SAFE ROUTES TO SCHOOL
Black Hawk County Metropolitan Area

AECOM #111030 (60131813)

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January 2011

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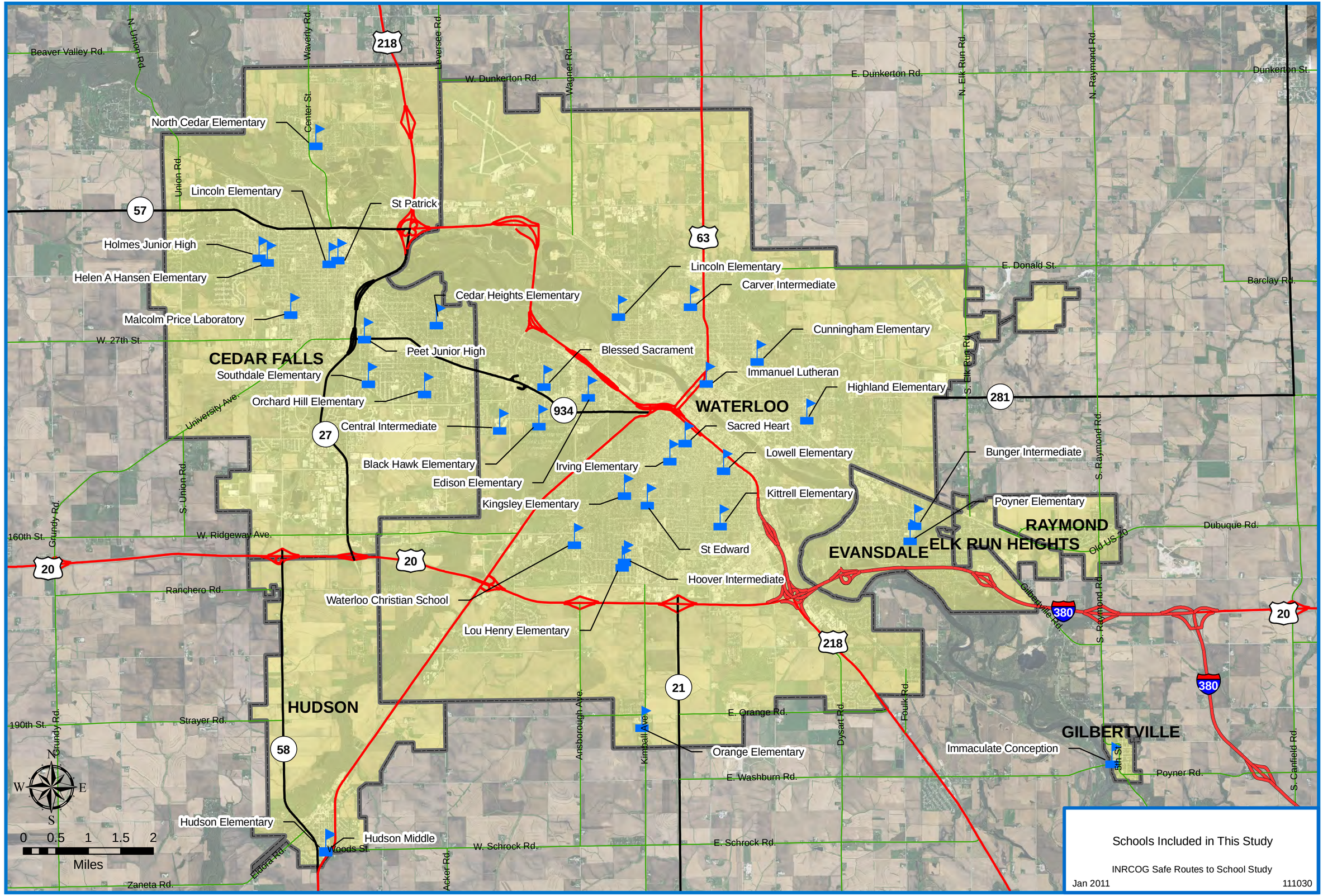
INTRODUCTION

I. INTRODUCTION

Background

The Iowa Northland Regional Council of Governments (INRCOG) was awarded a $138,000.00 grant from the Iowa DOT's Safe Routes to School Program in 2008 to complete a Safe Routes to School (SRTS) Study for the Black Hawk County Metropolitan Area. The areas to be studied include Waterloo Community Schools, Cedar Falls Community Schools, Hudson Community Schools and seven parochial schools. The study boundary is further described as one mile around each elementary school and two miles around each intermediate or junior high school. The schools included in this study are listed in the table below. A map of the study area is shown on the next page.

School District	Name of School
Waterloo	Black Hawk Elementary Bunger Intermediate Carver Intermediate Central Intermediate Cunningham Elementary Edison Elementary Highland Elementary Hoover Intermediate Irving Elementary Kingsley Elementary Kittrell Elementary Lincoln Elementary Lou Henry Elementary Lowell Elementary Orange Elementary Poyner Elementary
Cedar Falls	Cedar Heights Elementary Helen A. Hansen Elementary Holmes Junior High Lincoln Elementary Malcolm Price Laboratory North Cedar Elementary Orchard Hill Elementary Peet Junior High Southdale Elementary
Hudson	Hudson Elementary Hudson Middle School
Parochial	Blessed Sacrament Immaculate Conception Immanuel Lutheran Sacred Heart St. Edward's St. Patrick Waterloo Christian Academy


Beaver Valley Rd.
N. Union Rd.
Waverly Rd.
218
Leversee Rd.
W. Dunkerton Rd.
Wagner Rd.
E. Dunkerton Rd.
N. Elk Run Rd.
N. Raymond Rd.
Dunkerton St.
North Cedar Elementary
Center St.
Union Rd.
Lincoln Elementary
St Patrick
57
Holmes Junior High
Helen A Hansen Elementary
Malcolm Price Laboratory
W. 27th St.
Cedar Heights Elementary
Peet Junior High
CEDAR FALLS
Southdale Elementary
University Ave.
Orchard Hill Elementary
Central Intermediate
27
Black Hawk Elementary
Edison Elementary
Irving Elementary
Kingsley Elementary
St Edward
Hoover Intermediate
Waterloo Christian School
Lou Henry Elementary
63
Lincoln Elementary
Carver Intermediate
Blessed Sacrament
934
WATERLOO
Cunningham Elementary
Immanuel Lutheran
Highland Elementary
Sacred Heart
Lowell Elementary
Kittrell Elementary
E. Donald St.
Barclay Rd.
S. Elk Run Rd.
281
Bunger Intermediate
Poyner Elementary
RAYMOND
ELK RUN HEIGHTS
EVANSDALE
Dubuque Rd.
Old US 20
Gilbertville Rd.
380
S. Raymond Rd.
20
218
21
Grundy Rd.
S. Union Rd.
160th St.
W. Ridgeway Ave.
Ranchero Rd.
190th St.
Strayer Rd.
HUDSON
58
Ansborough Ave.
Kimball Ave.
E. Orange Rd.
Orange Elementary
Dysart Rd.
Foulk Rd.
E. Washburn Rd.
GILBERTVILLE
Immaculate Conception
5th St.
Poyner Rd.
S. Canfield Rd.
Hudson Elementary
Hudson Middle
Woods St.
Eldora Rd.
W. Schrock Rd.
E. Schrock Rd.
Acker Rd.
Zaneta Rd.
N
W
E
S
0 0.5 1 1.5 2
Miles
Schools Included in This Study
INRCOG Safe Routes to School Study
Jan 2011
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Study Purpose and Scope

The goal of the study is to identify needed safety improvements around the schools and to recommend and prioritize possible safety improvement projects, some of which may become the subject of future SRTS grant applications. By developing recommendations and prioritization, communities can then identify strategies to fund and complete safety improvement projects. This study also includes an education and encouragement component. After the recommendations have been implemented and portions of the education and encouragement campaign have begun, it is the hope that more parents and students will choose to walk or bike to school.

Study Methodology

The process that was utilized to develop this study is based on gathering information throughout the metropolitan area and receiving feedback from the school systems involved. The process was developed by INRCOG in conjunction with AECOM. The following steps were taken during the development of this study.

Collection of Existing Data and Research

This initial step involved the identification and collection of data that would be crucial in the proper identification of infrastructure improvements throughout the metro area. The method and type of data collected will be described in Section II of this report.

Advisory Committee

An Advisory Committee was created to assist in identifying and evaluating the infrastructure improvement alternatives around each school. Representatives were chosen to participate in meetings and to provide feedback based on the institution that they represent. Below is a table showing the list of the Advisory Committee Members with affiliation or representation designation.

Name	Title/Representing
Michelle Sweeney	Associate Engineer, City of Cedar Falls
Eric Thorson	City Engineer, City of Waterloo
Chad Deutsch	Mayor, City of Evansdale
Aric Schroeder	City Planner, City of Waterloo
Mohammad Elahi	Traffic Engineering, City of Waterloo
Cindi McDonald	Cedar Falls Community Schools
Marty Metcalf	Waterloo Community Schools
Michelle Temeyer	Waterloo Community Schools
Roark Horn	Superintendent, Hudson Community Schools
Mary Beckey Kelley	Cedar Valley Catholic Schools
Cathy Walz	Director of Education, Cedar Valley Catholic Schools
Lynn Kloberdanz	Black Hawk County Engineering Department
Craig Berte	Captain, Cedar Falls Police Department
Tim Pillack	Captain, Waterloo Police Department
Krista Rostad	Iowa Department of Transportation
Kevin Blanshan	INRCOG
Andrea White	INRCOG
Laura Jobst	INRCOG
Eileen Daley	Black Hawk County Health Department - ACHIEVE Initiative
Ross Bruno	Hellman & Associates
Brooke Beckner	Hellman & Associates
Mark Durbahn	AECOM

The Advisory Committee met throughout the planning process at the following times:

February 25, 2009: Initial meeting and project description.

March 25, 2009: Discussion of the data gathered to date. Discussed the type of issues that would be of concern near schools. Began gathering information of possible safety issues within all of the communities.

August 21, 2009: Presented the results of the parent surveys. Discussed the possible education and encouragement initiatives to implement at four different schools. Presented a list of engineering issues at each school.

Assessment of Adequacies and Deficiencies

Assessments were completed at each school within the study area which was mostly completed during school day start or end times. The assessment of the schools included pictures, identification of school crosswalks, pedestrian signal locations, identifying school crossing guard locations, drop-off and pick-up congestion issues, and interviews with adult crossing guards. The assessment phase also included trips through the communities to identify as many school crosswalk locations as possible. This allowed for the plotting of the routes that students are to take to and from school.

Principal Interviews

As part of the process to gather information, phone interviews were completed with many of the schools within the study.

Parent Survey Comments

An evaluation of the comments received in the Parent Surveys assisted in identifying issues pertaining to traffic safety and sidewalk infrastructure. Each school in the study includes a description of the comments received.

Development of Infrastructure Improvement Alternatives

Alternatives were developed at schools where needs were identified during the assessment and data gathering phases of the study. Not all the schools were found to have substantial enough issues to merit the development of alternatives. The discussion of these schools is limited to a description of the data that was gathered for that school.

Development of Recommendations and Cost Estimates

Each school where a safety improvement was identified, a recommendation was developed that was consistent with the Manual on Uniform Traffic Control Devices (MUTCD). Planning level cost estimates were developed for the recommendations.

Education and Encouragement Initiatives

An important aspect of the study was to develop an education and encouragement campaign within the involved school systems. The concept is to develop an initiative that encourages students to bike or walk to school with an educational component that includes safety awareness. A program is to be developed at one school within the school systems of Cedar Falls, Waterloo and Hudson. This model can then be duplicated within the school system at other schools that have an interest.

DATA COLLECTION

II. DATA COLLECTION

Data collection was a major aspect of this study. Numerous sources of information were brought together to develop a thorough understanding of the safety issues affecting the schools in the metro area. This section will describe the data that was collected, the method of data collection and, if not found in this section, a description of where the data can be found within the report.

Mapping Data and Graphic Information System (GIS)

Much of the data that was gathered for this study was input into ArcView GIS software. Maps were created that displayed the information that was collected for each school in the study area. All of the school maps are shown in the Evaluations and Recommendations Section of this report. Following is a list of the data that was collected and placed in the ArcView GIS database:

Existing Sidewalk Network

The existing sidewalk network was created by plotting lines over the existing sidewalks using Black Hawk County Aerial Mapping dated April of 2007. The existing sidewalk information is plotted in yellow on the school maps.

School Locations and Boundaries

School locations and boundaries were input based on data provided by the school districts. This data has been adjusted to show recent adjustments to boundaries completed in the spring of 2010. Also, school locations have changed and are up to date as of the spring of 2010. School areas are shown in contrasting color with solid black lines indicating the boundary.

Black Hawk County Aerial

The aerial displayed as background is from Black Hawk County and was flown in April of 2007.

Traffic Counts

The traffic data is from the 2009 Iowa DOT traffic counts and was obtained from the Iowa DOT.

Signal and School Crosswalk Locations

Signal and school crosswalk locations were obtained through site visits and local knowledge of the area. Not all of the signals in the Metropolitan Area were identified, but most of the key traffic signals have been labeled on the maps. The existing school crosswalks are the crosswalks that are signed using the school crosswalk sign assembly.

Number of Students Within Planning Areas

The Waterloo School System has developed planning areas throughout their school system. These planning areas can generate data that can be displayed for each planning area. These planning areas were generated to assist the Waterloo School System in completing changes to their elementary school boundaries. The information that was helpful for this study was the number of kindergarten through 5th grade students that reside within each planning area. The data displayed is based on 2009 enrollment data. This information allowed planners to identify high population areas that are close to elementary schools and are not being served by the existing sidewalk network. This data is not available for the Cedar Falls or Hudson Schools.

Crossing Guard Locations

Crossing guard locations are identified on the maps. The maps do not designate whether the crossing guard is an adult or student, but this information may be found in the school evaluations or in the notes on principal interviews.

Student and Parent Surveys

Student and parent surveys were conducted at all of the schools within the study with varying magnitudes of response. Some schools had a high response rate while others did not respond at all. Following is a description of the surveys that were conducted and summaries of the information that was gathered.

Student Surveys

During the fall of 2008, Safe Routes to School Students Arrival and Departure Tally Sheets were distributed to all of the schools within the study area. Each teacher was to complete the tally sheet during a warm weather week by asking the students on Tuesday, Wednesday and Thursday how they got to school and how they plan to get home. Not all of the schools participated. The results of the student survey are shown in the Appendix along with a copy of the blank tally sheet distributed to the students.

Parent Surveys

During the spring of 2009, parent surveys were conducted in the Waterloo, Cedar Falls and Hudson School Systems. The survey that was distributed is shown in the Appendix. Various methods were used to distribute the surveys. Most surveys were distributed to students and taken home for the parents to fill out and return. Other surveys were distributed at conferences. The response rate varied from 0% to a high of 42%. The results of the survey were compiled by the National Center for Safe Routes to School and are shown in the Appendix. Some of the observations from the parent surveys are described below:

- The information from the parent surveys indicate that there is a higher percentage of kids walking home from school than walking to school. This is due to parents giving the kids rides in the morning but not in the afternoon.

- Some schools have a high percentage of kids utilizing the family vehicle and a high percentage of kids living closer than 1/2 mile to school. These schools may be good candidates for education and encouragement initiatives.

- Some schools have very high rates of kids being bused to school. Example is Orange Elementary School.

- The comments from the parents within the surveys identified numerous perceived safety issues, reasons why they would not allow their kids to walk or bike to school, and other issues regarding safe routes to school. This information was used to assist in developing a list of engineering issues for each school.

Principal Interviews

Part of the data gathering portion of this study was to contact the school principals of the schools in the study area to determine what some of the key issues are in regard to safe routes to school and pedestrian safety. School principals were contacted by phone during the fall of 2009 and the spring of 2010. The principals were asked questions similar to the ones described below:

- What are some of the pedestrian safety concerns that parents have expressed to you or you know of regarding your school neighborhood?

- Where do you have student or adult crossing guards located?
- What pedestrian or bicycle safety programs do you have at your school?
- Is walking or biking promoted at your school?

The notes taken during the principal interviews are shown in the Appendix.

Obesity Data

Obesity data was gathered from the Black Hawk County Health Department which collected that data for the Waterloo School District in the 2007-2008 school year. The data shows the percentage of the students who are obese for each elementary school in Waterloo. This data can assist in prioritizing education and encouragement initiatives and infrastructure improvements. A healthy lifestyle includes increased levels of physical activity. By encouraging students to bike or walk to school, it increases the health and possibly lower the rates of obesity. The obesity data for the Waterloo Schools is shown in the table below.

OBESITY DATA		
School	**Sample Size**	**% Obese**
Black Hawk Elementary	172	23.3
Cunningham Elementary	238	29.0
Edison Elementary	101	18.8
Highland Elementary	234	31.6
Irving Elementary	89	18.0
Kingsley Elementary	218	15.1
Kittrell Elementary	352	17.6
Lincoln Elementary	220	26.4
Lou Henry Elementary	179	15.1
Lowell Elementary	263	25.1
Orange Elementary	161	16.8
Poyner Elementary	266	22.9

EVALUATIONS AND RECOMMENDATIONS

III. EVALUATIONS AND RECOMMENDATIONS

A major part of the study was to evaluate each school within the metropolitan area to determine the deficiencies in regard to pedestrian safety and infrastructure. The evaluation included a review of the gathered data such as the student and parent surveys, the obesity data, the data displayed on the maps and comments received from the Advisory Committee. After all of the initial data was reviewed, a list of engineering issues was developed as a starting point of the evaluation process. This list was presented to the Advisory Committee for comments and additions or deletions. This initial list of engineering issues is shown in the Appendix.

Using the initial list of engineering issues, a field review of all of the schools was completed to evaluate the existing sidewalk network, school crosswalk locations, traffic control at intersections and locations of general signs such as “No Parking”. Most of the evaluations were done during dismissal time of the school. This allowed observation of the crossing guard locations, student pick-up congestion, walking patterns of students and traffic impact while students were leaving the school grounds.

A descriptive evaluation was completed for each school that included recommendations suitable for future Safe Routes to School grant applications. Each school write-up includes a description of the existing conditions and a listing of issues that affects pedestrian and bicycle safety.

All of the maps for each school are included in this section at the end of each school’s write-up. The data that was previously described is indicated on these maps. Also included are direction arrows of the routes that students should take to get to school. These routes utilize as much sidewalk as possible, designated school crosswalks and traffic signals. These arrows also help to identify gaps in existing sidewalk. Also displayed are the recommended sidewalk improvements and proposed school crosswalk locations.

Intermediate, Middle or Junior High School maps are included as well but at a larger scale. Much of the detail can be seen more clearly on the elementary maps. These school’s locations are also displayed on the elementary maps. The following key helps identify which map that the Intermediate, Middle or Junior High Schools are displayed.

Bunger Intermediate School:	See Poyner Elementary School Map
Central Intermediate School:	See Black Hawk Elementary School Map
Hoover Intermediate School:	See Lou Henry Elementary School Map
Carver Intermediate School:	See Cunningham Elementary School Map
Holmes Junior High School:	See Helen A. Hansen Elementary School Map
Peet Junior High School:	See Cedar Heights or Southdale Elementary School Map

WATERLOO SCHOOL DISTRICT

BLACK HAWK ELEMENTARY SCHOOL

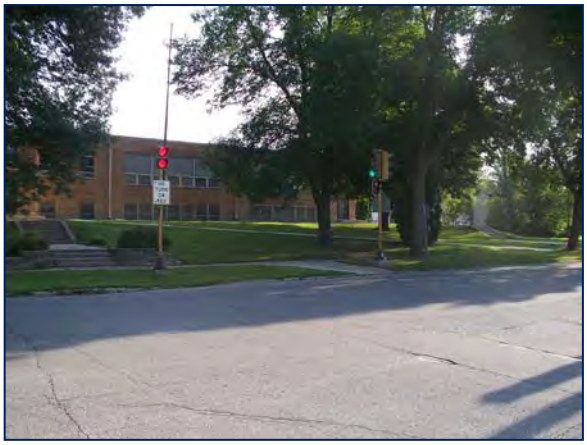
Existing Conditions

Black Hawk Elementary School is located on Downing Avenue in an established neighborhood. Black Hawk Elementary is in the process of being reconstructed on the same site but oriented so the entrance is off of Sheldon Street. Black Hawk Elementary School and Edison Elementary are combining into one Elementary school. The new school boundary will include areas north of University Avenue and east of Ansborough Avenue. It is anticipated that students north of University Avenue and east of Ansborough Avenue will be bused to the new Black Hawk Elementary School.

The parent survey did not have any comments regarding specific traffic issues or lack of sidewalk.

Downing Avenue

Downing Avenue's average daily traffic from the 2009 Iowa DOT traffic data is 3,210. This is the busiest road in the Black Hawk Elementary immediate vicinity. There is an existing signalized school crossing at the intersection of Downing Avenue and Wren Road. This older type of signal configuration is no longer supported by MUTCD. The existing speed limit on Downing Avenue is 25 mph so a school speed zone is not appropriate at this location.



The existing pedestrian signal configuration at Downing Avenue and Wren Road is no longer supported by MUTCD. There is STOP control for northbound Wren Road traffic with a signalized NO TURN ON RED sign. This may be confusing to motorists.

Existing Sidewalk Network

There is existing sidewalk along both sides of Downing Avenue and Wren Road. There is also a sidewalk along the east side of Sheldon Street with a school crosswalk on Sager Avenue. Based on the new school orientation, new sidewalk may be needed along the south side of Sager Avenue from Scott Avenue to Linbud Lane. See the map to see the existing sidewalk network for Black Hawk Elementary School.

Recommendations

It is recommended that the new school configuration be re-evaluated for traffic and pedestrian flow. At a minimum, additional sidewalk will be needed along Sager Avenue to provide a safer walking environment for over 50 students that may use the proposed sidewalk. Some of this proposed sidewalk may be installed with the construction of the new school.

Also, a new traffic signal may be warranted along Downing Avenue. The existing pedestrian signal is no longer supported by MUTCD. A new signal location should be explored as well. A possible location for a new traffic signal is at the Sheldon Street and Downing Avenue intersection. The new school entrance will be off of Sheldon Street. A new traffic signal installation is approximately $100,000.00.

Black Hawk Elementary Attendance Area

Black Hawk Elementary School

Orchard Hill Elementary Attendance Area

Edison Elementary Attendance Area

Kingsley Elementary Attendance Area

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 2009 ADT

45 Number of K-5 Students in 2009

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Existing School Crosswalk

Proposed School Crosswalk

Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Black Hawk Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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CARVER INTERMEDIATE SCHOOL

Existing Conditions

Carver Intermediate School was recently constructed on the same site as Logan Intermediate but oriented differently. The new school is constructed on the west side of U.S. Highway 63 and its main entrance is opposite Esther Street.

