineers Journal.* Feb 2000; 71-75.
- Jelleyman T, Spencer N. **Residential Mobility in Childhood and Health Outcome: A Systematic Review.** *Journal of Epidemiology and Community Health.* 2008. 62: 584-592.
- Joh K, Nguyen M, Boarnet M. **Can Built and Social Environmental Factors Encourage Walking among Individuals with Negative Walking Attitudes?** *Journal of Planning Education and Research.* 2012; 32 (2): 219-236.
- Kahn EB, et al. **The Effectiveness of Interventions to Increase Physical Activity.** *American Journal of Preventative Medicine.* 2002; 22 (4S): 73-107.
- Keeley L, et al. **The Shifting Nature of U.S. Housing Demand.** *The Demand Institute.* May 2012.
- Kim J. **Physical and Psychological Factors in Sense of Community.** *Environment and Behavior.* 2004; 36 (3): 313-340.
- Kramer M, Sobel L. **Smart Growth and Economic Success: Benefits for Real Estate Developers, Investors, Businesses, and Local Governments.** U.S. Environmental Protection Agency. Dec 2012.
- Levine J, et al. **Does Accessibility Require Density or Speed?** *Journal of the American Planning Association.* 2012; 78 (2): 157-172.
- Levine J, Inam A. **The Market for Transportation-Land Use Integration: Do Developers Want Smarter Growth Than Regulations Allow?** *Transportation.* 2004; 31: 409-427.
- Levine J. **Zoned Out: Regulations, Markets and Choices in Transportation and Metropolitan Land-Use.** Washington, DC: Resources for the Future; 2006.
- Leyden K. **Social Capital and the Built Environment: The Importance of Walkable Neighborhoods.** *American Journal of Public Health.* 2003; 93 (9): 1546-1551.
- Lund, H. **Pedestrian Environments and Sense of Community.** *Journal of Planning Education and Research.* 2002; 21 (3): 301-312.
- Lynott J, et al. **Planning Complete Streets for an Aging America.** AARP Public Policy Institute. May 2009.
- Macpherson A, Roberts I, Pless IB. **Children's Exposure to Traffic and Pedestrian Injuries.** *American Journal of Public Health.* 1998; 88 (12): 1840-1843.
- McCormack GR, Shiell A. **In Search of Causality: A Systematic Review of the Relationship Between the Built Environment and Physical Activity Among Adults.** *International Journal of Behavioral Nutrition and Physical Activity.* 2011; 8 (125).
- Mendes de Leon C, et al. **Neighborhood Social Cohesion and Disorder in Relation to Walking in Community-Dwelling Older Adults: A Multi-Level Analysis.** *Journal of Aging & Health.* 2009; 21 (1): 155-171.
- Morrison D, Thomson H, Petticrew M. **Evaluation of the Health Effects of a Neighbourhood Traffic Calming Scheme.** *Journal of Epidemiology and Community Health.* 2004; 58: 837-840.
- Nasar J. **Does Neotraditional Development Build Community?** *Journal of Planning Research and Education.* 2003; 23 (1): 58-68.
- National Highway Traffic Safety Administration. **Traffic Safety Facts: 2013 Data – Pedestrians.** U.S. Department of Transportation. February 2015.
- Oakes JM, Forsyth A, Schmitz K. **The Effects of Neighborhood Density and Street Connectivity on Walking Behavior: the Twin Cities Walking Study.** *Epidemiologic Perspectives & Innovations.* 2007; 4 (16).
- Physical Activity Guidelines Advisory Committee. **2008 Physical Activity Guidelines for Americans.** U.S. Department of Health and Human Services. 2008.
- Pucher J, Dijkstra L. **Promoting Safe Walking and Cycling to Improve Public Health: Lessons from the Netherlands and Germany.** *American Journal of Public Health.* 2003; 93 (9): 1509-1516.
- Ragland D, et al. **Transportation and Health: Policy Interventions for Safer, Healthier People and Communities.** *Partnership for Prevention & Safe Transportation Research and Education Center.*
- Richards DC. **Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants.** *Department of Transport: London.* September 2010.
- Retting R, Ferguson S, McCartt A. **A Review of Evidence-Based Traffic Engineering Measures Designed to Reduce Pedestrian-Motor Vehicle Crashes.** *American Journal of Public Health.* 2003; 93 (9): 1456-1463.
- Roberts I, et al. **Effect of Environmental Factors on Risk of Injury of Child Pedestrians by Motor Vehicles: A Case-control Study.** *British Medical Journal.* 1995; 310: 91-94.
- Rogers S, Gardner K, Carlson C. **Social Capital and Walkability as Social Aspects of Sustainability.** *Sustainability.* 2013; 5: 3473-3483. July 2011.
- Saelens BE, Sallis JF, Frank LD. **Environmental Correlates of Walking and Cycling: Findings From the Transportation, Urban Design, and Planning Literature.** *Annals of Behavioral Medicine.* 2003; 25 (2): 80-91.
- Saelens BE, Handy S. **Built Environment Correlates of Walking: A Review.** *Medicine & Science in Sports & Exercies.* 2008; 40 (7 Suppl): S550-S566.