Principal Brad Schweppe had some concerns with the safety of pedestrian traffic with the new Carver Intermediate School. Many students that walk or bike to school exit along the drive onto U.S. Highway 63. A sidewalk is provided along the north side of this drive and many of the students head south. He commented that students cut across the drive which is full of bus and vehicular traffic waiting to exit onto U.S. Highway 63.

Comments from the parent survey include the following:

- Need sidewalks on Louise Street and Columbia Street. New bike trail on West Donald is awesome! Love it!

- West Donald and Burton roads are not safe for walking.

During a site visit conducted on November 5, 2009, similar behavior was observed as described by the principal. Many student pedestrians want to exit along U.S. Highway 63 heading south. Instead of cutting in front of vehicles, students go between or behind the vehicles.

Students walking behind vehicles exiting onto U.S. Highway 63.

Vehicles waiting to exit onto U.S. Highway 63. Right-turn lane is not designed properly to provide adequate room for two exit lanes.

It was also observed that there was not adequate sidewalk on Louise Street. Some students exit Carver Intermediate and head north along the school drive to Louise Street. Louise Street does not include sidewalks on either side of the road.

Students walk in the street along Louise Street due to a lack of sidewalk.

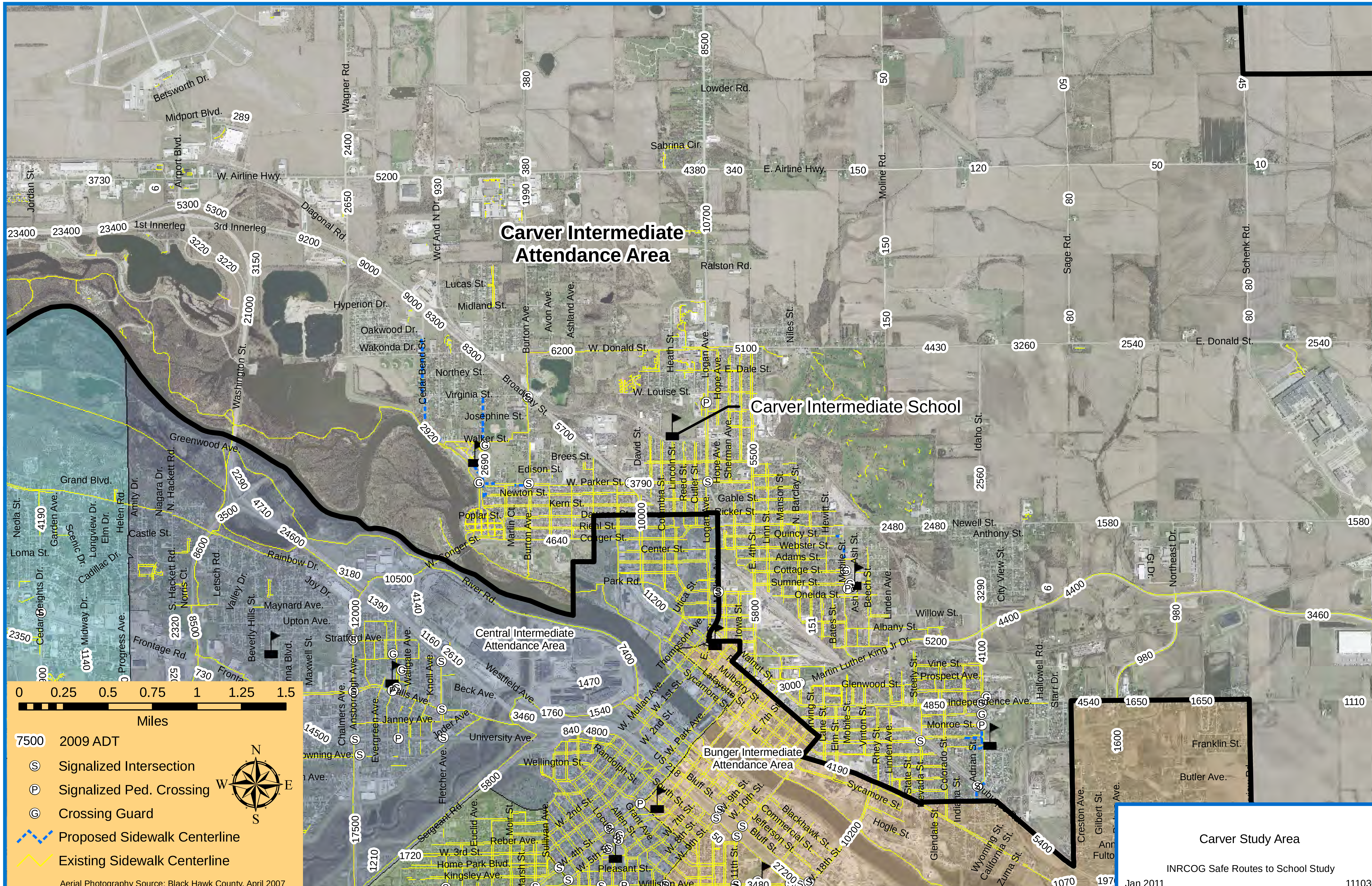
Alternatives

Entrance Road off of U.S. Highway 63

Signals will be installed as part of the U.S. Highway 63 project. It is anticipated that the signalization will assist in the long exit line of vehicles. Signalization will also provide improved safety for pedestrians giving them a protected crossing of the entrance road. The new U.S. Highway 63 will include a 10-foot wide recreational trail on the school side of the road providing more separation between the sidewalk and the roadway.

Additional Sidewalk on Louise Street

An alternative is to provide additional sidewalk along the south side of Louise Street from U.S. Highway 63 to Columbia Street. This alternative would provide additional sidewalk in a neighborhood that lacks an extensive system. This alternative was not selected for further consideration due to the relatively low traffic volumes along Louise Street.



Carver Intermediate Attendance Area
Carver Intermediate School
Central Intermediate Attendance Area
Bunger Intermediate Attendance Area
0 0.25 0.5 0.75 1 1.25 1.5
Miles
7500 2009 ADT
Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Proposed Sidewalk Centerline
Existing Sidewalk Centerline
Aerial Photography Source: Black Hawk County, April 2007
N
E
S
W
Carver Study Area
INRCOG Safe Routes to School Study
Jan 2011
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Betsworth Dr.
Midport Blvd.
Airport Blvd.
W. Airline Hwy.
E. Airline Hwy.
Diagonal Rd.
1st Innerleg
3rd Innerleg
Wagner Rd.
Lowder Rd.
Sabrina Cir.
Ralston Rd.
Moline Rd.
Sage Rd.
Schenk Rd.
Lucas St.
Midland St.
Hyperion Dr.
Oakwood Dr.
Wakonda Dr.
Northey St.
Virginia St.
Josephine St.
Walker St.
Broadway St.
W. Donald St.
E. Donald St.
E. Dale St.
W. Louise St.
Greenwood Ave.
Washington St.
Grand Blvd.
Rainbow Dr.
River Rd.
W. Conger St.
Newell St.
Anthony St.
Willow St.
Albany St.
Martin Luther King Jr. Dr.
Glenwood St.
Independence Ave.
Monroe St.
Franklin St.
Butler Ave.
University Ave.
Westfield Ave.
Sycamore St.
Hogle St.
Pleasant St.
Williston Ave.
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CENTRAL INTERMEDIATE SCHOOL

Existing Conditions

Central Intermediate School is located on the west side of Katoski Drive at the end of Downing Avenue. Most of the student pedestrians exit the school grounds at the Katoski Drive/Downing Avenue intersection. While completing a site visit, it was observed that some students do not follow the pedestrian signals. They choose not to wait and cross inadvertently.

There were no parent comments received from the parent survey.

Traffic signal at Katoski Drive and Downing Avenue intersection. This intersection is the main entrance to the school and the location most pedestrians use to exit the school grounds. There are no pedestrian signal heads on the east leg of the intersection.

Existing Sidewalk Network

As stated above, the main pedestrian and vehicular entrance to Central Intermediate School is at the Katoski Drive/Downing Avenue intersection. There is sidewalk along both sides of Downing Avenue and a recreational trail along the west side of Katoski Drive. There are adequate sidewalk facilities for Central Intermediate School.

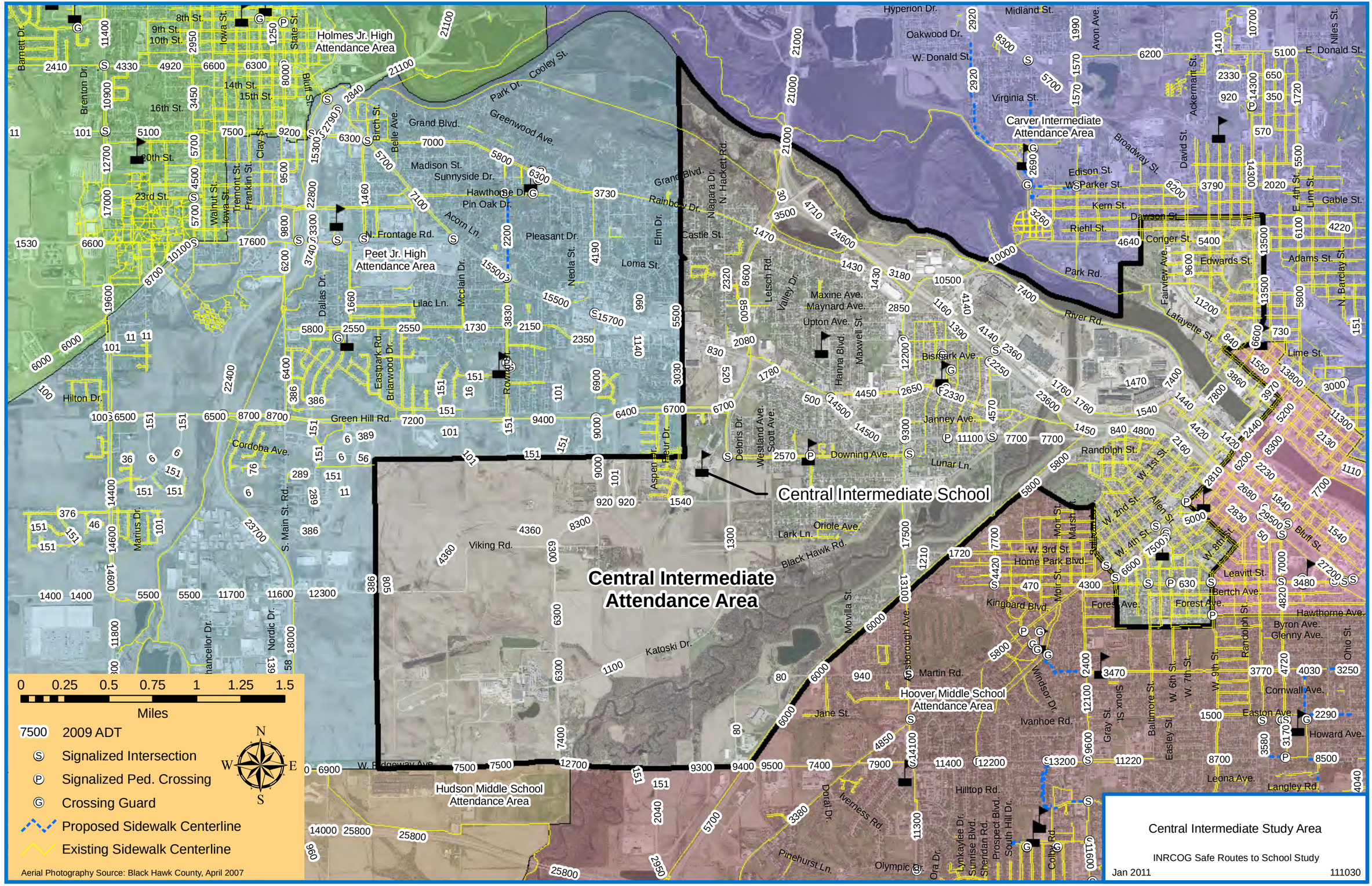
Drop-Off and Pick-Up Zone

Central Intermediate has adequate drop-off and pick-up zone locations. There is a very long curb and sidewalk area for numerous cars and buses to park and drop-off and pick-up students.

School buses and cars utilize the long length of curb in front of Central Intermediate to drop-off and pick-up students.

Alternatives

To provide proper utilization of the existing pedestrian traffic signals at the corner of Katoski Drive/Downing Avenue intersection, adult supervision is needed to enforce proper crossing activity. This could be in the form of a teacher or an adult crossing guard. It is also recommended that signal heads be provided along the east leg of the intersection to match the marked school crosswalk.



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CUNNINGHAM ELEMENTARY SCHOOL

Existing Conditions

Cunningham Elementary School is in an established neighborhood located north and east of downtown Waterloo. The school is located in an area with smaller homes with high-density housing. The school was recently constructed within the last six years at the current location.

The following information was gathered during a phone conversation with Principal Liz Crowley. She reported that there are crossing guards at the intersections of Cottage Street and Mobile Street and on Sumner Street and Mobile Street. She would like to see more sidewalk on Mobile Street. About 1/2 the student population rides the bus to and from school.

A comment from the parent survey that related to traffic safety and sidewalk infrastructure is as follows:

- I wish there were crossing guards at Sumner and Beach Streets.

School Crossing Locations

Currently there are multiple school crossings at the Sumner Street and Mobile Street intersection. These school crossings are located at the north and south legs of Mobile Street which have stop control and across Sumner Street at a pedestrian signal. A crossing guard is located here in the morning and afternoon.

Even though there is a crossing guard at Cottage Street and Mobile Street, a school crossing is not marked across Mobile Street.

Looking south toward the Sumner Street and Mobile Street intersection. The MUTCD states that a school crossing assembly shall not be installed on approaches controlled by a STOP sign.

The pedestrian signal on Sumner Street along the east side of Mobile Street. Mobile Street has stop control with Sumner Street being the through street.

The following observations were made during site visits and by analyzing the school map.

Mobile Street Sidewalk

The 2009 Iowa DOT traffic numbers for Mobile Street show that the average daily traffic ranges between 970 and 1090 vehicles per day. There is no sidewalk on Mobile Street north of Adams Street. The side streets that connect to Mobile Street also lack sidewalk. As shown in the Cunningham Elementary map, Adams Street, Webster Street and Quincy Street have sidewalk gaps near Mobile Street.

The following comments were received from the parent survey:

- Dogs running wild are another reason affecting decision.
- I wish there were crossing guards at Sumner and Beach Streets.

Future Development

A future housing development is planned in the southeast quadrant of the Newell Street and Mobile Street intersection. This multi-unit housing development includes over 40 units of town homes and will increase the student population close to Cunningham Elementary School. Currently there are no sidewalks on Mobile Street or Ash Street that connect to this development.

Improvement Alternatives and Recommendations

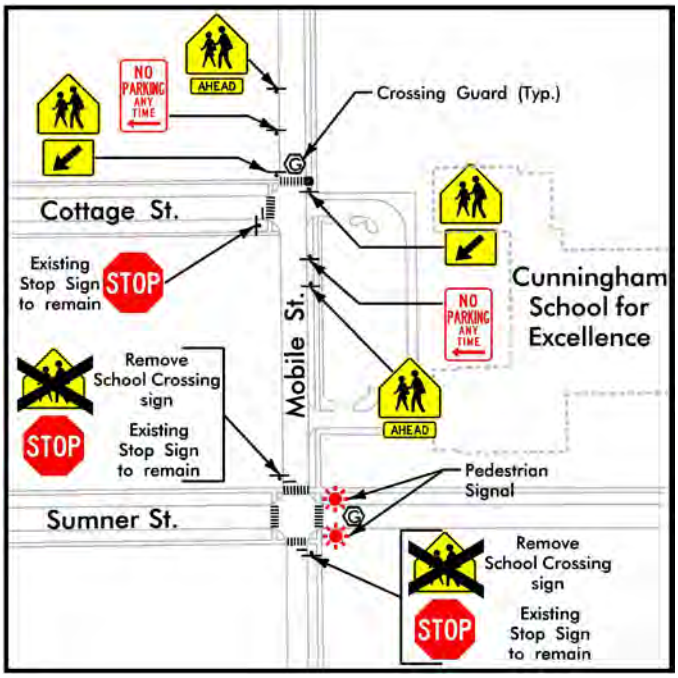
Alternatives and recommendations have been developed for Cunningham Elementary School. These alternatives and recommendations are described as follows:

Sidewalk Infill

It is recommended that sidewalk be constructed on the east side of Mobile Street from Adams Street to Webster Street. This 320-foot sidewalk will serve as a connection to the future development which will be located on the east side of Mobile Street from Webster Street to Newell Street. This sidewalk will connect Cunningham Elementary with the future development which includes over 40 new town homes.

School Crossings

It is recommended that the school crossings be clarified and improved at the intersections of Mobile Street/Cottage Street and Sumner Street/Mobile Street. Improvements include removing the existing school crossing signs attached to the STOP signs on Mobile Street at the intersection with Sumner Street. MUTCD states that school crossing signs shall not be installed on approaches controlled by a STOP sign. Improvements also include signing and marking a school crossing on Mobile Street just north of Cottage Street. A new pedestrian curb ramp is needed on the east side of Mobile Street at this crossing. No parking signs 75 feet north and south are recommended to increase visibility of this school crossing. Below is a figure showing the proposed improvements at these intersections.



School crossing improvements along Mobile Street in front of Cunningham Elementary.

It is also recommended that a new school crossing be installed on Newell Street on the east side of Mobile Street. This proposed crossing will provide a designated crossing for students attending Cunningham Elementary that live north of Newell Street. There are other routes that students north of Newell Street may choose to go, but this proposed crossing would be the only designated school

crossing on Newell Street in this area. There are over 100 elementary-aged school children that are less than a mile from Cunningham Elementary and live north of Newell Street.

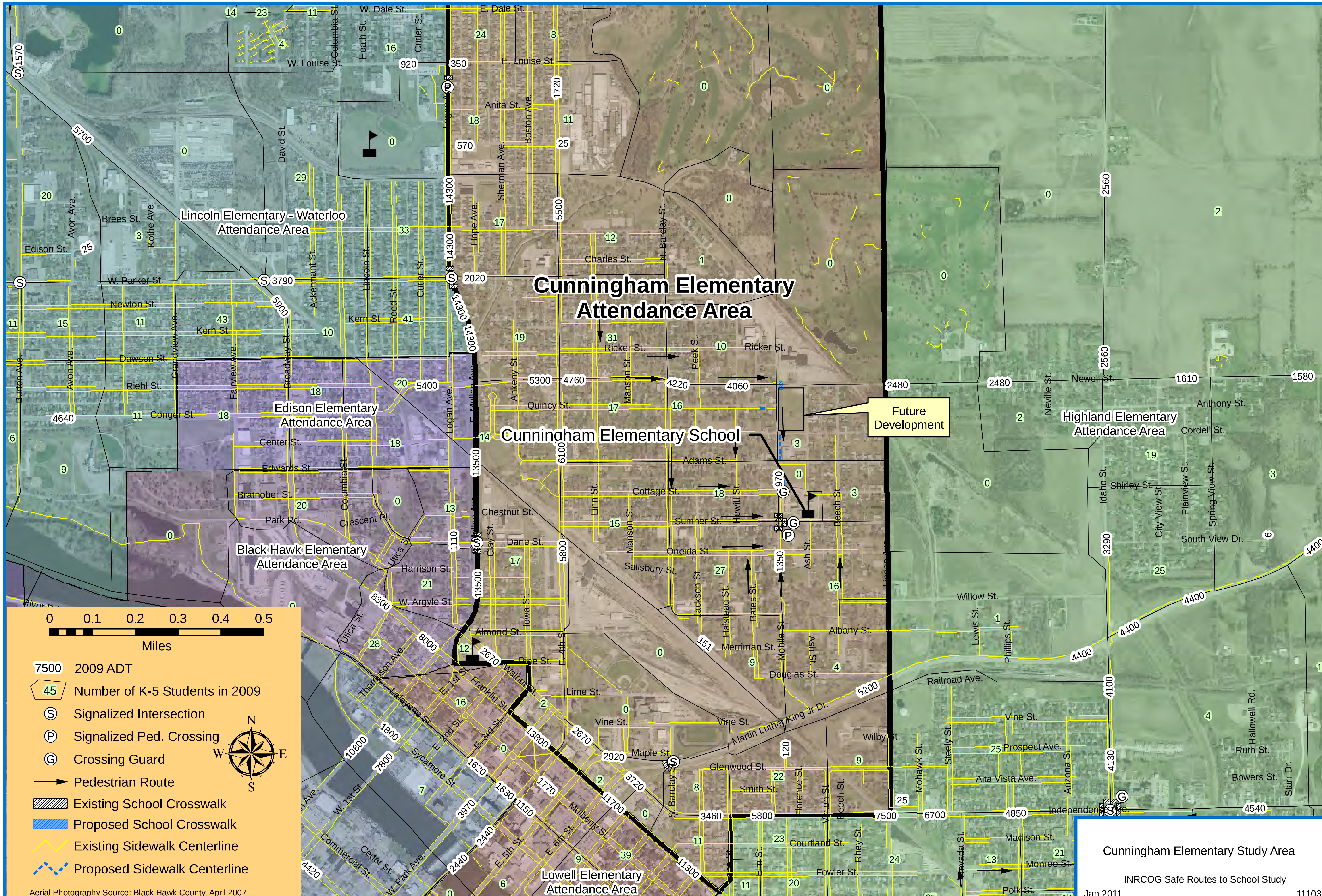
See the Cunningham Elementary map for the proposed details of the sidewalk infill and the school crossing locations.

Below is the cost estimate for the recommended improvements.

CUNNINGHAM ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Sidewalk Infill on Mobile Street from Adams Street to Weber Street, New School Crossing on Mobile Street at Cottage Street, School Crossing Improvements at Sumner Street and Mobile Street and New School Crossing on Newell Street at Mobile Street.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	91.0	$35.00	$3,185.00
2	Posts	LF	140.0	$20.00	$2,800.00
3	Pavement Markings	LS	1.0	$5,500.00	$5,500.00
4	PCC Sidewalk	SY	180.0	$55.00	$9,900.00
5	Earthwork and Subgrade Preparation	LF	320.0	$4.00	$1,280.00
6	Driveway Modification	Each	2.0	$1,500.0	$3,000.00
7	Topsoil	CY	90.0	$20.00	$1,800.00
8	Seeding and Fertilizing	Acre	0.1	$12,000.00	$1,200.00
9	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$2,900.00	$2,900.00
10	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$2,900.00	$2,900.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$34,465.00**



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EDISON ELEMENTARY SCHOOL

Existing Conditions

Edison Elementary is an older school in an established neighborhood west of downtown Waterloo. Edison is being combined with Black Hawk Elementary, and a new school is being constructed at the Black Hawk Elementary School grounds.

The following information was gathered during a phone conversation with Melisa Steggall, Edison Elementary School Principal:

- Student crossing guards with adult supervision are located at the Magnolia Parkway and Falls Avenue intersection and the Magnolia Parkway and Bismark Avenue intersection.
- Buses and cars drop-off and pick-up at the same location along Magnolia Parkway. Kids dart in between buses to get to parents' cars on the other side of Magnolia Parkway.
- Most staff is outside after school to assist.

The following are selected comments that relate to traffic safety and pedestrian infrastructure that were received from the parent surveys:

- It is not safe for children to cross 4-lane roads, regardless of the speed of traffic.
- People are not watching out for safety of children -- it is not safe for them. It is not safe for kids to walk on Rock Island to school especially at the corner by the church. I have seen three accidents in the two years I have lived here. So far no child has been hit. Also, people drive too fast at the corner of Knoll and Bismark.
- Regarding speed and amount of traffic, Ansborough and Upton are not safe. There is a lack of sidewalks.
- They would have to cross two busy streets -- Ansborough and Falls.
- Ansborough is a very busy intersection for any child to cross.
- The walking light at the intersection of Fletcher and Falls turns off before you get half way through it. It is not safe for kids to walk by themselves through this intersection.

The following information was gathered during a site visit to the school on the afternoon of October 27, 2009.

Drop-Off and Pick-Up Locations

Magnolia Parkway is a very busy street during drop-off and pick-up times. The bus drop-off and pick-up location is along the west side of Magnolia Parkway. The parents drop-off and pick-up students north and south of the bus area along the west side of Magnolia Parkway. There is no parking along the east side of the street. Many parents park on both sides of Rock Island Avenue with head-in parking on the south side of the street. Parents and students must cross Magnolia Parkway to get to their cars on Rock Island Avenue.

School bus pick-up zone along the west side of Magnolia Parkway.

Parents parking along both sides of Rock Island Avenue. Head-in parking along the south side creates un-safe backing out of stalls with numerous pedestrians in the vicinity.

Crossing Guards, Pedestrian Signal and School Crossing Locations

There are numerous street crossing safety measures around Edison Elementary School. There are parent crossing guards at the intersection of Magnolia Parkway and Rock Island Avenue, student crossing guards at Bismark Avenue and Magnolia Parkway intersection, and student crossing guards at the pedestrian signal just south of the school on Falls Avenue. There are designated school crossing locations at all four legs of the Hartman Avenue and Magnolia Parkway intersection and at Evergreen Avenue and Bismark Avenue. All of these features are located on the school map.

Adult crossing guard at the intersection of Magnolia Parkway and Hartman Avenue.

Signalized pedestrian crossing at Magnolia Parkway and Falls Avenue.

Improvement Alternatives

Alternatives for infrastructure improvements that were developed at this school include the following:

- Possibly relocating the bus drop-off and pick-up zone to the south side of Bismark Avenue along the north side of the school. This would provide additional room for a parent drop-off and pick-up zone.
- Reconfigure the parking along Rock Island Avenue to eliminate the head-in parking along the south side.
- Provide an updated traffic signal on Magnolia Parkway and Falls Avenue.

Recommendations are not made for Edison due to the closure of the school in 2011.

Edison Elementary Attendance Area

Lincoln Elementary - Waterloo Attendance Area

Edison Elementary Attendance Area

Black Hawk Elementary Attendance Area

Edison Elementary School

Irving Elementary Attendance Area

Black Hawk Elementary Attendance Area

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 ADT

45 Number of K-5 Students in 2009

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Pedestrian Route

Existing School Crosswalk

Proposed School Crosswalk

Sidewalk Centerline

Aerial Photography Source: Black Hawk County, April 2007

Edison Elementary Study Area

INRCOG Safe Routes to School Study

July 2010 111030

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HIGHLAND ELEMENTARY SCHOOL

Existing Conditions

Highland Elementary School was recently constructed on the east side of Idaho Street between French Street and Monroe Street. The school was previously named McKinstry Elementary and moved from its previous location 750 feet south along Idaho Street. The new school opened January of 2010. Much of the data regarding Highland Elementary was gathered prior to the new school opening in 2010.

The following information was gathered during a phone conversation with Mary Jo Wagner, principal of Highland Elementary School. She commented that additional sidewalk is needed down Independence Avenue. She sees students walking down the shoulder. She also commented that there is a lack of sidewalk in the area which discourages some students from walking to school.

Some selected comments from the parent surveys are as follows:

- We live on a highway and there is no sidewalk on the road, also trains are sometimes on the tracks.

- No sidewalks or bike trail along portion of Independence Avenue.

A site visit was completed on October 27, 2009, before the opening of the new school. The main issue that was identified during the site visit was some sidewalk lacking at key locations near the new school. These areas are further described below.

Lack of Sidewalk in Key Locations

Key sidewalk segments are missing on French Street, Polk Street, and along Idaho Street. Close to the intersection with Idaho Street both French Street, and Polk Street have sidewalk gaps. There is no sidewalk on Idaho Street along the west side from Dubuque Street to Monroe Street.

There is no sidewalk in front of the new school along the west side of Idaho Street.

Polk Street has sidewalk along both sides of the street from Dubuque Road to Arizona Street, but is lacking sidewalk on the last block closest to Highland Elementary School.

Existing School Crosswalk on Dubuque Road and Lack of Sidewalk on Adrian Street

The existing school crosswalk on Dubuque Road does not have adequate sidewalk through the intersection. In its current configuration, it is difficult for pedestrians to cross the railroad and Dubuque Street without getting into the street. Also, there is a lack of sidewalk on the south side of the tracks along the east side of Adrian Street.

The existing Dubuque Road school crosswalk at Adrian Street/Idaho Street intersection does not have sidewalk crossing the railroad tracks or up to the intersection. The traffic signals do not have sidewalk to access the push-button actuators.

Recommendations

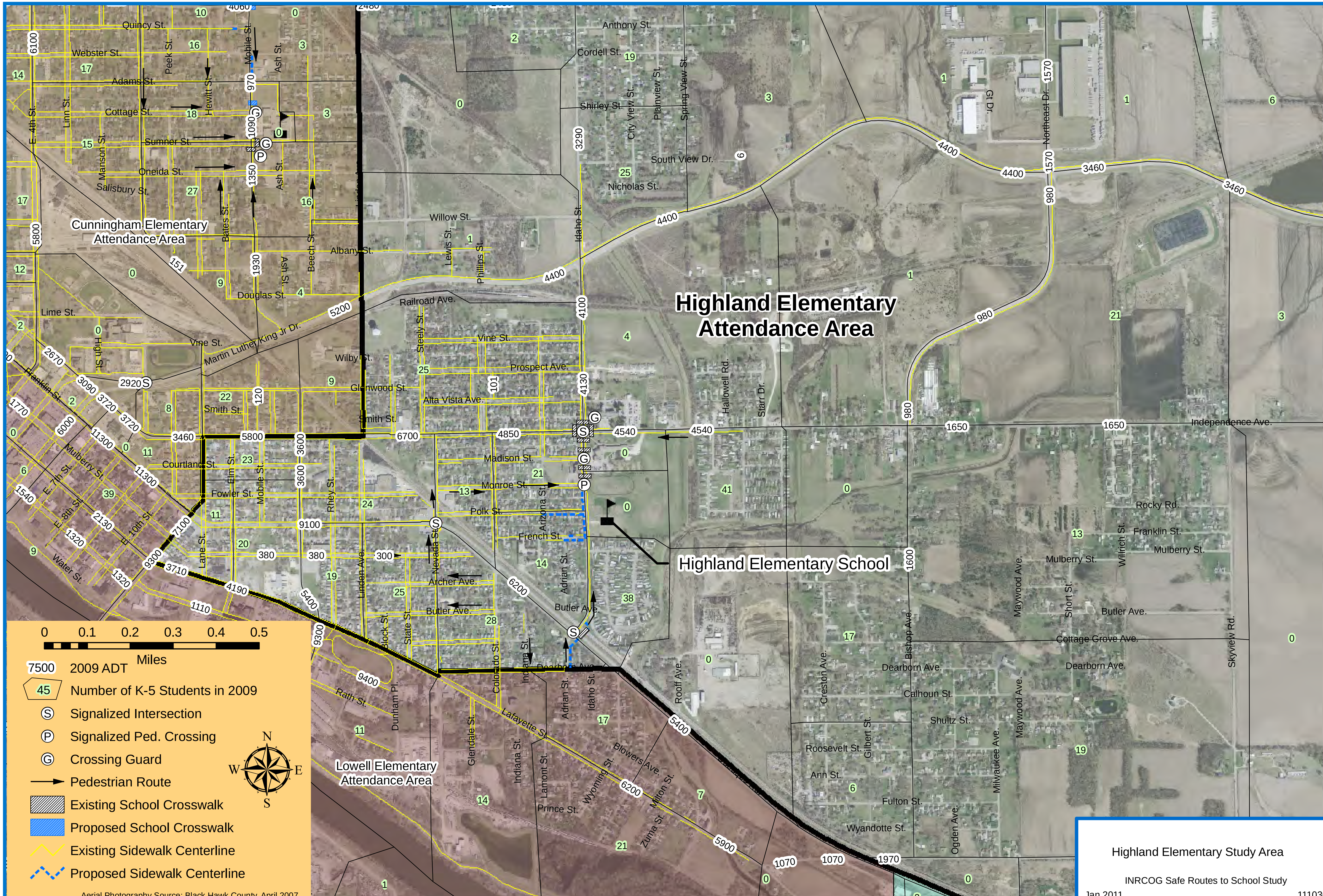
It is recommended to construct additional sidewalk on the south side of Polk Street from Arizona Street to Idaho Street, on the south side of French Street from Adrian Street to Idaho Street, a 70-foot gap on the north side of French Street near Adrian Street, and on the west side of Idaho Street from French Street to Monroe Street. See the Highland Elementary map for the locations of the recommended sidewalk infill.

It is also recommended that sidewalk be constructed along Adrian Street along the east side from Dearborn Avenue to just north of the railroad. A new railroad pedestrian crossing will be needed. This new sidewalk and railroad crossing will provide an improved pedestrian crossing of Dubuque Road for approximately 28 elementary aged students that live south of Dubuque Road and are in the Highland Elementary attendance boundary.

HIGHLAND ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Sidewalk Infill Along the South Side of Polk Street from Arizona Street to Idaho Street, on the South Side of French Street from Adrian Street to Idaho Street, a 70-Foot Gap on the North Side of French Street and on the West Side of Idaho Street from French Street to Monroe Street and on the East Side of Adrian Street from Dearborn Avenue to Just North of the CN Railroad. New Railroad Pedestrian Crossing on Idaho Street Just North of Dubuque Road.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	PCC Sidewalk	SY	740.0	$55.00	$40,700.00
2	7 1/2" HMA Sidewalk	SY	25.0	$130.00	$3,250.00
3	Earthwork	CY	325.0	$25.00	$8,125.00
4	Subgrade Preparation	LF	1,380.0	$3.50	$4,830.00
5	Driveway Modification	Each	6.0	$2,000.00	$12,000.00
6	Detectable Warning Surface	SF	112.0	$35.00	$3,920.00
7	Remove and Replace Curb and Gutter	LF	40.0	$42.00	$1,680.00
8	Granular Shoulder	Ton	20.0	$50.00	$1,000.00
9	Topsoil	CY	360.0	$25.00	$9,000.00
10	Tree Root Removal	Each	5.0	$250.00	$1,250.00
11	Storm Sewer Extension	LF	16.0	$65.00	$1,040.00
12	Seeding and Fertilizing	Acre	0.5	$18,000.00	$9,000.00
13	Traffic Control	LS	1.0	$10,000.00	$10,000.00
14	Railroad Crossing	LS	1.0	$22,000.00	$22,000.00
15	Railroad Protective Insurance	LS	1.0	$5,000.00	$5,000.00
16	Railroad Flagging	LS	1.0	$5,000.00	$5,000.00
17	Design and Contract Administration Services	LS	1.0	$13,000.00	$13,000.00
18	Construction Survey and Inspection Services	LS	1.0	$15,000.00	$15,000.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$165,795.00**


Highland Elementary Attendance Area
Highland Elementary School
Cunningham Elementary Attendance Area
Lowell Elementary Attendance Area
0 0.1 0.2 0.3 0.4 0.5
Miles
7500 2009 ADT
45 Number of K-5 Students in 2009
S Signalized Intersection
P Signalized Ped. Crossing
G Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
N
S
E
W
Aerial Photography Source: Black Hawk County, April 2007
Highland Elementary Study Area
INRCOG Safe Routes to School Study
Jan 2011
111030
Quincy St.
Webster St.
Adams St.
Cottage St.
Sumner St.
Oneida St.
Salisbury St.
Albany St.
Douglas St.
Lime St.
Vine St.
Martin Luther King Jr Dr.
Wilby St.
Glenwood St.
Smith St.
Courtland St.
Fowler St.
Railroad Ave.
Prospect Ave.
Alta Vista Ave.
Madison St.
Monroe St.
Polk St.
French St.
Archer Ave.
Butler Ave.
Willow St.
Anthony St.
Cordell St.
Shirley St.
South View Dr.
Nicholas St.
Independence Ave.
Rocky Rd.
Franklin St.
Mulberry St.
Butler Ave.
Cottage Grove Ave.
Dearborn Ave.
Calhoun St.
Shultz St.
Roosevelt St.
Ann St.
Fulton St.
Wyandotte St.
Lafayette St.
Blowers Ave.
Prince St.
Water St.
Raith St.
Idaho St.
Lewis St.
Phillips St.
Steely St.
Nevada St.
Arizona St.
Adrian St.
Hallowell Rd.
Starr Dr.
Bishop Ave.
Creston Ave.
Gilbert St.
Ogden Ave.
Milwaukee Ave.
Maywood Ave.
Short St.
Wilrich St.
Skyview Rd.
Northeast Dr.
Gt Dr.
City View St.
Plainview St.
Spring View St.
Mobile St.
Ash St.
Hewitt St.
Peek St.
Linn St.
Manson St.
E. 4th St.
Bates St.
Beech St.
High St.
Franklin St.
Mulberry St.
E. 7th St.
E. 8th St.
E. 10th St.
Elm St.
Rhey St.
Linden Ave.
Lane St.
Block St.
State St.
Colorado St.
Indiana St.
Lamont St.
Glendale St.
Dunham Pl.
Wyoming St.
Milton St.
Zuma St.
Rooff Ave.
4400
3460
1570
980
1650
4540
4850
6700
5800
3460
5200
4100
4130
3290
9100
380
300
6200
5400
1970
1070
5900
9400
9300
4190
3710
1110
7100
2130
1320
1540
11300
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1770
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3720
2670
2920
151
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1350
1090
970
6100
5800
3600
120
101
1600

HOOVER INTERMEDIATE SCHOOL

Existing Conditions

Hoover Intermediate School is located at the intersection of Park Lane and Colby Road just north of Lou Henry Elementary School. Hoover has a high enrollment compared to other intermediate schools in Waterloo with over 800 students attending the school. The high number of students attending can create problems with traffic flow and pedestrian access.

The following information was gathered during a phone conversation with Hoover Intermediate Principal, Dan Cox. He said that the lack of sidewalks down Hillcrest Road is a major concern. He also has concerns about the location of the bike racks relative to the drop-off and pick-up zones. The pedestrians cross the parking lot which has incoming and outgoing traffic. He would like to see the Park Lane, Hillcrest Road and parking lot entrance reconfigured to make it more pedestrian friendly.

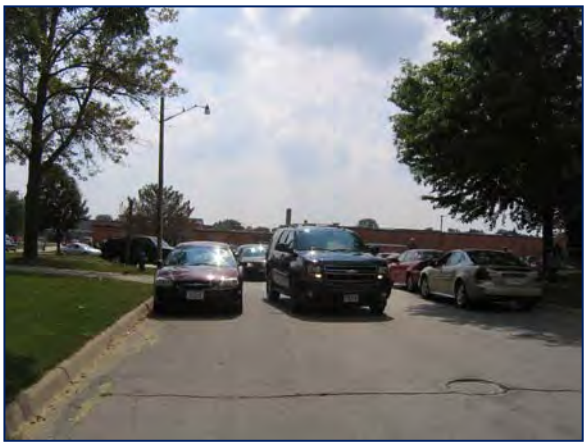
Some selected comments from the parent surveys that pertain to traffic safety and sidewalk infrastructure include the following:

- We really need sidewalks on Hillcrest, Ivanhoe, Midlothian and Park Lane.
- Would allow child to walk/bike to school at 6th grade, but not Hoover due to busy intersections.
- More safety precautions; people drive fast in school crossings/walking area.
- There is no direct, safe route with sidewalks to Hoover and that is the main reason I will not let my child walk.
- The streets are too busy to walk. There are no sidewalks on Ridgeway and where do they walk in the winter?

Results of the site visit completed on September 9, 2009, include the following observations:

Hillcrest Road

Many parents park along Hillcrest Road to wait to pick up students. Due to the lack of sidewalks, many of the students walk in the street to get to the vehicles. Hillcrest Road is a 31-foot wide street. When there are parked cars on both sides, only one lane of traffic can get through.



Parking on both sides of Hillcrest Road allows only one lane of traffic through.

Lack of sidewalks along Hillcrest Road causes students to walk through lawns.

Park Lane

Park Lane is another major access road for Hoover Intermediate. Park Lane connects Kimball Avenue to Hoover. It was observed that sidewalks were lacking on both sides of Park Lane from Hillcrest Road to Colby Road. Students cut across school lawn to get to the southwest corner of Park Lane and Colby Road. Also, students wait along the south side of Park Lane for parents to pick them up.

Standing on Hillcrest Road looking down Park Lane, students are standing on the south side of the street waiting for parents.

Alternatives

Hillcrest Road

To improve the pedestrian environment along Hillcrest Road, sidewalk infill is proposed on both sides from Park Lane to Ridgeway Avenue. This key segment of sidewalk would provide needed pedestrian facilities along this heavily-used stretch of roadway. Hillcrest Road is the main route for students living north and west of Hoover Intermediate. Due to the high concentration of students walking or biking along Hillcrest, additional sidewalk is needed to provide additional safety and pedestrian accommodation. It is also proposed to eliminate parking along the east side of Hillcrest Road from Park Lane to Ridgeway Avenue. Due to the 31-foot width of Hillcrest Road, parking on both sides has a significant impact on traffic flow.

Park Lane

Park Lane is the main route for students living south and east of Hoover Intermediate. To provide better pedestrian access to the school, sidewalk is proposed along both sides of Park Lane from Hillcrest Road to Colby Road.

New School Crossing Locations and Crosswalk Improvements

It is proposed to install school crosswalks on Hillcrest Road on the south side of Park Lane, on Park Lane on the east side of Hillcrest Road, and on Park Lane on the west side of Colby Road. These proposed school crossings will match the proposed sidewalk infill and provide a logical pedestrian flow near the school. It is also proposed to repaint all of the crosswalks along Hillcrest Road and Park Lane at all of the intersections near Hoover Intermediate.

To provide a designated route for the pedestrian traffic through the staff parking lot, it is proposed to install a crosswalk with pedestrian islands through the parking lot. This crosswalk is intended to define and delineate the path to keep pedestrians away from the drop-off and pick-up areas. The crosswalk will also help to alert motorists of a designated pedestrian-crossing point.

Recommendations

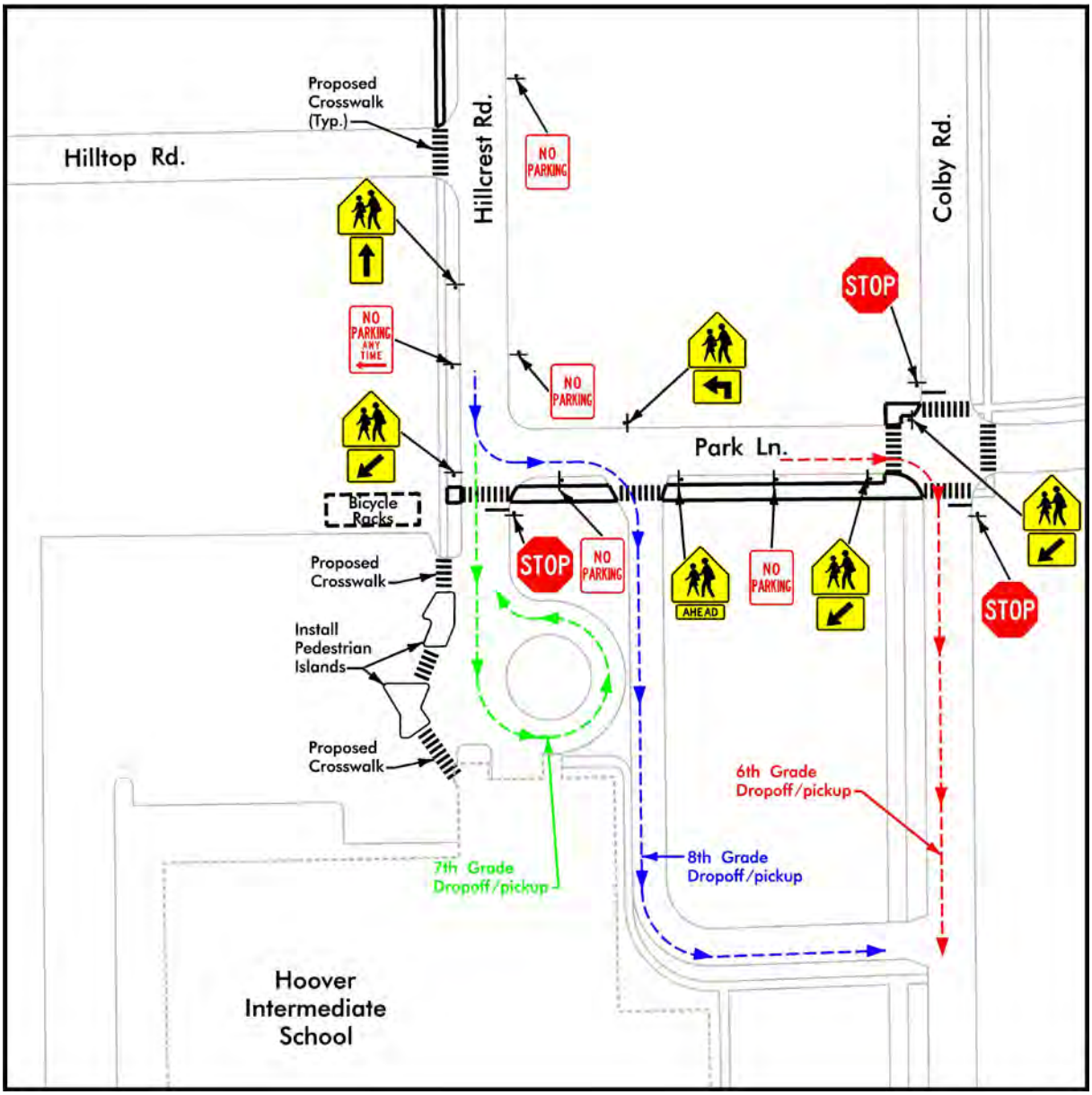
It is recommended that the alternatives described above be implemented at Hoover Intermediate School area. To prioritize the proposed improvements, the recommendations have been grouped into phases.