- Schieber R, Vegega M (Eds). **Reducing Childhood Pedestrian Injuries: Summary of a Multidisciplinary Conference.** *Injury Prevention.* 2002; 8 (1 Suppl): 1-10.
- Scott M, Maddox D. **Speeding in Residential Areas: 2nd Edition.** *U.S. Department of Justice – Community Oriented Policing Services.* January 2010.
- Shoup L, Ewing R. **The Economic Benefits of Open Space, Recreational Facilities and Walkable Community Design.** *Robert Wood Johnson Foundation – Active Living Research.* May 2010.
- Smith D, Appleyard D. **State of the Art: Residential Traffic Management.** *U.S. Department of Transportation – Federal Highway Administration.* December 1980.
- Speck J. **Walkable City: How Downtown Can Save America, One Step at a Time.** *New York, NY: Farrar, Straus & Giroux.* 2012. Print.
- Stevenson M, Jamrozik K, Spittle J. **A Case-Control Study of Traffic Risk Factors and Child Pedestrian Injury.** *International Journal of Epidemiology.* 1995; 24 (5): 957-964.
- Szreter S, Woolcock M. **Health by Association? Social Capital, Social Theory, and the Political Economy of Public Health.** *International Journal of Epidemiology.* 2004; 33: 650-667.
- Tefft B. **Impact Speed and a Pedestrian's Risk of Severe Injury or Death.** *AAA Foundation for Traffic Safety.* September 2011.
- Tester J, et al. **A Matched Case-Control Study Evaluating the Effectiveness of Speed Humps in Reducing Child Pedestrian Injuries.** *American Journal of Public Health.* 2004; 94 (4): 646-650.
- Transportation Research Board & Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use. **Does the Built Environment Influence Physical Activity? Examining the Evidence.** *Special Report 282.* 2005. Washington, DC: National Academy of Sciences.
- U.S. Department of Transportation – Federal Highway Administration, Institute of Transportation Engineers. **Issue Brief: Pedestrian Safety at Intersection.** April 2004.
- Wazana A, et al. **A Review of Risk Factors for Child Pedestrian Injuries: Are They Modifiable?** *Injury Prevention.* 1997; 3: 295-304.
- Whyte W. **The Social Life of Small Urban Spaces.** *New York, NY: Project for Public Spaces.* 2001. Print.
- Wood L, Frank L, Giles-Corti B. **Sense of Community and its Relationship with Walking and Neighborhood Design.** *Social Science & Medicine.* 2010; 70 (9): 1381-1390

Appendix F

Neighborhood Connections Decision Tree



Balancing different priorities when connecting an existing neighborhood and a new commercial or housing development is challenging and often controversial. This decision tree is intended to support policy-makers, city staff, and neighborhood residents in protecting health and safety outcomes in making these connectivity decisions.

This decision tree was created by the Douglas County Health Department in partnership with the City of Omaha and stakeholders from the Candlewood, Fire Ridge, and Royalwood Estates neighborhoods.

For more information, including the full Neighborhood Connections Health Impact Assessment, please visit www.douglascountyhealth.com/healthy-community/health-impact-assessments.

The creation of this decision tree was supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The opinions expressed are those of the Douglas County Health Department and do not necessarily reflect the views of the Health Impact Project, Robert Wood Johnson Foundation or The Pew Charitable Trusts.