Phase I will include the following improvements:

- Sidewalk infill on Hillcrest Road along the west side from Hilltop Road to Ridgeway Avenue and on Park Lane along the south side from Hillcrest Road to Colby Road.

- New school crossings on Hillcrest Road at the south side of Park Lane and on Park Lane at the west side of Colby Road.
- The elimination of parking along the east side of Hillcrest Road.
- The crosswalk through the staff parking lot.

See the below figure for the improvements recommended in Phase I.



Phase I recommendations include sidewalk infill and school crossings on Hillcrest Road and Park Lane.

HOOVER INTERMEDIATE (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Phase I - Sidewalk Infill Along the West Side of Hillcrest Road from Hilltop Road to Ridgeway Avenue and on Park Lane Along the South Side from Hillcrest Road to Colby Road. New School Crossings on Hillcrest Road and Park Lane. Crosswalk Through the Staff Parking Lot Including Refuge Islands.

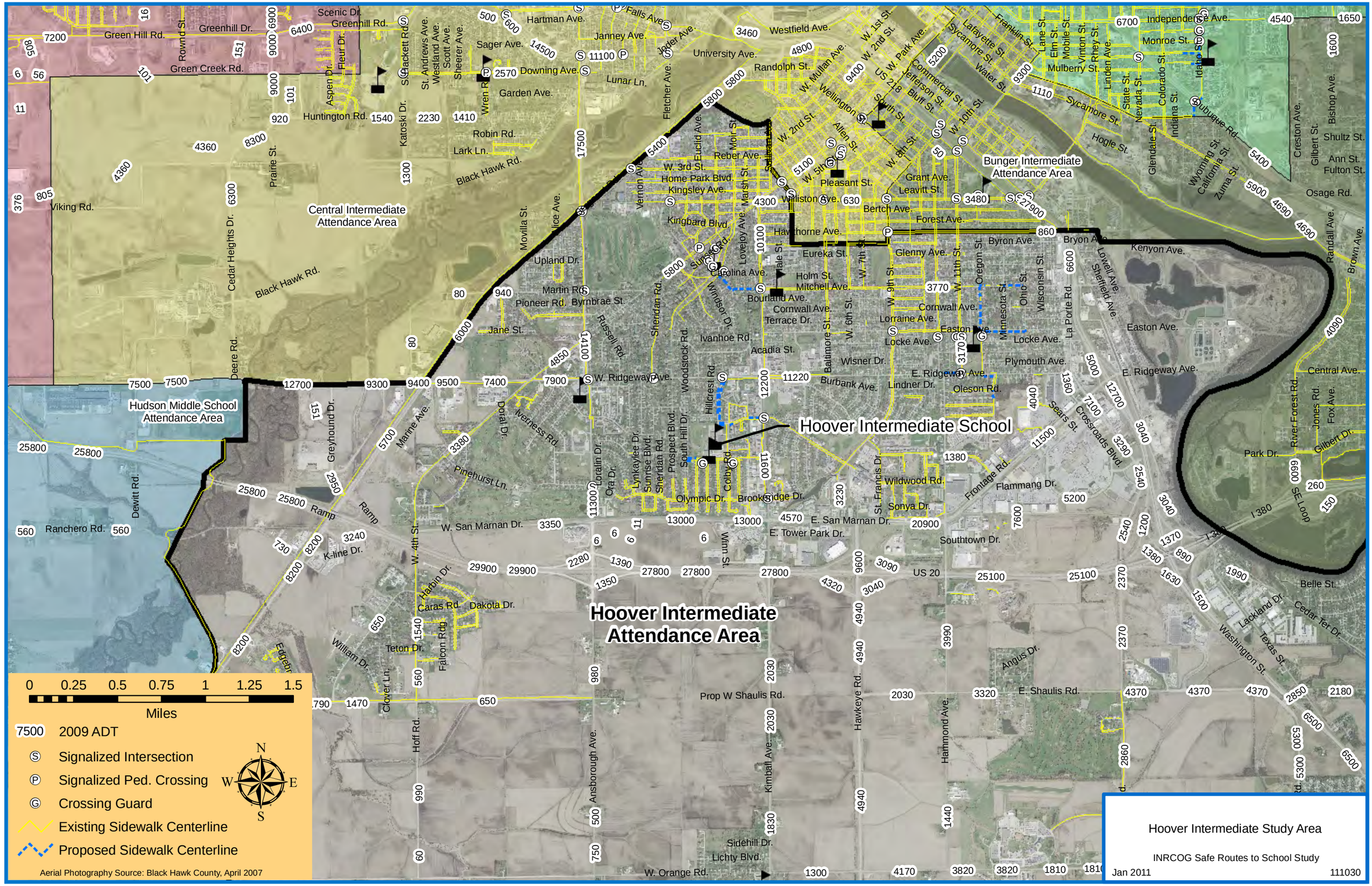
Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	106.0	$35.00	$3,710.00
2	Posts	LF	196.0	$20.00	$3,920.00
3	Pavement Markings	LS	1.0	$5,500.00	$5,500.00
4	PCC Sidewalk	SY	740.0	$55.00	$40,700.00
5	Earthwork and Subgrade Preparation	LF	1,325.0	$4.00	$5,300.00
6	Driveway Modification	Each	4.0	$1,500.0	$6,000.00
7	2.5' Curb and Gutter	LF	215.0	$25.00	$5,375.00
8	6" Median Pavement	SY	150.0	$55.00	$8,250.00
9	Topsoil	CY	350.0	$20.00	$7,000.00
10	Seeding and Fertilizing	Acre	0.4	$8,000.00	$3,200.00
11	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$8,900.00	$8,900.00
12	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$8,900.00	$8,900.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$106,755.00**

Phase II will include sidewalk on Hillcrest Road along the east side from Park Lane to Ridgeway Avenue and on Park Lane along the north side from Hillcrest Road to Colby Road. A new school crossing will also be included on Park Lane at the east side of Hillcrest Road. See the Lou Henry Elementary School map for Phase I and Phase II recommendations.

HOOVER INTERMEDIATE (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Phase II - Sidewalk Along the East Side of Hillcrest Road from Park Lane to Ridgeway Avenue and Along the North Side of Park Lane from Hillcrest Road to Colby Road. New School Crossing on Park Lane and Colby Road Intersection.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	55.0	$35.00	$1,925.00
2	Posts	LF	42.0	$20.00	$840.00
3	Pavement Markings	LS	1.0	$500.00	$500.00
4	PCC Sidewalk	SY	890.00	$55.00	$48,950.00
5	Earthwork and Subgrade Preparation	LF	1,585.0	$4.00	$6,340.00
6	Driveway Modification	Each	8.0	$1,500.00	$12,000.00
7	Topsoil	CY	420.0	$20.00	$8,400.00
8	Seeding and Fertilizing	Acre	0.4	$8,000.00	$3,200.00
9	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$8,300.00	$8,300.00
10	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$8,300.00	$8,300.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$98,755.00**


Hoover Intermediate School
Hoover Intermediate Attendance Area
Central Intermediate Attendance Area
Bunger Intermediate Attendance Area
Hudson Middle School Attendance Area
Hoover Intermediate Study Area
INRCOG Safe Routes to School Study
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Miles
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Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Existing Sidewalk Centerline
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Aerial Photography Source: Black Hawk County, April 2007
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IRVING ELEMENTARY SCHOOL

Existing Conditions

Irving Elementary is located on W. 5th Street which carries 6,600 vehicles per day based on the Iowa DOT 2009 traffic counts. The location of the school is within an established neighborhood with many older homes. Most of the students at Irving Elementary live too close to the school to qualify for busing. The sidewalk network within the Irving Elementary School boundary is well developed with no notable sidewalk gaps. See the Irving Elementary School map for the school boundary, sidewalk network and location.

During the phone interview with Loleta Montgomery Irving Elementary Principal, she had concerns with the school crossing at Western Avenue and W. 5th Street. Cars park on the school side of W. 5th Street blocking the view of vehicular traffic and of students trying to cross W. 5th Street. There have been reports of students darting between parked cars and running across W. 5th Street.

There were no comments from the parent surveys relating to traffic safety or sidewalks.

Results of the site visit completed on November 5, 2009, include the following observations:

The roll-out STOP sign at W. 5th Street and Western Avenue is reported to have vehicles missing the sign and not stopping as directed.

W. 5th Street Crossing at Western Avenue

There are adult crossing guards at W. 5th Street and Western Avenue and W. 5th Street and Locust Street.

The adult crossing guard at W. 5th Street and Western Avenue believes this is a very dangerous crossing. She witnesses cars going through the STOP sign at least once a day.

Locust Street Intersection with W. 5th Street

Adult crossing guard at W. 5th Street and Locust Street said that vehicles are turning right on red while students are crossing the street. Below are photos showing the intersection and crossing guard.

The signalized intersection has an adult crossing guard to insure that students cross properly and provide increased visualization for vehicular traffic.

Some signing is in place for "No Right Turn on Red While Pedestrians are Present" at the W. 5th Street and Locust Street intersection.

W. 4th Street Crossing at Western Avenue

A majority of the students live north and west of W. 5th Street. If the students walk or bike, they would need to cross W. 5th Street and W. 4th Street. With the high percentage of the students crossing at Western Avenue, they continue on Western Avenue to the intersection of W. 4th Street. The intersection of Western Avenue and W. 4th Street is not a designated school crossing. The school crossings on W. 4th Street are one block on either side of Western Avenue at Baltimore Street and at the signals of Locust Street.

There are "No Parking" signs along the school side of W. 5th Street between Baltimore Street and Locust Street. These signs are ignored during drop-off and pick-up times of a school day.

This picture shows the crossing of West 4th Street on the north side of Western Avenue. The crossing is unsignalized and unmarked as a school crossing.

This shows the approaching view of the roll-out STOP sign at Western Avenue and the vehicles parked in the "NO PARKING" zone along W. 5th Street in front of Irving Elementary. The view of students crossing W. 5th Street is restricted by the parked cars.

Recommendations

The recommendations for Irving Elementary are based on making improvements to the W. 5th Street and Western Avenue intersection. Two options have been developed to make improvements. These options are further described in the following discussion.

Option 1: This option includes the closure of the Irving Elementary access to W. 5th Street at Western Avenue. This closure eliminates the need to cross at this unsignalized and undesignated school crossing. This option forces students to cross W. 5th Street at the signalized intersection of Locust Street or at Baltimore Street. It is anticipated that more students will cross at the signalized crossing at Locust Street than Baltimore Street. By routing the students to Locust Street, a better crossing of W. 4th Street is also achieved. The W. 4th Street intersection with Locust Street is signalized as well. It is also recommended that this option include a new school crossing on W. 5th Street at the Baltimore Street intersection.

The disadvantage of this option is that it restricts access to the sidewalk along W. 5th Street at Western Avenue. The school may not be willing to close this access since it is the closest access to the main entrance and may result in complaints from parents. This closure does not change the routing of students coming to school. Some students will still cross at Western Avenue on the way to school but not at the higher numbers witnessed at the end of the school day.

See Option 1 Figure for more details.

Option 2: This option includes improvements to the existing crossing of Western Avenue. These improvements are described below:

1. Use a new roll-out STOP sign that is larger, has no other wording on the sign but STOP and has flags for increased visibility. Install fold-down STOP signs on each side of the crossing at this location as well.
2. New school crossing signs on each side of W. 5th Street at the crossing with arrows. This would include removing the school crossing warning signs that are located near the Western Avenue intersection for advanced warning of the Locust Street school crossing.
3. Improve the pavement markings for the crossing. Place a stop bar on W. 5th Street on the south side of Western Avenue. Provide "Zebra" striping crosswalk to improve visibility. Paint yellow curb on the school side 50 feet on both sides of the crossing.
4. Move the school crossing on W. 4th Street at the Baltimore Street intersection to the Western Avenue intersection. This would include updating the school crossing signs and removing the school crossing ahead signs which would be in conflict with the Locust Street school crossing. Provide "Zebra" striping at the new W. 4th Street school crossing at Western Avenue.

The disadvantages of Option 2 relate to the effectiveness of temporary traffic control devices. A 1978 study by the Iowa Highway Research Board reported that 37% of vehicles observed at temporary stop control devices did not come to a complete stop. The Manual on Uniform Traffic Control Devices (MUTCD) states that temporary STOP signs should not be used. The Iowa State Code supersedes the MUTCD and allows for use of roll-out STOP signs.

See Option 2 Figure for more details.

The cost estimates for these options are shown below.

IRVING ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

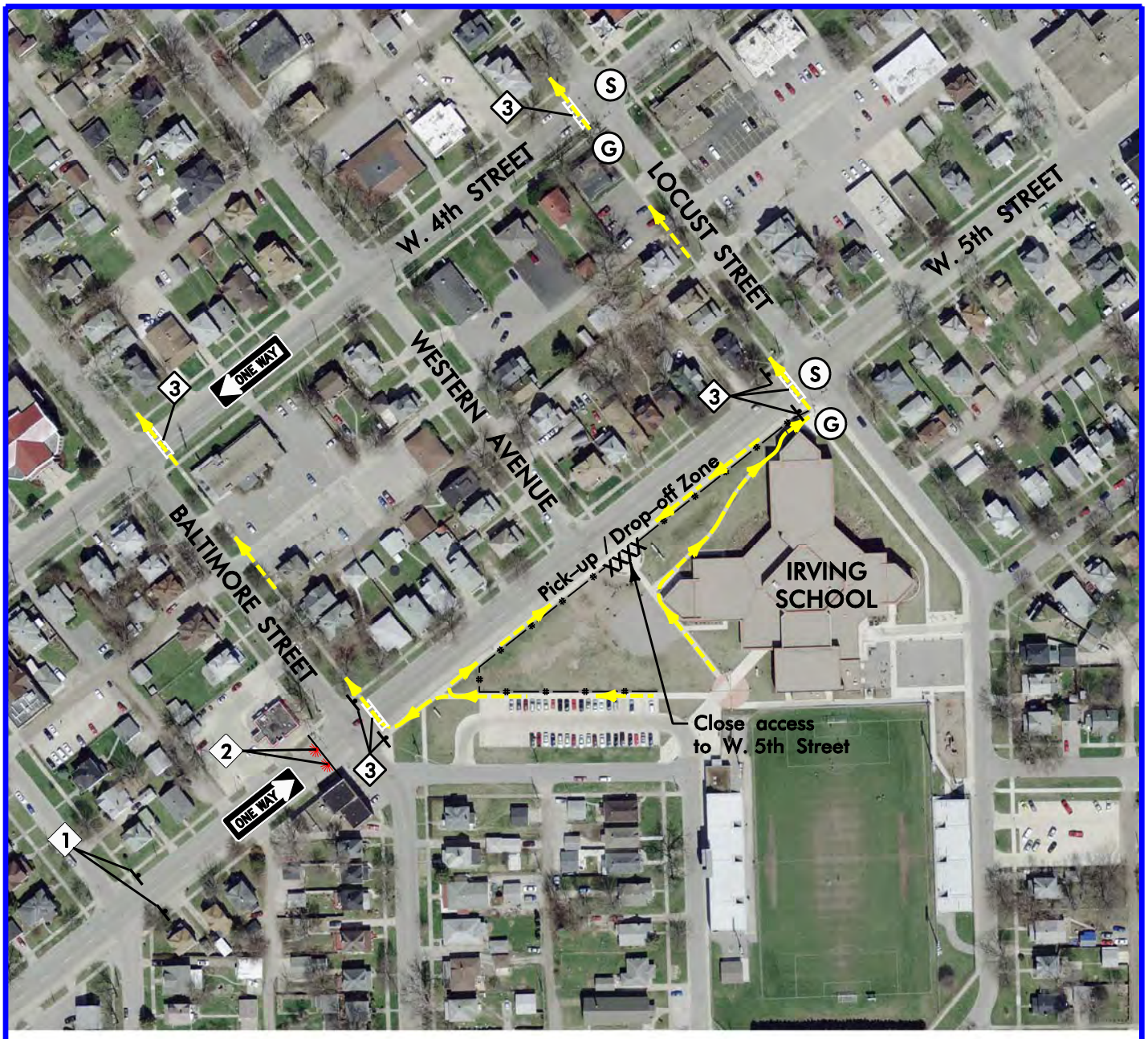
Option 1 - Closure of Access to W. 5th Street at Western Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Chain Link Fence, 48-Inch	LF	60.0	$35.00	$2,100.00
2	Signed and Painted Pedestrian Crossing	EACH	4.0	$1,800.00	$7,200.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$9,300.00**

IRVING ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Option 2 - Improve School Crossing at Western Avenue and W. 5th Street Intersection.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Portable Stop Sign	Each	1.0	$800.00	$800.00
2	Signing for Crosswalk and No Parking	LS	1.0	$4,000.00	$4,000.00
3	Pavement Markings	LS	1.0	$1,500.00	$1,500.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$6,300.00**



LEGEND

- Marked School Crossing
- (G) Proposed Adult Crossing Guard Crossing
- (S) Signalized Intersection
- Pedestrian Traffic Flow
- Existing Fence

0 200
SCALE IN FEET

NOTES

1. Existing School Advance Warning Sign, Add "AHEAD" Sign Below
2. Existing Overhead Flashers w/School Speed Limit Assembly. Add "SCHOOL" sign, S4–3, to Assembly
3. Existing School Crossing. Repaint Crosswalk and Add W16–7p Arrow to Sign

OPTION 1:
Close Irving School access to W. 5th Street at Western Avenue.

AECOM

PROPOSED CROSSING IMPROVEMENTS
Irving Elementary School
Western Avenue at W. 5th Street

SAFE ROUTES TO SCHOOL
Black Hawk County Bicycle / Pedestrian Safety Study
June 2010 Iowa Northland Regional Council of Governments 111030

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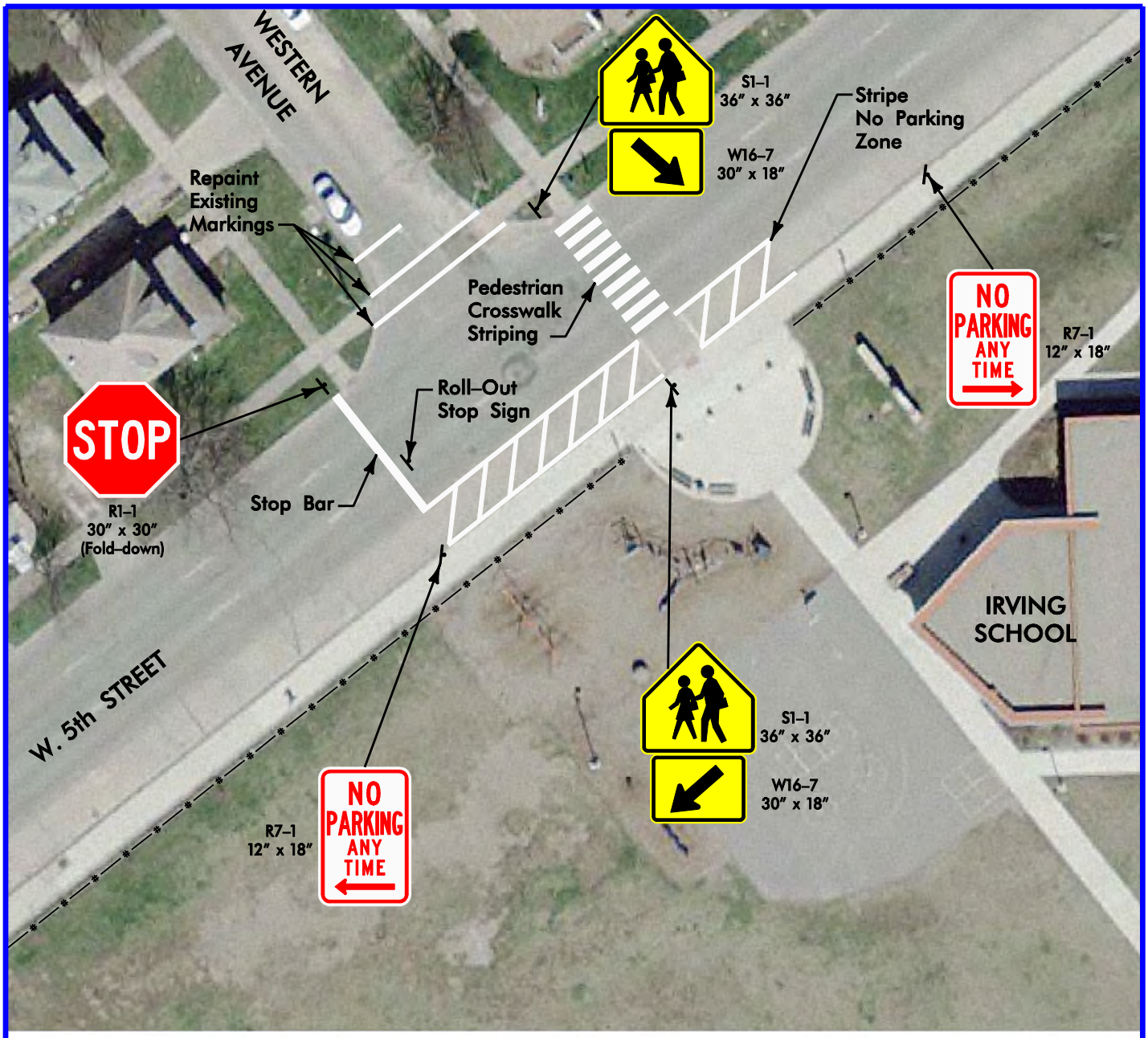

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SCALE IN FEET

OPTION 2:
Improve pavement markings and signing at the Western Avenue crossing of W. 5th Street.

AECOM

PROPOSED CROSSING IMPROVEMENTS
Irving Elementary School
Western Avenue at W. 5th Street
SAFE ROUTES TO SCHOOL
Black Hawk County Bicycle / Pedestrian Safety Study
June 2010 Iowa Northland Regional Council of Governments 111030

3/30/2011
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Irving Elementary Attendance Area

Black Hawk Elementary Attendance Area

Cunningham Elementary Attendance Area

Edison Elementary Attendance Area

Lowell Elementary Attendance Area

Kingsley Elementary Attendance Area

Irving Elementary School

Kittrell Elementary Attendance Area

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 2009 ADT

45 Number of K-5 Students in 2009

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Pedestrian Route

Existing School Crosswalk

Proposed School Crosswalk

Existing Sidewalk Centerline

Aerial Photography Source: Black Hawk County, April 2007

N W E S

Irving Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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KINGSLEY ELEMENTARY SCHOOL

Existing Conditions

The existing school building was recently remodeled at its current location on Prospect Boulevard just south of the Sunset Road intersection. The school is located in an older neighborhood with low-density housing. Based on the results of the parent surveys conducted in the fall of the 2009, it appears that most of the students are not eligible for school busing. The survey also indicates that Kingsley has a high percentage of students that are transported to and from school by a family vehicle. These percentages by family vehicle are 68% to school and 61% from school.

During a phone interview with Sue Flodeen, Kingsley Elementary Principal, she commented that 25% to 30% of the Kingsley students are bused. She said that Kingsley has congestion on Prospect Boulevard during pick-up and drop-off times. There are student crossing guards with adult supervision on Prospect Boulevard in front of the school.

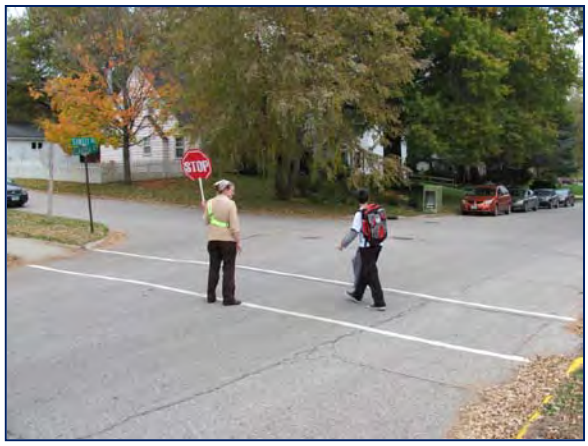
Some selected comments from the parent surveys that pertain to traffic safety and sidewalk infrastructure include the following:

- I would like to see a push-button light on Moir and W. 4th Street crossing to Prospect and at Moir and Campbell.
- Cannot cross Kimball Avenue due to speed and amount of traffic.
- Patrols not on time at W. 4th Street.
- There are no sidewalks that connect our complete route.
- Our home is located between two very busy streets with no sidewalks the whole way to school.
- I would like to see a push-button light on Moir and W. 4th Street crossing to Prospect due to traffic and distance of intersection.
- W. 4th Street needs a sidewalk from Martin Road to Ansborough. It is extremely dangerous for walkers and bikers. A sidewalk along this route would be a great improvement to our City and safety.

Results of the site visit completed on October 21, 2009, include the following observations:

Crossing Guards on Sunset Road

An adult crossing guard was observed on Sunset Road at Clarissa Street and Hubbard Avenue. This crossing guard is primarily needed to assist students crossing Sunset Road to waiting parents in parked cars on the opposite side of Sunset Road. This crosswalk is not signed as a designated school crosswalk. Student crossing guards were observed on Sunset Road at Hubbard Avenue. This is a designated school crosswalk. The student crossing guards had reflective vests but no stop paddles or STOP signs. Below are photos of the crossing guards on Sunset Road.



Adult crossing guard on Sunset Road and Clarissa Street. This crosswalk is not marked or signed as a designated school crosswalk.

Student crossing guards on Sunset Road and Hubbard Avenue.

Pedestrian Signal on W. 4th Street

The pedestrian signal and school crossing on W. 4th Street at Hubbard Avenue shows a high amount of usage. Over 20 students cross this intersection each day. The school places a teacher to assist students in the operation of the pedestrian signal and crossing of the street. In an interview with Mr. Gomez, the teacher at this intersection, he commented that this signal is unsafe. Mr. Gomez stated that cars go through the stop lights when red. The intersection has stop control for Hubbard Avenue with the signals facing W. 4th Street traffic.

The school crossing on W. 4th Street at Prospect Boulevard/Moir Street. Two school crossings are needed to get to a sidewalk on Prospect Boulevard.

Students completing a gap study on W. 4th Street at Prospect Boulevard.

Other observations of the existing conditions include the following:

Intersection of Prospect Boulevard and W. 4th Street

This existing school crossing was identified for a gap study due to the skewed intersection and high traffic on W. 4th Street. As part of a Lego League project, Kingsley fourth graders chose to complete a gap study in the morning and afternoon of November 19, 2010. See the Appendix for the gap study field sheets.

In the morning the gap study showed that four pedestrians crossed at this location with a total of 51 suitable gaps recorded over a 36-minute period. In the afternoon, the gap study showed that 14 pedestrians crossed at this location, with a total of 43 suitable gaps recorded over a 43-minute period.

This crossing is located at the middle of the boulevard at a skew across W. 4th Street. To get to a sidewalk, students have to cross the northbound or southbound lanes of Prospect Boulevard.

Existing Sidewalk Network and Student Density

As mentioned previously, Kingsley is located in a neighborhood with low density housing and a lack of sidewalks. As shown on the Kingsley Elementary map, many neighborhoods or planning areas do not have an existing sidewalk network. Providing a sidewalk network that would serve a large percentage of the students is made more difficult by the fact that the housing is spread out and low density.

Kimball Avenue

A little over 50 students live on the east side of Kimball Avenue. Based on the estimated pedestrian traffic flow the crossings of Kimball Avenue would be at “Six Corners” which is the intersection of Williston Avenue, W. 4th Street and Kimball Avenue, or at Mitchell Avenue at the existing signals and school crossing. The 2009 Iowa DOT traffic numbers for Kimball Avenue show that the average daily traffic ranges between 10,100 and 12,100 vehicles per day.

Ansborough Avenue

The 2009 Iowa DOT average daily traffic numbers for Ansborough Avenue show 15,400 vehicles per day. Approximately 73 students live on the west side of Ansborough Avenue. The main crossing for these neighborhoods would be Martin Road which includes a signal at the Ansborough Avenue and Martin Road intersection. The signal does have pedestrian accommodation on the south side of Martin Road. This crossing is approximately 0.9 mile from Kingsley Elementary School.

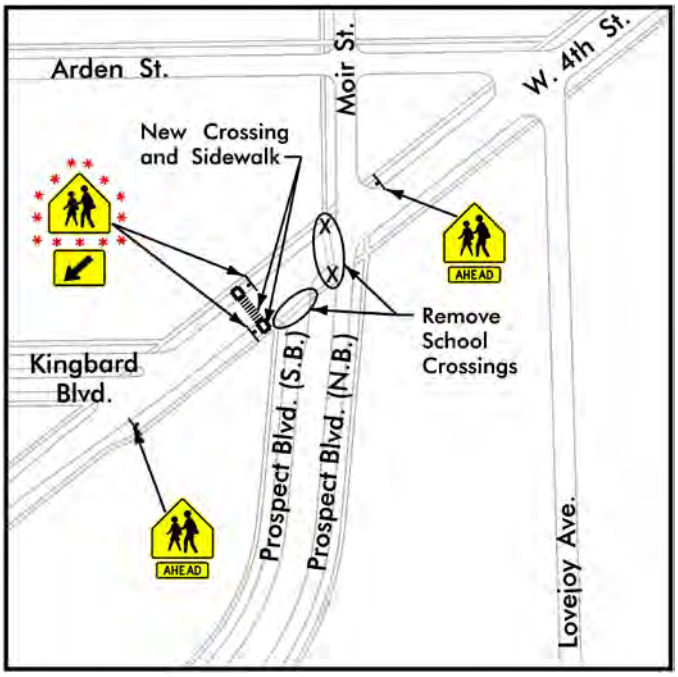
Alternatives

The alternatives that are proposed include improvements to the crossing locations on W. 4th Street and some additional sidewalk in key locations. These alternatives are further described as follows:

W. 4th Street and Prospect Boulevard Intersection

Although the intersection of W. 4th Street and Prospect Boulevard does not meet the warrants for a signalized school crossing, an improved crossing is needed at this intersection. To warrant a signal, less than one suitable gap per minute and at least 20 students in an hour at the crossing location is needed based on the Manual on Uniform Traffic Control Devices. As described previously, there were about 1.4 suitable gaps per minute with 4 pedestrians in the morning and 1.0 suitable gaps per minute with 14 pedestrians in the afternoon.

To provide improvements to the school crossing, it is proposed that the location change to remove the skew across W. 4th Street. With the skew, the crossing distance is approximately 42 feet. By changing the location to cross perpendicular to the street, the crossing distance can be reduced to approximately 36 feet. Also, by changing the location, the school crossing of the southbound lanes of Prospect Boulevard can be removed. It is also proposed to improve the signing and pavement markings.



The proposed school crossing improvements at Prospect Boulevard and W. 4th Street include a new location to remove the skew and improved pavement markings and signing.

W. 4th Street and Hubbard Avenue

Due to the high usage of the pedestrian signal, it is proposed that the existing signals be replaced with new signals with pedestrian detection that control both W. 4th Street and Hubbard Avenue. The current signal configuration has stop control on Hubbard Avenue with signals on W. 4th Street. The MUTCD does not support this type of older signal configuration. Also, improvements are needed for better awareness of the signals by the vehicular traffic on W. 4th Street.

Sidewalk Infill

Many of the students that live east of Kimball Avenue would cross at Mitchell Avenue. Sidewalk is needed from this intersection to Kingsley Elementary School. This sidewalk would be along Mitchell Avenue from Kimball Avenue to Derbyshire Road and on Derbyshire Road from Mitchell Avenue to Prospect Boulevard. This sidewalk would serve students that are less than 1/2-mile away from school.

Another location for possible sidewalk infill is to connect the neighborhoods just west of Ansborough Avenue by connecting with sidewalk the Martin Road and Ansborough Avenue intersection with Kingsley Elementary. To provide a sidewalk connection, sidewalk is proposed on Martin Road from Ansborough Avenue to W. 4th Street and along W. 4th Street from Martin Road to Sheridan Avenue. This sidewalk connection would serve students who live over a mile from Kingsley Elementary School.

Recommendations

It is recommended that the improvement on W. 4th Street as described above be implemented. These improvements include the replacement of the pedestrian signal at W. 4th Street and Hubbard Avenue and the new school crossing at W. 4th Street and Prospect Boulevard. These improvements to W. 4th Street will provide safer crossings for over 150 students on the northwest side of W. 4th Street which live less than 0.6 mile from Kingsley Elementary. These neighborhoods northwest of W. 4th Street have an established sidewalk network as well. It is also recommended that the sidewalk infill from the Kimball Avenue/Mitchell Avenue intersection to Kingsley Elementary be completed. This sidewalk connection will provide an important link for the students that reside on the east side of Kimball Avenue. The cost estimate for these improvements is shown below.

KINGSLEY ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

New Signal at 4th Street and Hubbard Avenue, New School Crosswalk on W. 4th Street at Prospect Boulevard and Sidewalk Infill from Kimball Avenue/Mitchell Avenue Intersection to Kingsley Elementary.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	72.0	$35.00	$2,520.00
2	Posts	LF	112.0	$20.00	$2,240.00
3	LED Sign	Each	2.0	$3,000.00	$6,000.00
4	Pavement Markings	LS	1.0	$5,000.00	$5,000.00
5	Pedestrian Signal Removal	LS	1.0	$3,000.00	$3,000.00
6	Signals at W. 4th Street and Hubbard Avenue	LS	1.0	$100,000.00	$100,000.00
7	PCC Sidewalk	SY	800.0	$55.00	$44,000.00
8	Earthwork and Subgrade Preparation	LF	1,430.0	$4.00	$5,720.00
9	Driveway Modification	Each	4.0	$1,500.0	$6,000.00
10	Topsoil	CY	380.0	$20.00	$7,600.00
11	Seeding and Fertilizing	Acre	0.4	$8,000.00	$3,200.00
12	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$18,600.00	$18,600.00
13	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$18,600.00	$18,600.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$222,480.00**

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Miles

7500 2009 ADT

45 Number of K-5 Students in 2009

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Pedestrian Route

Existing School Crosswalk

Proposed School Crosswalk

Existing Sidewalk Centerline

Proposed Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Edison Elementary Attendance Area

Lowell Elementary Attendance Area

Irving Elementary Attendance Area

Black Hawk Elementary Attendance Area

Kingsley Elementary School

Kingsley Elementary Attendance Area

Kittrell Elementary Attendance Area

Lou Henry Elementary Attendance Area

Kingsley Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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KITTRELL ELEMENTARY SCHOOL

Existing Conditions

The existing school building was recently constructed at the southwest corner of Easton Avenue and Oregon Street with the front entrance on Oregon Street. The previous elementary building was located in the same block but on the corner of W. 11th Street and Easton Avenue. The school is set in a neighborhood with an established sidewalk network to the west and northwest but lacks sidewalks to the east, northeast and south. See the Kittrell Elementary map for existing sidewalk network details and building location.

During the telephone interview with Principal Audrey Wallican-Green, several safety issues were identified. She had concerns with the 2-way STOP at the corner of Easton Avenue and Oregon Street. The school uses a portable roll-out STOP sign on Easton Avenue to create a temporary 4-way STOP at this corner. She thought that this intersection should be made a permanent 4-way STOP intersection. She commented that the intersection of Oregon Street and Ridgeway Avenue needed to include some traffic control to accommodate pedestrians. There are concerns with the speed of traffic on the streets around the schools. She also commented that there are student crossing guards at the Easton Avenue/Oregon Street intersection and the Easton Avenue/W. 11th Street intersection.

Some selected comments from the parent surveys that pertain to traffic safety and sidewalk infrastructure include the following:

- I am concerned about W. 9th and Easton intersection. Also, no sidewalks on Easton until after W. 9th Street.
- The crossing between W. 9th and Easton is non-existent and traffic is heavy and fast. We live between Baltimore and W. 9th Street. We will not let our children walk/bike to elementary alone because of the following issues:
  - No sidewalk along Easton between Baltimore and W. 9th.
  - No safe crossing across W. 9th.
- Post speed limit on Easton and children crossing signs on Easton between W. 9th and Randolph. Watch city buses -- they speed up in 1100 block of Easton.
- Crossing guards often messing around and at times put student in more danger -- they need better supervision.
- Post sign Children at Play. Mitchell Avenue is a raceway. Police the speed limits.
- You need more sidewalks on Hammond and all the way down W. 11th.
- Kittrell area too busy with speeding traffic.
- Hammond and Ridgeway need sidewalks.

Observations

Results of several site visits which occurred on September 16, 2009, and May 4, 2010, resulted in the following observations:

Existing School Crossings

Existing school crossing locations were identified during the site visits described above. The existing school crossing locations are shown on the Kittrell Elementary map. Many of the existing crossings do not have proper advance warning, pavement markings or signing at the crossing. Also, the existing school crossing locations are based on the orientation and location of the old school building which has been relocated.

This pedestrian signal at Ridgeway Avenue and W. 11th Street has stop control for southbound W. 11th Street traffic and signal control for Ridgeway Avenue traffic. This type of signal configuration can cause confusion when activated for southbound W. 11th Street traffic.

Pedestrian Signal at W. 11th Street and Ridgeway Avenue

The existing pedestrian signal at W. 11th Street and Ridgeway Avenue is in place to provide a designated crossing location for students and pedestrians. Currently, there is very little sidewalk on the south side of Ridgeway Avenue to provide a connection to the signalized school crossing. The signal includes pedestrian signal heads for the east leg and the north leg of the intersection. A marked school crossing is on the east leg of the intersection.

Gap Study on Ridgeway Avenue at Oregon Street

A gap study was completed at this location on May 4, 2010, from 3:25 to 4:23 p.m. The gaps were studied to evaluate the warrant for a possible signal at this location. The west side of this intersection was analyzed. The gap study field sheet is shown in the Appendix.

The results of the gap study show that 13 pedestrians crossed at this location with 75 total adequate gaps over a 58-minute interval. While at this location, observations of the existing pedestrian crossing at W. 11th Street were made. No pedestrians crossed at this location during the time of the gap study.

Lack of Sidewalks

While it is not the intent to provide sidewalk for every student within walking distance of Kittrell Elementary, key sidewalk gaps have been identified. Based on existing school crossing locations, signalization, crossing guard locations and the number of students within a planning area, pedestrian routes were developed and plotted on the Kittrell Elementary map. By evaluation of the Kittrell Elementary map, some key areas within walking distance of Kittrell Elementary School are not being served by sidewalks. These sidewalk gaps are generally located east, northeast and south of Kittrell Elementary.

These pictures on Oregon Street, north of Kittrell Elementary, show students walking through lawns on their way home from school.

School Crosswalks

The existing school crosswalk locations were based on Kittrell Elementary's previous location at the corner of W. 11th Street and Easton Avenue. With the slight change in location, some of the school crosswalk locations should change or be removed to better fit the new school orientation.

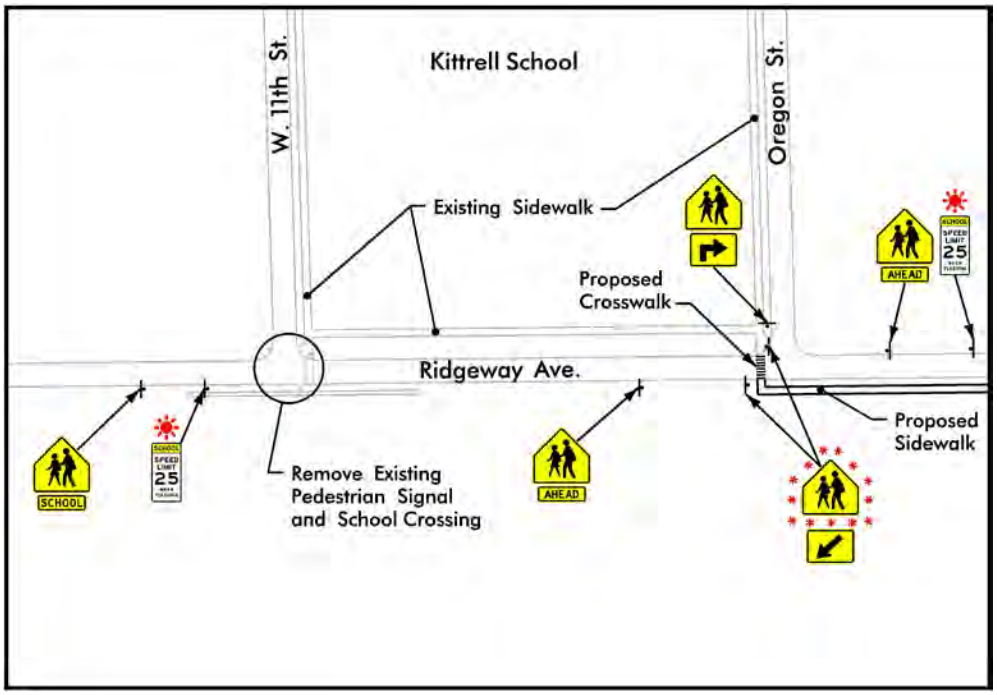
Improvement Alternatives

Improvement alternatives were developed that improved the signing and location of the school crosswalks and identification of sidewalk infill priorities. These improvements are further described below:

Pedestrian Signal and School Crosswalk on Ridgeway Avenue

This alternative includes the removal of the pedestrian signal and school crosswalk on Ridgeway Avenue at the W. 11th Street intersection and provides a new school crossing on Ridgeway Avenue at Oregon Street. Although the intersection of Ridgeway Avenue and Oregon Street does not meet the warrants for a signalized school crossing, a designated school crossing is needed at this location. To warrant a signal, less than one suitable gap per minute and at least 20 students in an hour at the crossing location is needed based on the Manual on Uniform Traffic Control Devices. As described previously, 1.3 suitable gaps per minute and 12 students crossed at this location based on a gap study described above.

The proposed school crossing on Ridgeway Avenue and Oregon Street would include a signed school zone and school speed limit reduction from the signed 35 mph to 25 mph. It is proposed that an adult crossing guard be located at this intersection to assist school aged children with the identification of suitable gaps in the traffic. The adult crossing guard is to have an approved reflective vest and a STOP paddle. The proposed school crossing with the appropriate signing and pavement markings is shown in the figure to the right.



Signing for the proposed school zone on Ridgeway Avenue with a school speed limit and a school crossing on Ridgeway Avenue and Oregon Street.

Sidewalk Infill

To provide sidewalk to neighborhoods that are less than a 1/2-mile from school and have a high number of students living within planning areas, proposed sidewalk infill has been identified. The sidewalk infill is proposed on Oregon Street from Easton Avenue to Mitchell Avenue, along Mitchell Avenue from Oregon Street to Ohio Street, and on Easton Avenue from Oregon Street to Ohio Street. These proposed sidewalk segments will serve 121 students in 6 different planning areas. See the Kittrell Elementary map for the proposed sidewalk infill and the number of students in different planning areas.

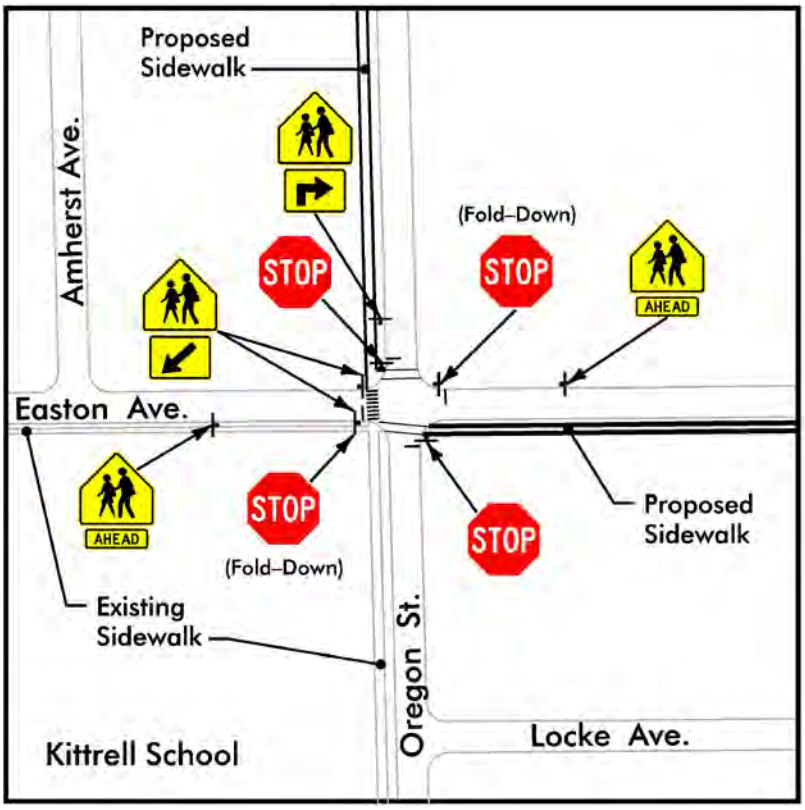
The planning area just south of Kittrell Elementary and across Ridgeway Avenue has 49 students. This planning area includes high-density housing such as numerous apartment complexes and duplexes. To provide a "walkable" corridor for this planning area, sidewalk infill is needed along Bethel Street from Langley Road to Oleson Road and a small segment near Ridgeway Avenue. To provide a connection from Bethel Street to the proposed school crossing on Ridgeway Avenue, a sidewalk is proposed from Bethel Street to Oregon Street. See the Kittrell Elementary map for the proposed sidewalk infill.

Another segment of sidewalk infill that has been identified is along the north side of Ridgeway Avenue from Hammond Avenue to W. 11th Street. This segment of sidewalk would provide an extension of the Ridgeway Avenue sidewalk along the north side and provide pedestrian access to Hammond Avenue.

School Crosswalk Improvements at Easton Avenue and Oregon Street Intersection

The intersection of Easton Avenue and Oregon Street currently includes school crosswalks in all four legs of this intersection. This intersection currently includes stop control for Oregon Street. In the morning and afternoon, the school places a roll-out STOP sign in the middle of the intersection with student crossing guards.

It is proposed to clarify the school crossing locations, improve pavement markings and provide updated signing at this intersection. The Manual on Uniform Traffic Control Devices states that School Crossing Assemblies shall not be installed on approaches controlled by a STOP or YIELD sign. At this intersection, Oregon Street has a school crossing assembly on both legs. This alternative would include removing the school crossing assemblies on both legs of the Oregon Street intersection and on the east leg of Easton Avenue. A fully-signed school crossing would be installed on the west leg of Easton Avenue. The proposed improvements are shown in the figure to the right.



The proposed improvements at the Easton Avenue and Oregon Street intersection include a school crossing on Easton Avenue across the west leg of the intersection. All other school crossing assemblies would be removed. Fold-down stop signs with painted stop bars would be installed on both legs of Easton Avenue.

Recommendations

It is recommended that the alternatives described above be implemented at Kittrell Elementary School area. To prioritize the proposed improvements, the alternatives have been grouped into phases.

It is recommended that Phase I include the removal of the pedestrian signal, school zone improvements and school crosswalk on Ridgeway Avenue as shown in figure on the previous page and the Easton Avenue and Oregon Street intersection improvements as shown in figure above. Also included in Phase I is the sidewalk infill to serve the planning area directly south of Kittrell Elementary. The sidewalk infill includes sidewalk on Bethel Street between Langley Road and Oleson Road and on Ridgeway Avenue from Oregon Street to Bethel Street. The cost estimate for these improvements is shown below.

KITTRELL ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Phase I - Pedestrian Signal Removal, School Zone and School Crossing Improvements on Ridgeway Avenue and School Crosswalk Improvements at the Easton Avenue and Oregon Street Intersection. Sidewalk Infill on Bethel Street and Ridgeway Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	110.0	$35.00	$3,850.00
2	Posts	LF	200.0	$20.00	$4,000.00
3	LED Sign	Each	2.0	$4,500.00	$9,000.00
4	Sign with Beacon	Each	2.0	$1,500.00	$3,000.00
5	Pavement Markings	Sta.	25.0	$60.00	$1,500.00
6	Pedestrian Signal Removal	LS	1.0	$3,000.00	$3,000.00
7	PCC Sidewalk	SY	360.0	$55.00	$19,800.00
8	Earthwork and Subgrade Preparation	LF	640.0	$4.00	$2,560.00
9	Driveway Modification	Each	2.0	$1,500.00	$3,000.00
10	Topsoil	CY	170.0	$20.00	$3,400.00
11	Seeding and Fertilizing	Acre	0.2	$12,000.00	$2,400.00
12	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$5,600.00	$5,600.00
13	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$5,600.00	$5,600.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$66,710.00**

It is recommended that Phase II include the sidewalk infill along Ridgeway Avenue from Hammond Avenue to W. 11th Street, Easton Avenue from Oregon Street to Ohio Street, Oregon Street from Easton Avenue to Mitchell Avenue and Oregon Street from Oregon Street to Ohio Street. The cost estimate for these improvements is shown below.

KITTRELL ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Phase II - Sidewalk Infill Along Ridgeway Avenue, Easton Avenue, Oregon Street and Mitchell Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	PCC Sidewalk	SY	1,920.00	$55.00	$105,600.00
2	Earthwork and Subgrade Preparation	LF	3,450.00	$4.00	$13,800.00
3	Driveway Modification	Each	15.0	$1,500.00	$22,500.00
4	Topsoil	CY	900.0	$20.00	$18,000.00
5	Seeding and Fertilizing	Acre	0.8	$8,000.00	$6,400.00
6	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$16,700.00	$16,700.00
7	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$16,700.00	$16,700.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$199,700.00**

Kittrell Elementary Attendance Area

Kittrell Elementary School

Lou Henry Elementary Attendance Area

Poyner Elementary Attendance Area

0 0.1 0.2 0.3 0.4 0.5

Miles

- 7500 2009 ADT
- 45 Number of K-5 Students in 2009
- Ⓢ Signalized Intersection
- Ⓟ Signalized Ped. Crossing
- Ⓖ Crossing Guard
- Pedestrian Route
- Existing School Crosswalk
- Proposed School Crosswalk
- Existing Sidewalk Centerline
- Proposed Sidewalk Centerline (Phase I)
- Proposed Sidewalk Centerline (Phase II)

N W E S

Aerial Photography Source: Black Hawk County, April 2007

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Kittrell Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

LINCOLN ELEMENTARY SCHOOL

Existing Conditions

The existing school building was recently constructed at its current location approximately 1/2-mile from the old building at Parker Street and Burton Avenue. The school site includes some sidewalks but was placed in a neighborhood with a limited sidewalk network leading to the new building site. See the Lincoln Elementary map for existing sidewalk network details.

The telephone interview with Carrie Heinzerling, lead teacher/assistant principal, identified several issues that were of concern. The Parker Street/Longfellow Avenue/Cedar Bend Street intersection is a safety concern due to the configuration and confusion of traffic flow. She commented that additional sidewalks would be helpful along Cedar Bend Street and Longfellow Avenue. She also stated that the pick-up and drop-off zone is congested but it does not affect pedestrians and bicyclists.

From the parent surveys, there were several comments relating to the lack of sidewalks. These comments are as follows:

- Sidewalks would really help.
- If there were sidewalks, it would be better.

Results of the site visits completed on September 16 and 21, 2009, include the following observations:

Pick-Up and Drop-Off Zone Congestion

Parents pick-up and drop-off students at the parking lot off of Cedar Bend Street. No parking is permitted on either side of Cedar Bend Street due to the pavement width and lack of shoulder. Parents pull off Cedar Bend Street and park in the grass on both sides of the street. Below are photos of the congestion and confusion in front of Lincoln Elementary along Cedar Bend Street from parents picking up their children after school.

Erratic driving behavior is shown in these two photos in front of Lincoln Elementary School. A parent is backing out and turning around in the middle of Cedar Bend Street during peak traffic conditions. Another vehicle is shown driving on the wrong side of the road to avoid congestion. If walking and biking increases, then pick-up and drop-off congestion may decrease.

Lack of Sidewalks

Observations were made of students walking south along both Longfellow Avenue and Cedar Bend Street. Due to the lack of sidewalks, the students were walking through the grass south to the Parker Street/Longfellow Avenue/Cedar Bend Street intersection. Below are photos of the area.

These photos show the existing sidewalk ending on Longfellow Avenue south of Lincoln Elementary and students walking through yards along Longfellow Avenue. Lack of sidewalks was also identified north of Lincoln Elementary. Although there were not as many students walking and biking to the north, there was a lack of sidewalks connecting the neighborhoods to Lincoln Elementary School. Below are photos of areas that highlight the lack of sidewalks to the north of Lincoln Elementary.

These photos along Longfellow Avenue north of Lincoln Elementary show the lack of sidewalks and a family walking home from school in the middle of the road.

Parker Street/Longfellow Avenue/Cedar Bend Street Intersection

Existing intersection of Cedar Bend Street, Parker Street and Longfellow Avenue.

This intersection was observed at the end of the school day on September 21, 2009. An adult crossing guard is located at this intersection in the morning and afternoon. The adult crossing guard commented that there are numerous problems with this intersection and that vehicular traffic is unsure how to navigate through the intersection. To the left is a plan view of the current configuration of the intersection.

The existing conditions at the Longfellow Avenue, Cedar Bend Street and Parker Street intersection is confusing to motorists and pedestrians. Because of the intersection configuration, motorists are unsure of the traffic control and pedestrians cross over 57 feet of pavement at Parker Street. The adult crossing guard indicated that erratic driving behavior at the intersection is a common occurrence.

These photos show the intersection which lacks proper crossing signing and traffic control. The westbound vehicle along Parker Street does not have a STOP or YIELD sign.

Improvement Alternatives

Alternatives were developed that improved the sidewalk network to Lincoln Elementary School and improved the Parker Street/Longfellow Avenue/Cedar Bend Street intersection.

Due to the high concentration of students that live south of Lincoln Elementary that do not get bused, a consistent walking corridor should be developed to allow the students safer access to the school. As shown in the Lincoln Elementary School map, sidewalk infill is proposed on the south side the school. The sidewalk infill south of the school includes creating a connection from Cedar Bend Street to Longfellow Avenue and extending the Longfellow Avenue sidewalk down to Parker Street. It is also proposed to fill in the gaps of sidewalk along Parker Street from Longfellow Avenue to Burton Avenue and on Newton Street near Cedar Bend Street.

The proposed sidewalk on the north side is on the west side of Longfellow Avenue from Walker Street north to Virginia Street. Another sidewalk segment may be included as well. This sidewalk would serve residential neighborhood approximately 3/4 of a mile away from Lincoln Elementary which is currently being bused possibly due to the lack of sidewalk infrastructure. This neighborhood is shown in the Lincoln Elementary School map and includes the streets of Wakonda Drive, Woodmayr Drive, Oakwood Drive and Greenbrier Road. The proposed sidewalk would be along Cedar Bend Street from Walker Street to Woodmayr Drive.

The proposed intersection improvements are intended to clarify the traffic control at this intersection by moving the stop bars closer to the intersection and adding a STOP sign for the westbound Parker Street traffic. The north-south crosswalk of Parker Street is to be shortened by removing the excess pavement on the north side of the intersection. The crosswalk can be shortened from approximately 57 feet wide to 28 feet wide. Reducing the pavement width in this area will eliminate westbound Parker Street traffic from cutting the corner to head north on Cedar Bend Street. See the Proposed Crossing Improvements on figure following page 44 for more details.

Recommendations

It is recommended that the Parker Street/Longfellow Avenue/Cedar Bend Street intersection be improved as described as above. Due to the large percentage of students that live south of the school and the confusion of motorists through this intersection, the proposed improvements will lessen the distance of the crosswalk and slow down westbound Parker Street to northbound Cedar Bend Street traffic.

It is also recommended that the sidewalk network south of the school be completed as described above. The lack of sidewalk directly south of the school causes students to walk through yards or onto the street. In the winter, students have to walk in the street due to the snow.

Another recommendation is to extend the sidewalk network to the north. It is recommended that this be split into two phases. The first phase is the sidewalk on the west side of Longfellow Avenue from Walker Street north to Virginia Street. The second phase is to connect the Greenbrier neighborhood just north of Burton Avenue and just east of Cedar Bend Street. The second phase is along Cedar Bend Street from Walker Street to Woodmayr Drive.

The cost estimates for the recommendations are shown below.

LINCOLN ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

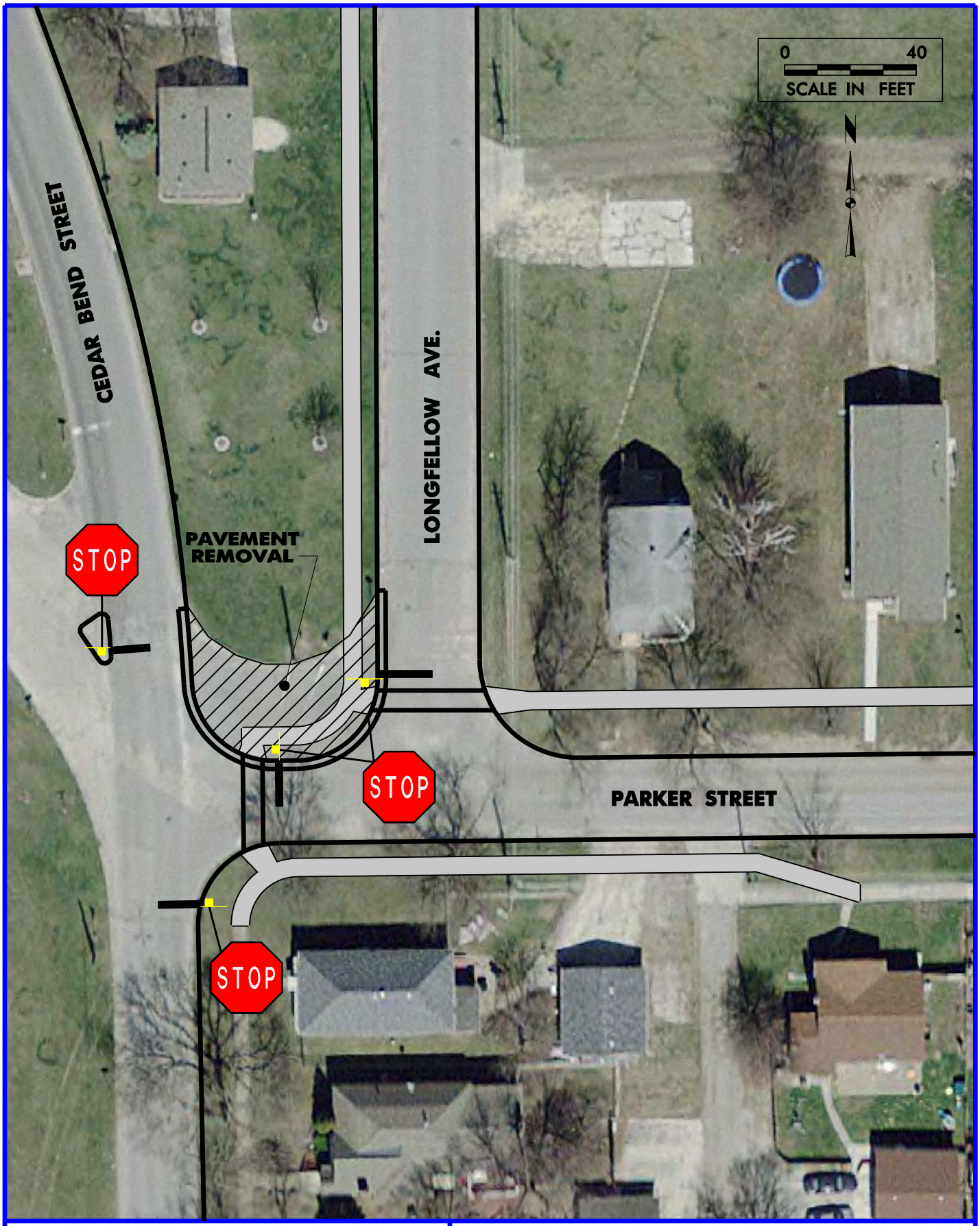
Phase I - Sidewalk and Intersection Improvements at Longfellow Avenue and Parker Street and Sidewalk Infill Along Longfellow Avenue, Parker Street and Newton Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	PCC Sidewalk	SY	1,820.0	$50.00	$91,000.00
2	Signed and Painted Pedestrian Crossing	EACH	2.0	$1,100.00	$2,200.00
3	Earthwork and Subgrade Preparation	LF	3,260.0	$3.00	$9,780.00
4	Pavement Removal	SY	280.0	$7.00	$1,960.00
5	2.5' Curb and Gutter	LS	140.0	$22.00	$3,080.00
6	Driveway Modification	EACH	4.0	$1,500.00	$6,000.00
7	Topsoil	CY	560.0	$15.00	$8,400.00
8	Seeding and Fertilizing	ACRE	0.5	$8,000.00	$4,000.00
9	Incidentals and Contingency *(Estimate at 10% of Construction Cost)*	LS	1.0	$12,500.00	$12,500.00
10	Design and contract Administration Services *(12% of Construction Cost)*	LS	1.0	$16,500.00	$16,500.00
11	Construction Survey and Inspection Services *(7% of Construction Cost)*	LS	1.0	$13,700.00	$13,700.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$169,120.00**

LINCOLN ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Phase II - Sidewalk Infill Along Cedar Bend Street from Walker Street to Woodmayr Drive.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	PCC Sidewalk	SY	1,860.0	$50.00	$93,000.00
2	Signed and Painted Pedestrian Crossing	EACH	3.0	$1,100.00	$3,300.00
3	Earthwork and Subgrade Preparation	LF	3,340.0	$3.00	$10,020.00
4	Driveway Modification	EACH	8.0	$1,500.00	$12,000.00
5	Topsoil	CY	520.0	$15.00	$7,800.00
6	Seeding and Fertilizing	ACRE	0.5	$8,000.00	$4,000.00
7	Incidentals and Contingency *(Estimate at 10% of Construction Cost)*	LS	1.0	$12,900.00	$12,900.00
8	Design and contract Administration Services *(10% of Construction Cost)*	LS	1.0	$14,400.00	$14,400.00
9	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$14,400.00	$14,400.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$171,820.00**



AECOM

INTERSECTION IMPROVEMENTS
Cedar Bend Street, Longfellow Avenue and Parker Street

SAFE ROUTES TO SCHOOL

Black Hawk County Bicycle / Pedestrian Safety Study

June 2010 Iowa Northland Regional Council of Governments 111030

3/30/2011
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Lincoln Elementary - Waterloo Attendance Area

Lincoln Elementary School

Edison Elementary Attendance Area

Black Hawk Elementary Attendance Area

Cunningham Elementary Attendance Area

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 2009 ADT

45 Number of K-5 Students in 2009

Ⓢ Signalized Intersection

Ⓖ Crossing Guard

Pedestrian Route

Existing School Crosswalk

Proposed School Crosswalk

Existing Sidewalk Centerline

Proposed Sidewalk Centerline

Phase I

Phase II

N W E S

Aerial Photography Source: Black Hawk County, April 2007

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Lincoln Elementary Study Area (Waterloo)

INRCOG Safe Routes to School Study

Jan 2011 111030

LOU HENRY ELEMENTARY SCHOOL

Existing Conditions

The existing school building was recently constructed on school property directly south of Hoover Intermediate School at the corner of Rachael Street and Colby Road. The school's bus drop-off and pick-up zone is on the school side or west side of Colby Road. The school parking lot entrance and exit is on Rachael Street. The school parking lot also serves as the drop-off and pick-up area for parents and guardians.

The following information was gathered during a phone conversation with Lou Henry Elementary School Principal Brian Ortman. He commented that there are student crossing guards stationed at the intersections of Colby Road and Rachael Street and on Rachael Street and Nancy Road. He would like to have more sidewalk on the east side of Colby Road. A lot of students walk through the yards along the east side of Colby Road. He also commented that the drop-off and pick-up area for parents is very congested and backs up onto Rachael Street. He would like to see another entrance to the parking lot off of Colby Road which would provide more space for the drop-off and pick-up area.

Some selected comments from the parent surveys that pertain to traffic safety and sidewalk infrastructure include the following:

- Parking lot and street parking is dangerous -- cannot see kids, too congested.
- Put an overpass path across Ansborough at Ridgemont.
- Ansborough and Westridge intersection is extremely dangerous -- would at least need a crosswalk with light. Kimball and Rachael is also a good spot that already has a light, but a crosswalk would allow walkers easily.
- Traffic at Park and Rachael.
- Please put sidewalks in on Hillcrest and South Hill Drive.
- Need to complete sidewalk on Colby down to Rachael. Kids have to walk four to five feet out in street in winter time due to snow and no sidewalk. Very busy at that time of day. Many close calls for kids. Cars and buses drive by.
- Street parking a problem; no sidewalks from west.
- Safety is our biggest concern -- crossing Ansborough is too dangerous.
- Sidewalks would make me more comfortable.

Results of the site visit completed on September 9, 2009, include the following observations:

Gaps and Missing Sidewalk Segments

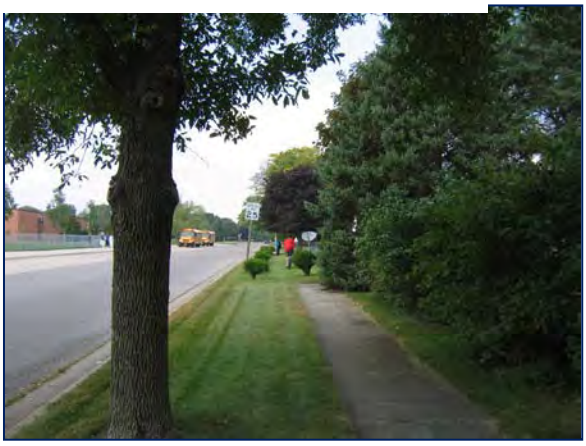
Along Rachael Street, key segments of sidewalk are missing on both sides of the street. A 340-foot segment along the north side of Rachael Street from South Hill Drive to Wendy Road and a 150-foot segment along the south side of Rachael Street from South Hill Drive to west of Wendy Road.

Sidewalk gap on the south side of Rachael Street near South Hill Drive. Paths in the grass show that a sidewalk is needed in this location.

Sidewalk gap on the north side of Rachael Street from Wendy Road to South Hill Drive. Grass shows signs of pedestrian activity. This picture also shows students walking down Rachael Street.

Colby Road also has locations where sidewalk is needed. As the principal indicated, sidewalk is lacking on the east side of Colby Road from Rachael Street to Park Lane.

Another area where sidewalk segments are missing is along Park Lane from Colby Road to Kimball Avenue. A small 120-foot segment is missing on the south side of Park Lane near the intersection of Colby Road and a 370-foot segment is missing on the north side of Park Lane from Brockway Road to the Kimball Avenue frontage road.



Sidewalk is lacking on the east side of Colby Road. Students walking in the grass on their way home from school.

Existing School Crossings at Rachael Street and Colby Road Intersection

All four legs of this 4-way STOP include signed school crossings. This is contrary to MUTCD which states that school crossing assemblies shall not be installed on approaches controlled by a STOP sign.

Multiple School Crossings at Nancy Road and Rachael Street Intersection

School crossings are marked at all three legs of this intersection. The intersection has STOP control for Nancy Road. School crossing at STOP control is contrary to MUTCD.

School Neighborhood Surrounded by Arterials

The Lou Henry Elementary School neighborhood is surrounded by high-traffic urban 4-lane arterials. The two arterials that impact the attendance boundary the most are Ansborough Avenue through the west side and Kimball Avenue through the east side. The 2009 Iowa DOT Annual Average Daily Traffic shows 11,300 vehicles per day for Ansborough Avenue and a range of 10,400 to 12,700 vehicles per day for Kimball Avenue. The existing school crossing for Ansborough Avenue is located at the intersection with Ridgemont Road. The existing school crossing for Kimball Avenue is located at the intersection with Park Lane. See the Lou Henry School map for traffic information and existing school crossing locations.

Alternatives

Alternatives that are proposed include additional sidewalk infill and upgrade school crossing at key locations. These alternatives are further described below.

Sidewalk Infill on Rachael Street

This alternative would provide a continuous sidewalk on both sides of Rachael Street from South Hill Drive to Colby Road. Rachael Street experiences higher traffic at pick-up and drop-off times on school days. Rachael Street also serves as the primary pedestrian corridor for the neighborhoods west of South Hill Drive. Based on the Lou Henry map which shows the number of K - 5th grade students living within planning areas, 93 students live west of South Hill Drive and could use Rachael Street as a route to Lou Henry Elementary School.

Sidewalk Infill on Colby Road

This alternative would provide sidewalk on the east side of Colby Drive from Rachael Street to Park Lane. Due to the close proximity of the school, this side of Colby Drive experiences numerous students walking through the grass.

Sidewalk Infill on Park Lane

This alternative would provide sidewalk on both sides of Park Lane from Colby Road to Kimball Avenue. The Park Lane intersection with Kimball Avenue is the designated school crossing location across Kimball Avenue. Even though elementary students are bused across Kimball Avenue, over 75 students live within 3/4 of a mile that would utilize the Park Lane corridor to get to Lou Henry Elementary School.

School Crosswalk Improvements and Clarification

Improvements to the existing designated school crosswalks would include the removal of the school crossing signs on all four legs of the 4-way STOP at the Rachael Street and Colby Street intersection. The improvements at this intersection would include new pavement markings of the crosswalk and stop bars.

Improvements at the Rachael Street and Nancy Road intersection would include the removal of the school crossing signage at the west leg and south leg of this intersection. One school crossing location is needed which is the location of the student crossing guards.

A new school crossing is proposed crossing Park Lane on the west side of Colby Road. This would provide a designated crossing point for students crossing Park Lane close to the school.

Recommendations

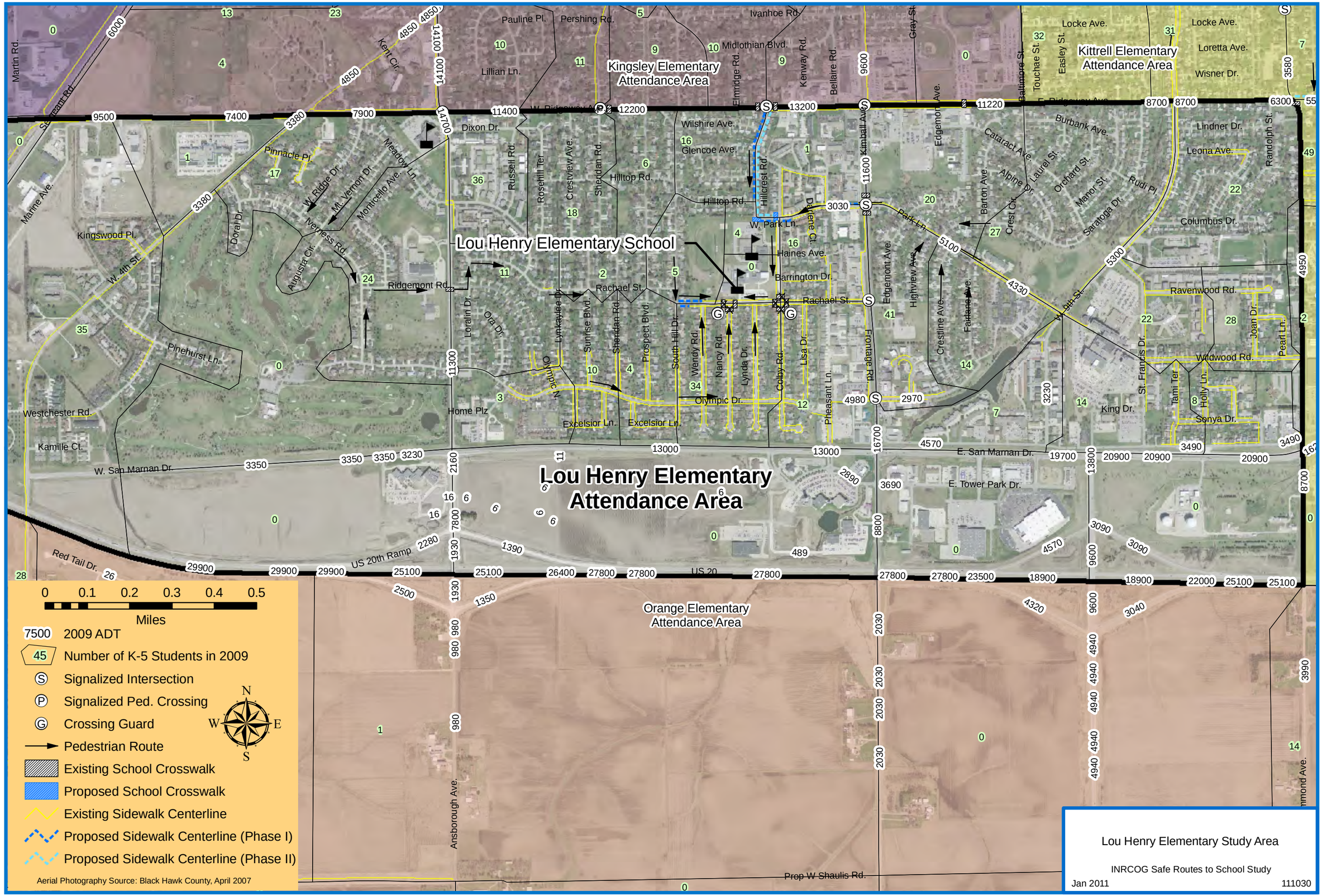
It is recommended that the school crossing improvements described above be completed at the Rachael Street and Wendy Road intersection, the Rachael Street and Colby Road intersection and the new crossing on Park Lane at Colby Road.

It is also recommended that the sidewalk infill be completed along Rachael Street and Park Lane as described above. This recommendation does not include the sidewalk along Colby Road. Due to the sidewalk on the west side of Colby Road, this segment of sidewalk was not as critical as the recommended segments along Rachael Street and Park Lane.

LOU HENRY ELEMENTARY (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Sidewalk Infill on Rachael Street Near South Hill Drive and on Park Lane Between Colby Street and Kimball Avenue. School Crossing Improvements on Rachael Street at Nancy Road and Colby Road. New School Crossing on Park Lane at Colby Road.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	106.0	$35.00	$3,710.00
2	Posts	LF	140.0	$20.00	$2,800.00
3	Pavement Markings	LS	1.0	$4,500.00	$4,500.00
4	PCC Sidewalk	SY	550.0	$55.00	$30,250.00
5	Earthwork and Subgrade Preparation	LF	975.0	$4.00	$3,900.00
6	Driveway Modification	Each	3.0	$1,500.00	$4,500.00
7	Topsoil	CY	260.0	$20.00	$5,200.00
8	Seeding and Fertilizing	Acre	0.3	$12,000.00	$3,600.00
9	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$5,900.00	$5,900.00
10	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$5,900.00	$5,900.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$70,260.00**


Lou Henry Elementary School
Kingsley Elementary Attendance Area
Kittrell Elementary Attendance Area
Lou Henry Elementary Attendance Area
Orange Elementary Attendance Area
Martin Rd.
Sergeant Rd.
Kent Cir.
Pauline Pl.
Pershing Rd.
Ivanhoe Rd.
Lillian Ln.
Midlothian Blvd.
Elmridge Rd.
Kenway Rd.
Bellaire Rd.
Gray St.
Locke Ave.
Loretta Ave.
Wisner Dr.
Easley St.
Touchae St.
Baltimore St.
Edgemont Ave.
Burbank Ave.
Lindner Dr.
Leona Ave.
Randolph St.
Cataract Ave.
Laurel St.
Orchard St.
Manor St.
Rudi Pl.
Saratoga Dr.
Columbus Dr.
Barton Ave.
Alpine Dr.
Crest Ct.
Park Ln.
W. Park Ln.
Haines Ave.
Barrington Dr.
Rachael St.
Ravenwood Rd.
Wildwood Rd.
Joan Dr.
Pearl Ln.
St. Francis Dr.
Tami Ter
Holly Ln.
Sonya Dr.
King Dr.
E. Tower Park Dr.
E. San Marnan Dr.
W. 9th St.
Highview Ave.
Crestline Ave.
Fairlane Ave.
Frontage Rd.
Pheasant Ln.
Lisa Dr.
Lynda Dr.
Coby Rd.
Nancy Rd.
Wendy Rd.
South Hill Dr.
Prospect Blvd.
Sheridan Rd.
Sunrise Blvd.
Lynkaylee Dr.
Ora Dr.
Loralin Dr.
Olympic Dr.
Excelsior Ln.
Home Plz
Ridgemont Rd.
Augusta Cir.
Verness Rd.
Monticello Ave.
Meadow Ln.
Mt. Vernon Dr.
W. Ridge Dr.
Pinnacle Pl.
Dora Dr.
Marine Ave.
Kingswood Pl.
W. 4th St.
Pinehurst Ln.
Westchester Rd.
Kamille Ct.
W. San Marnan Dr.
Red Tail Dr.
US 20th Ramp
US 20
Dixon Dr.
Russell Rd.
Rosehill Ter
Crestview Ave.
Sheridan Rd.
Hilltop Rd.
Wilshire Ave.
Glencoe Ave.
Hillcrest Rd.
Dale Drive Ct.
Kimball Ave.
Ansborough Ave.
Prop W Shaulis Rd.
0 0.1 0.2 0.3 0.4 0.5
Miles
7500 2009 ADT
45 Number of K-5 Students in 2009
Ⓢ Signalized Intersection
Ⓟ Signalized Ped. Crossing
Ⓖ Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline (Phase I)
Proposed Sidewalk Centerline (Phase II)
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Aerial Photography Source: Black Hawk County, April 2007
Lou Henry Elementary Study Area
INRCOG Safe Routes to School Study
Jan 2011
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LOWELL ELEMENTARY SCHOOL

Existing Conditions

Lowell Elementary School is located on the north side of Williston Avenue at the end of Oregon Street in an older established neighborhood. The existing sidewalk network is well established.

Some comments from the Parent Survey include the following:

- The intersection of 9th Street and South Street is dangerous.
- Several comments requested a crossing guard at the intersection of Williston Avenue and W. 11th Street.

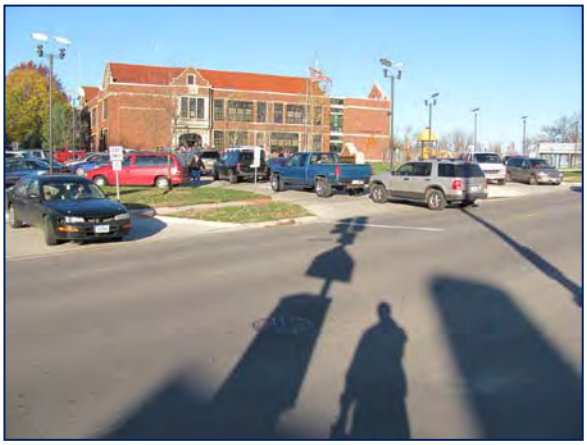
Based on the site visit completed on November 4, 2009, the following observations were made:

Pick-Up Congestion

Due to the small parking lot loop, not many vehicles can fit along the curb line to pick-up students. Vehicles tend to wait on Williston Avenue backing up traffic.

Parking on Oregon Street

Vehicles park on the east side of Oregon Street to pick-up students. The signalized pedestrian crossing is on the west side forcing parents and students to cross Oregon Street.



Cars waiting to pick up students occasionally block traffic on Williston Avenue.

Vehicles park on the east side of Oregon Street to pick-up students. The signalized pedestrian crossing is on the west side forcing parents and students to cross Oregon Street.

Alternatives

Several alternatives were developed to make improvements at Lowell Elementary. These alternatives are as follows:

Parking on Oregon Street

Switch the parking on Oregon Street from the east side to the west side. This will allow students to avoid crossing Oregon Street to waiting cars.

Provide a School Crosswalk on W. 9th Street

To give added protection for students living in the area west of W. 9th Street an alternative would be to install a new school crosswalk near the South Street intersection.

U.S. Highway 218

U.S. Highway 218 is a major barrier for students and pedestrians in the Lowell Elementary attendance boundary. All of the students that reside on the opposite side of the highway are eligible for busing to Lowell Elementary. There are sidewalk accommodations and pedestrian signals at U.S. Highway 218 and Washington Streets at W. 4th Street, W. 5th Street, W. 6th Street, W. 11th Street and Williston Avenue. Due to the high-traffic volumes, high turning movements, speed of traffic and multi-lane crossing, U.S. Highway 218 is a major barrier for elementary-aged students.

Recommendation

It is recommended that a school crossing be installed on Randolph Street and W. 9th Street intersection. This crossing would give added safety for crossing of W. 9th Street for 49 students who attend Lowell Elementary who live west of W. 9th Street. A school crossing assembly is estimated to cost approximately $2,500.00.

Lowell Elementary Attendance Area

Cunningham Elementary Attendance Area

McKinstry Elementary Attendance Area

Irving Elementary Attendance Area

Kittrell Elementary Attendance Area

Lowell Elementary School

0 0.1 0.2 0.3 0.4 0.5

Miles

- 7500 2009 ADT
- 45 Number of K-5 Students in 2009
- (S) Signalized Intersection
- (P) Signalized Ped. Crossing
- (G) Crossing Guard
- Pedestrian Route
- Existing School Crosswalk
- Proposed School Crosswalk
- Existing Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Lowell Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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Lowell Elementary Attendance Area

Cunningham Elementary Attendance Area

McKinstry Elementary Attendance Area

Irving Elementary Attendance Area

Kittrell Elementary Attendance Area

Lowell Elementary School

0 0.1 0.2 0.3 0.4 0.5

Miles

- 7500 2009 ADT
- 45 Number of K-5 Students in 2009
- (S) Signalized Intersection
- (P) Signalized Ped. Crossing
- (G) Crossing Guard
- Pedestrian Route
- Existing School Crosswalk
- Proposed School Crosswalk
- Existing Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Lowell Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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ORANGE ELEMENTARY SCHOOL

Existing Conditions

Orange Elementary School is located at the southwest corner of Orange Road and Kimball Avenue. It is located in a rural area on the south side of Waterloo. A small subdivision is located to the north and across Orange Road from the school. Almost 90% of the student population gets bused to the school.

Some comments from the parent survey include the following:

- Orange Road traffic is 40 mph during school time! There are no school zone lights! No crossing guards! Students going to Hawkeye speed terribly! Police presence before school may help!
- Speed of traffic on Orange Road is too high. Speed bumps not very helpful and do not deter fast driving.
- I would love for a police officer to sit on our road and clock drivers; maybe it would slow down the college kids. Orange Road has a speed limit of 25 -- no flashing light or school zone sign when coming from the Ansborough side. Hawkeye students will drive 45 mph or more down our street. Speed humps are minimal and do not slow anyone.

In a phone conversation with Orange Elementary School Principal, Ken Erpelding, he commented that most of the students are bused to school. There is no crossing guard program due to very few students walking or biking to school.

Results of various site visits to Orange Elementary in the past year include the following observations:

- There is no sidewalk along Kimball Avenue or Orange Road near Orange Elementary School.
- Orange Road and the Kimball Avenue intersection is STOP control for Orange Road. An overhead flashing beacon flashes red for Orange Road and yellow for Kimball Avenue.
- There are school zone signs along Kimball Avenue but no school crossings.
- The speed limit along Orange Road is 25 mph and Kimball Avenue is 30 mph.
- Kimball Avenue is a PCC paved roadway with curb and gutter. Orange Road is an asphalt roadway with earth shoulders and ditches along both sides.

A review of the Orange Elementary map shows that there are 18 elementary aged students that live in the subdivision to the north of Orange Elementary School.

Alternatives

To improve the walking environment for the subdivision just north of Orange Elementary School, a sidewalk could be constructed along the west side of Kimball Avenue from Orange Elementary School up to Sidehill Drive. Improved pavement markings at the intersection of Kimball Avenue and Orange Road intersection would place the stop bar behind the proposed crosswalk on Orange Road. Since Orange Road has STOP control, a school crosswalk is not to be installed at this intersection. Also, Orange Elementary should consider a crossing guard program to assist students across intersection and provide an additional level of safety.

Orange Elementary Attendance Area

Orange Elementary School

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 2009 ADT

45 Number of K-5 Students in 2009

Ⓢ Signalized Intersection

Ⓖ Crossing Guard

Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Orange Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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POYNER ELEMENTARY AND BUNGER INTERMEDIATE SCHOOLS

Existing Conditions

Poyner Elementary School is located on the corner of Central Avenue and Roosevelt Road in Evansdale. It was recently constructed at this location. Bunger Intermediate is located on Roosevelt Road just north of Poyner Elementary. See the Poyner Elementary and Bunger Intermediate maps for location.

During a phone conversation with the Bunger Intermediate Principal, Andy Miehe, he had concerns at two intersections: the Evans Road and Lafayette Road intersection and the Roosevelt Road and Lafayette Road intersection. He thought that the traffic speeds along Lafayette are too high and that the Roosevelt Road intersection with Lafayette should be made into a 4-way STOP.

Some selected comments from the parent surveys that pertain to traffic safety and sidewalk infrastructure include the following:

- No sidewalks on Grand Boulevard, but we need them.
- Would appreciate sidewalks on Grand Avenue.
- Parking is awful -- speeding.
- No sidewalks for the kids to move away from traffic.
- The school needs more bike racks.

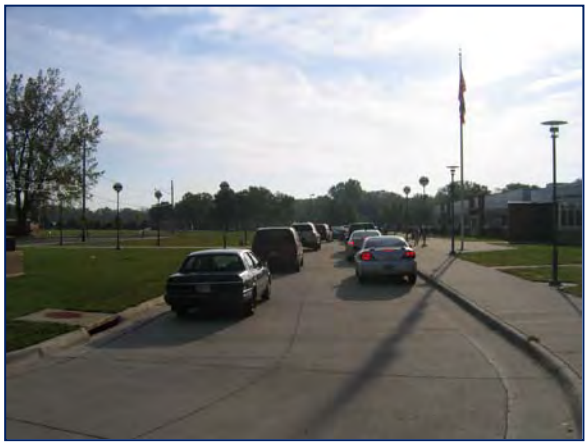
During a site visit to both schools on September 14, 2009, the following observations were made:

Crossing Guard Locations

The drop-off and pick-up area for Poyner Elementary is in front of the school on a one-way loop. Student crossing guards are located on the one-way loop at the entrance, exit and in front of the main entrance.

Poyner Roll-Out STOP Signs

Roll-out STOP signs are placed on the school crosswalk located on the corner of Central Avenue and Roosevelt Road. The intersection is marked clearly with fresh pavement markings. Speeds of through traffic are reduced due to the sharp curve at this location.



One-way loop during morning drop-off time.

School crosswalk at the corner of Central Avenue and Roosevelt Road.

School Crosswalks on Roosevelt Road and Lafayette Road

There is a school crosswalk on Roosevelt Street along the south side of Feldt Avenue and a school crosswalk on Roosevelt Road approximately 280 feet north of the Feldt Avenue crosswalk. Both crosswalks are signed adequately with fresh pavement markings.

Another school crosswalk is located on Lafayette Road along the west side of Roosevelt Road. This crosswalk has older signing and the pavement markings are faded. Lafayette Road has much more traffic than Roosevelt Road. The 2009 Iowa DOT Annual Average Daily Traffic shows 3,380 vehicles per day on Lafayette Road and 690 vehicles per day on Roosevelt Road.

Lack of Sidewalk

Due to the close proximity of Bunger Intermediate School and Poyner Elementary School to each other, their sidewalk needs are located in the same location. Since Poyner is an elementary school, its sidewalk needs are much closer to the school. The sidewalk needs that were identified during analysis of the school maps and site visits were in two locations: Grand Boulevard from Gilbert Drive to Central Avenue and on Lafayette from Roosevelt Road to McCoy Road.

A sidewalk along Grand Boulevard would provide a pedestrian access along Grand Boulevard which has 1,470 vehicles per day for the neighborhoods south and east of Grand Boulevard. These neighborhoods include the streets of Joy Drive and Hansen Drive. Twenty-four (24) K - 5th grade students reside in these neighborhoods. Refer to the Poyner Elementary School map.

A sidewalk along Lafayette Road would provide a pedestrian access for neighborhoods north of Lafayette Road and east of McCoy Road. This sidewalk segment would be utilized by mainly Bunger Intermediate School students due to the walking distance from Poyner Elementary to the neighborhoods that this sidewalk would serve.

Looking north on Grand Boulevard at Central Avenue intersection. The existing pavement is 26 feet wide which is too narrow for pedestrians and vehicular traffic particularly in the winter.

Recommendations

It is recommended that additional sidewalk be constructed to provide better pedestrian access to Poyner Elementary and Bunger Intermediate. To allow the preparation of grant applications, the proposed improvement have been grouped into phases. Phase I is the construction of the sidewalk along Grand Boulevard and Phase II is the construction of the sidewalk along Lafayette Road.

BUNGER INTERMEDIATE AND POYNER ELEMENTARY SCHOOLS (WATERLOO)
PLANNING LEVEL COST ESTIMATES

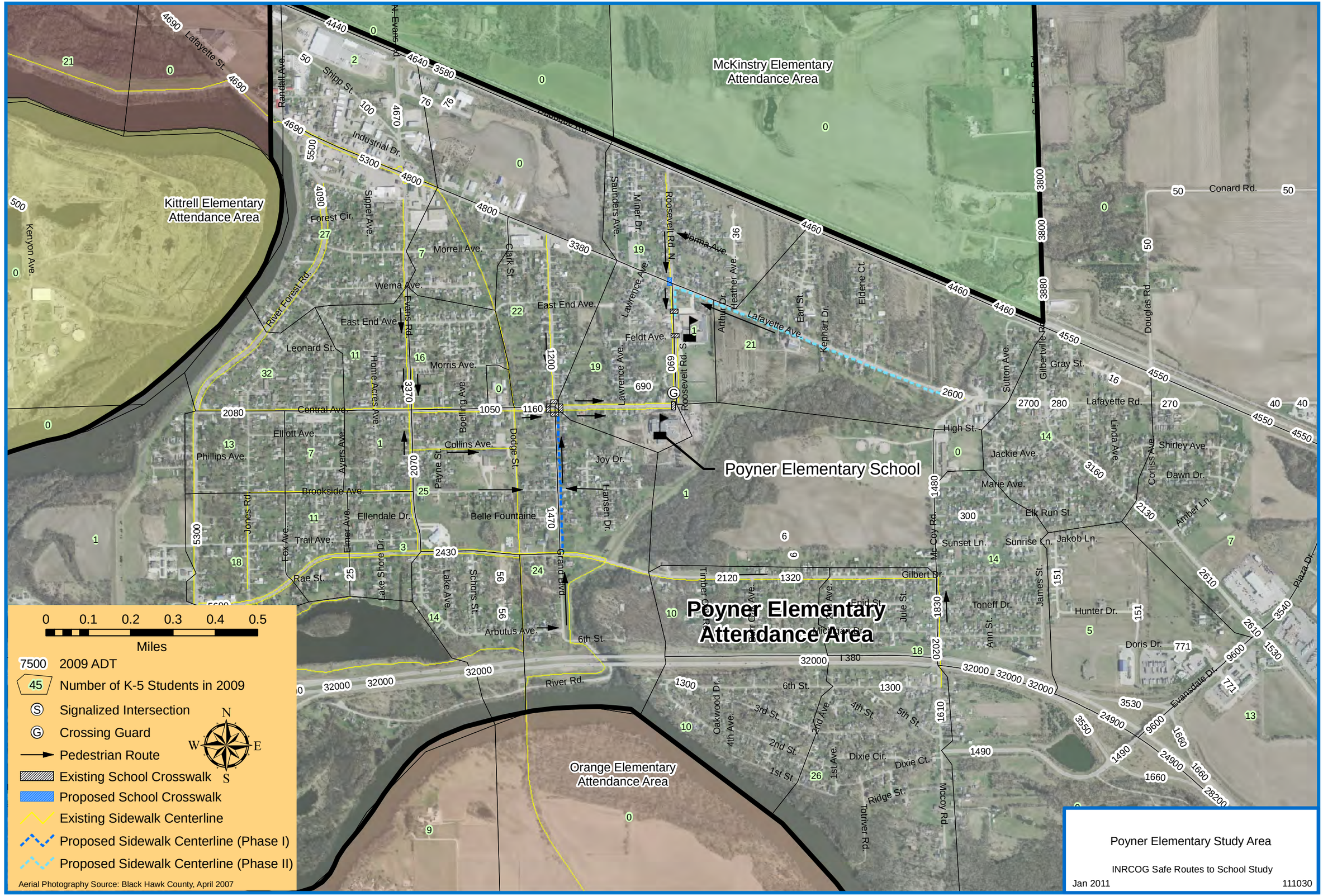
Phase I - New Sidewalk on Grand Boulevard from Gilbert Drive to Central Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Pavement Markings	LS	1.0	$500.00	$500.00
2	5-Foot PCC Sidewalk	SY	970.0	$45.00	$43,650.00
3	Earthwork and Subgrade Preparation	LF	1,740.0	$3.00	$5,220.00
4	Driveway Modification	Each	6.0	$1,760.00	$10,560.00
5	Topsoil	CY	460.0	$15.00	$6,900.00
6	Seeding and Fertilizing	Acre	0.4	$7,975.00	$3,190.00
7	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$7,100.00	$7,100.00
8	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$7,100.00	$7,100.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$84,220.00**

BUNGER INTERMEDIATE AND POYNER ELEMENTARY SCHOOLS (WATERLOO)
PLANNING LEVEL COST ESTIMATES

Phase II - New Sidewalk on Roosevelt Road from Bunger to Lafayette Avenue and on Lafayette Avenue from Roosevelt Road to McCoy Road. New School Crosswalk on Lafayette Avenue at Roosevelt Road.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	44.0	$30.00	$1,320.00
2	Posts	LF	56.0	$15.00	$840.00
3	LED Sign	Each	2.0	$3,000.00	$6,000.00
4	Pavement Markings	LS	1.0	$2,000.00	$2,000.00
5	5-Foot PCC Sidewalk	SY	2,240.0	$45.00	$100,800.00
6	Earthwork and Subgrade Preparation	LF	4,030.0	$3.00	$12,090.00
7	Driveway Modification	Each	9.0	$1,500.0	$13,500.00
8	Topsoil	CY	1,050.0	$19.00	$19,950.00
9	Seeding and Fertilizing	Acre	1.0	$7,600.00	$7,600.00
10	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$16,500.00	$16,500.00
11	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$16,500.00	$16,500.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$197,100.00**


McKinstry Elementary Attendance Area
Kittrell Elementary Attendance Area
Poyner Elementary School
Poyner Elementary Attendance Area
Orange Elementary Attendance Area
Lafayette St.
Randall Ave.
Shipp St.
Industrial Dr.
N. Evans Rd.
Dumpster Rd.
Forest Cir.
Sippel Ave.
Kenyon Ave.
River Forest Rd.
Morrell Ave.
Wema Ave.
Evans Rd.
Clark St.
East End Ave.
Leonard St.
Home Acres Ave.
Morris Ave.
Central Ave.
Elliott Ave.
Phillips Ave.
Ayers Ave.
Boelling Ave.
Collins Ave.
Dodge St.
Payne St.
Joy Dr.
Hansen Dr.
Brookside Ave.
Jones Rd.
Fox Ave.
Elmer Ave.
Ellendale Dr.
Trail Ave.
Belle Fountaine
Lake Shore Dr.
Rae St.
Lake Ave.
Schons St.
Grand Blvd.
Arbutus Ave.
6th St.
River Rd.
Saunders Ave.
Miner Dr.
Roosevelt Rd. N.
Roosevelt Rd. S.
Lawrence Ave.
Verma Ave.
Feldt Ave.
Arthur Dr.
Heather Ave.
Earl St.
Kephart Dr.
Eldene Ct.
Lafayette Ave.
Sutton Ave.
Gilbertville Rd.
Gray St.
Douglas Rd.
Conard Rd.
Lafayette Rd.
High St.
Jackie Ave.
Marie Ave.
Elk Run St.
Sunset Ln.
Sunrise Ln.
Jakob Ln.
Linda Ave.
Corliss Ave.
Shirley Ave.
Dawn Dr.
Amber Ln.
Plaza Dr.
Mc Coy Rd.
Gilbert Dr.
Timber Creek Rd.
Clay Ave.
Enid St.
Julie St.
Toneff Dr.
James St.
Ann St.
Hunter Dr.
Doris Dr.
Evansdale Dr.
I 380
Oakwood Dr.
4th Ave.
3rd St.
2nd St.
1st St.
2nd Ave.
4th St.
5th St.
1st Ave.
Dixie Cir.
Dixie Ct.
Ridge St.
Mccoy Rd.
Totriver Rd.
0 0.1 0.2 0.3 0.4 0.5
Miles
7500 2009 ADT
45 Number of K-5 Students in 2009
Signalized Intersection
Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline (Phase I)
Proposed Sidewalk Centerline (Phase II)
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Aerial Photography Source: Black Hawk County, April 2007
Poyner Elementary Study Area
INRCOG Safe Routes to School Study
Jan 2011
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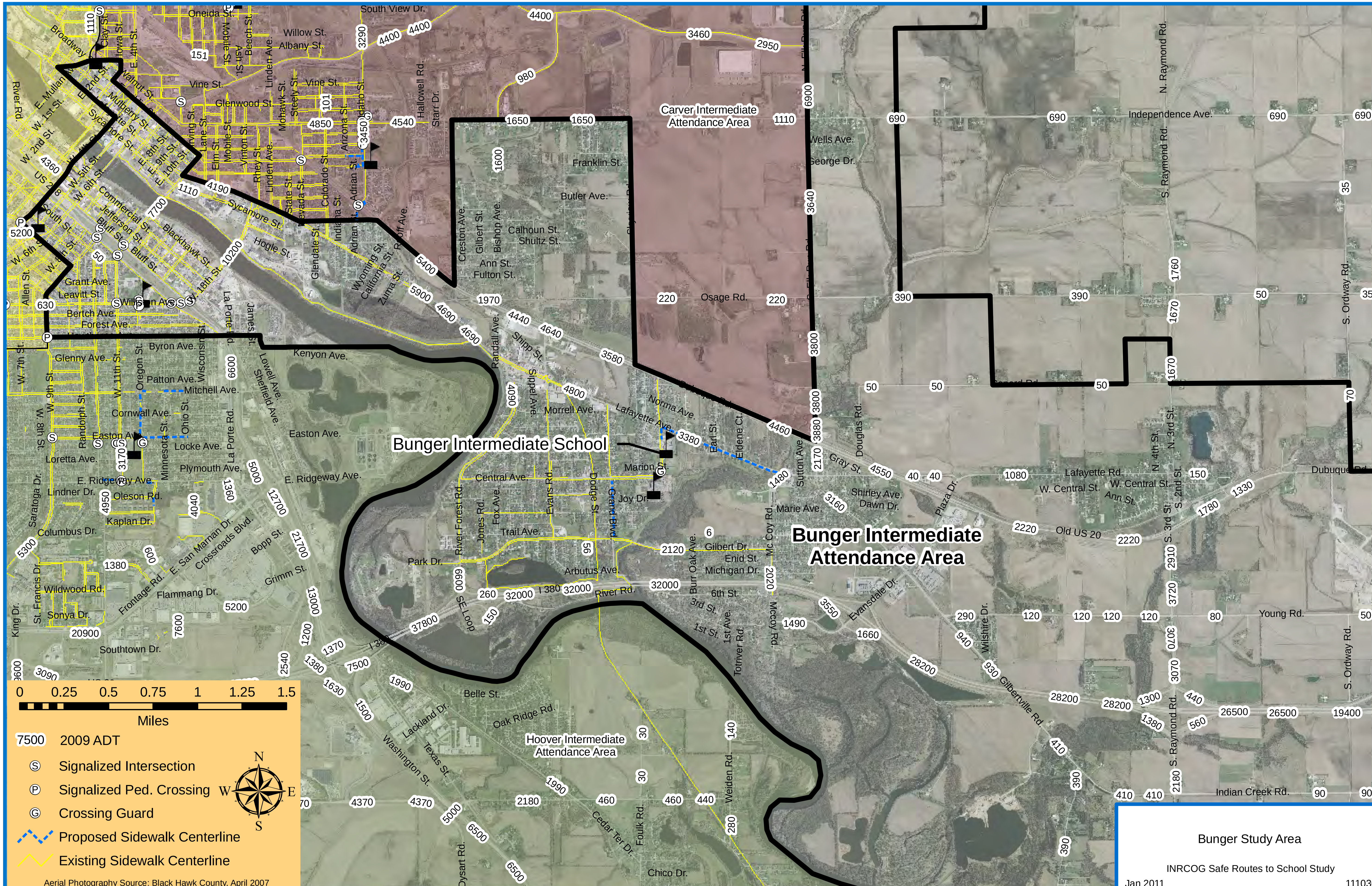

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CEDAR FALLS SCHOOL DISTRICT

CEDAR HEIGHTS ELEMENTARY SCHOOL

Existing Conditions

Cedar Heights Elementary School is located along Rainbow Drive in an older established neighborhood. The 2009 Iowa DOT Annual Average Daily Traffic shows 5,800 vehicles per day. The bus drop-off and pick-up zone is off of Rainbow Drive through the one-way loop at the front of the school. There are several drop-off and pick-up areas for parents. One is located on the east side of the school through the parking lot off of Rainbow Drive. The other is located south of the school on the one-way street of Hawthorne Drive.

Within the Parent Survey conducted in the spring of 2009, the comments pointed out several issues that related to sidewalk improvements. Many parents commented on the lack of sidewalks particularly on Rownd Street. Several commented on the lack of an adult crossing guard at the pedestrian signal on Hawthorne Drive and Rownd Street.

The results of the site visit conducted September 24, 2009, include the following observations:

Drop-Off and Pick-Up Congestion

Cedar Heights Elementary experiences pick-up and drop-off congestion at the east parking lot and just south of the school along Hawthorne Drive. At times, congestion for the east parking lot can back up onto Rainbow Drive. Hawthorne Drive is a westbound one-way from Rownd Street to Willow Lane just south of Cedar Heights Elementary School. Parking is not permitted along the north side of the Hawthorne Drive and at the designated crosswalks. Many vehicles disregard parking signs causing congestion and restricted sight distance to crosswalk.

Cars parked through crosswalk that does not get used and in front of "No-Parking" sign on Hawthorne Drive just south of Cedar Heights Elementary School.

Congestion along Hawthorne Drive at afternoon pick-up time.

Crosswalk on Hawthorne Drive

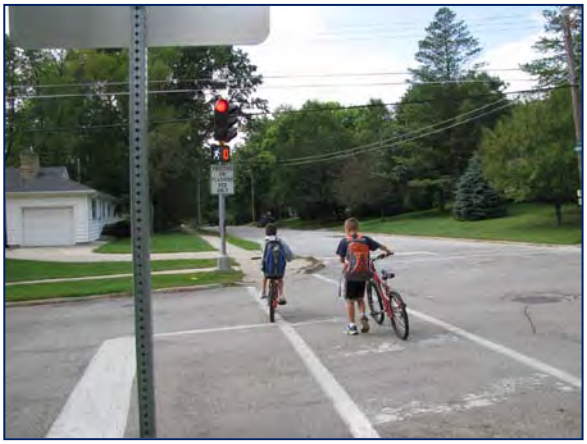
The crosswalk on Hawthorne Drive includes a temporary STOP sign that can be turned toward traffic during drop-off and pick-up times. The crosswalk does not include school crossing signs to designate the crosswalk. Student crossing guards are present in the morning and afternoon to assist younger students across the street. The drop-off and pick-up zone is on the south side of the street so students have to cross Hawthorne Drive. There are two crosswalks on Hawthorne Drive, one that gets used and the other does not. The crosswalk that does not get used has pavement markings and "No-Parking" signs placed on the south side of Hawthorne Drive.

Temporary STOP sign at crosswalk and crossing guard are important features of this crosswalk. This crosswalk does not include painting or "No Parking" signs on the south side of Hawthorne Drive.

Signal at Hawthorne Drive and Rownd Street

The signal gets heavily utilized by students walking to and from school. Due to the high amount of traffic on Hawthorne Drive from parents dropping off and picking up students, there is a potential for conflict between vehicular traffic and pedestrians. Vehicular traffic on Hawthorne Drive is to proceed only on a flashing red light. There are countdown timers for pedestrians as well.

This intersection is the end of the one-way traffic on Hawthorne Drive.



Students westbound on Hawthorne Drive crossing Rownd Street.

Lack of Sidewalk on Rownd Street

Observations were made during the site visit of students walking down Rownd Street through yards and along curb lines. Rownd Street is a collector road approximately 35 feet in width.

Students walking south through yards on the east side of Rownd Street.

Pedestrian Signal on Rainbow Drive in Front of School

This school crosswalk has an adult crossing guard that assists students in the proper operation of the pedestrian signal. The crosswalk is marked and signed.

Recommendations

By witnessing students walking south down Rownd Street and the comments received by parents requesting additional sidewalk, particularly down Rownd Street, it is recommended that sidewalk be constructed along the east side of Rownd Street from Bicentennial Drive to Hawthorne Drive. This sidewalk connection will serve multiple neighborhoods along Rownd Street just north of University Avenue.

It is also recommended that the crosswalk just south of the school on Hawthorne Drive be improved. Improvements would include new pavement markings for the crosswalk and stop bars, new signing to designate the crossing as a school crosswalk and the placement of “No-Parking” signs 50 feet to the east of the crosswalk. The placement of the “No-Parking” signs will be on the south side of Hawthorne Drive to allow better sight distance to the crosswalk.

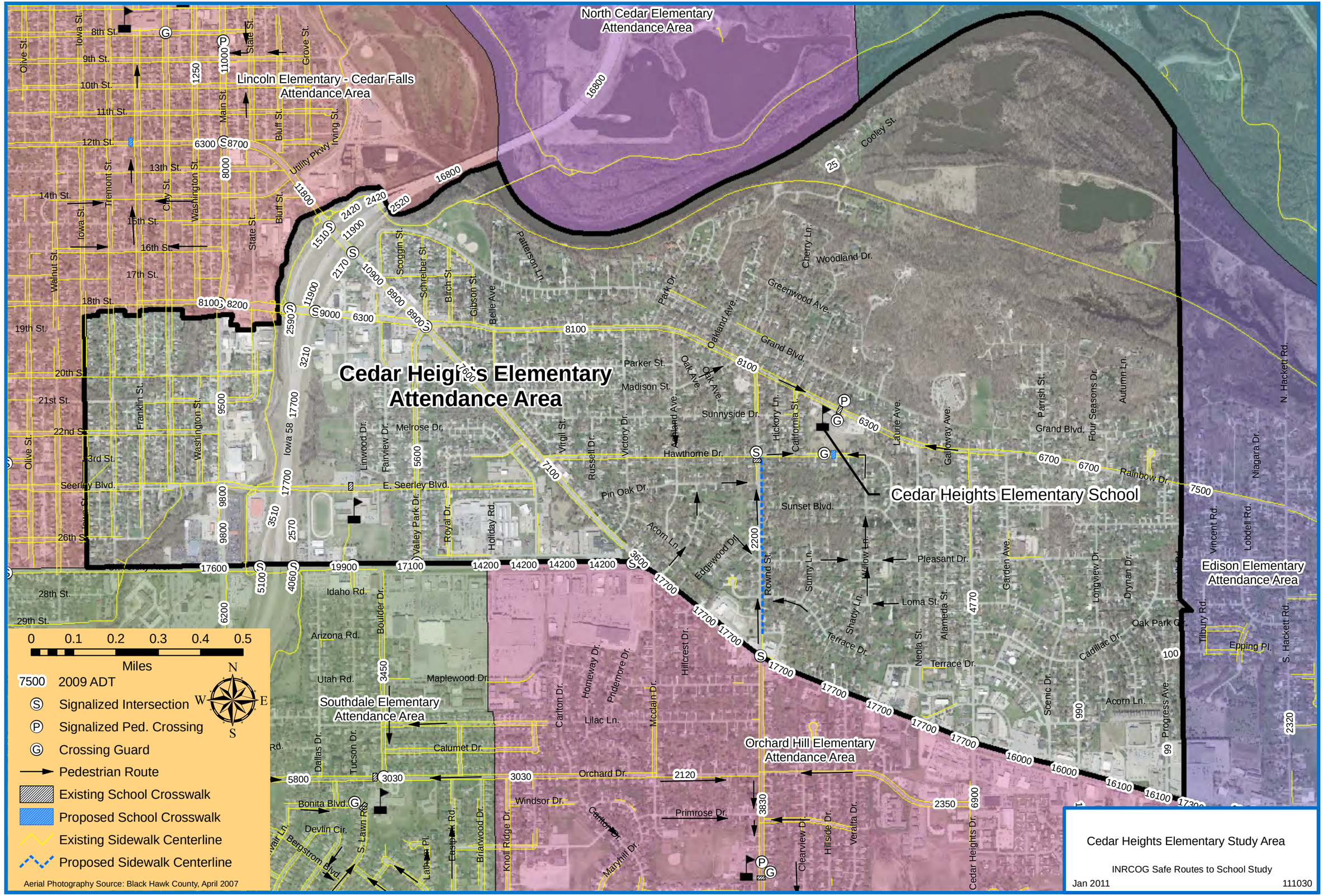
Pedestrian signal in front of the school on Rainbow Drive.

The costs of these recommendations are shown in the table below.

CEDAR HEIGHTS ELEMENTARY (CEDAR FALLS)
PLANNING LEVEL COST ESTIMATES

Sidewalk on Rownd Street from Bicentennial Drive to Hawthorne Drive Along the East Side.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	PCC Sidewalk	SY	1,230.0	$55.00	$67,650.00
2	Signed and Painted Pedestrian Crossing	Each	1.0	$1,500.00	$1,500.00
3	Earthwork and Subgrade Preparation	LF	2,200.0	$4.00	$8,800.00
4	Topsoil	CY	350.0	$20.00	$7,000.00
5	Seeding and Fertilizing	Acre	0.4	$4,000.00	$1,600.00
6	Design and Contract Administration Services *(12% of Construction Cost)*	LS	1.0	$10,400.00	$10,400.00
7	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$8,700.00	$8,700.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$105,650.00**


North Cedar Elementary Attendance Area
Lincoln Elementary - Cedar Falls Attendance Area
Cedar Heights Elementary Attendance Area
Cedar Heights Elementary School
Edison Elementary Attendance Area
Southdale Elementary Attendance Area
Orchard Hill Elementary Attendance Area
Olive St.
Iowa St.
8th St.
9th St.
10th St.
11th St.
12th St.
13th St.
14th St.
15th St.
16th St.
17th St.
18th St.
19th St.
20th St.
21st St.
22nd St.
23rd St.
26th St.
28th St.
29th St.
State St.
Grove St.
Main St.
Bluff St.
Irving St.
Utility Pkwy
Tremont St.
Clay St.
Washington St.
Walnut St.
Franklin St.
Cooley St.
Woodland Dr.
Cherry Ln.
Greenwood Ave.
Park Dr.
Oakland Ave.
Grand Blvd.
Patterson Ln.
Scoggin St.
Schreiber St.
Birch St.
Gibson St.
Belle Ave.
Parker St.
Madison St.
Oak Ave.
Sunnyside Dr.
Hickory Ln.
California St.
Laurie Ave.
Galloway Ave.
Parrish St.
Four Seasons Dr.
Autumn Ln.
N. Hackett Rd.
Niagara Dr.
Rainbow Dr.
Melrose Dr.
Linwood Dr.
Fairview Dr.
Virgil St.
Russell Dr.
Victory Dr.
Hawthorne Dr.
Pin Oak Dr.
Sunset Blvd.
Acorn Ln.
Edgewood Dr.
Rownd St.
Sunny Ln.
Willow Ln.
Pleasant Dr.
Loma St.
Shady Ln.
Terrace Dr.
Neola St.
Alameda St.
Garden Ave.
Longview Dr.
Drynan Dr.
Oak Park Ct.
Cadillac Dr.
Scenic Dr.
Progress Ave.
Vincent Rd.
Lobdell Rd.
Tilbury Rd.
Epping Pl.
S. Hackett Rd.
Seerley Blvd.
E. Seerley Blvd.
Valley Park Dr.
Royal Dr.
Holiday Rd.
Iowa 58
Idaho Rd.
Boulder Dr.
Arizona Rd.
Utah Rd.
Maplewood Dr.
Dallas Dr.
Tucson Dr.
Calumet Dr.
Orchard Dr.
Windsor Dr.
Primrose Dr.
Bonita Blvd.
Devlin Cir.
S. Lawn Rd.
Bergstrom Blvd.
Lathrop Pl.
Eastpark Rd.
Briarwood Dr.
Knoll Ridge Dr.
Carlton Dr.
Manyhill Dr.
Homeway Dr.
Pridemore Dr.
Hillcrest Dr.
Mcclain Dr.
Lilac Ln.
Clearview Dr.
Hillside Dr.
Veralla Dr.
Cedar Heights Dr.
Oak Park Ct.
16800
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9000
6300
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3210
7600
17700
9500
9800
3510
2570
17600
5100
4060
19900
17100
14200
3600
2200
25
6300
6700
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3830
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Miles
7500 2009 ADT
Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
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Aerial Photography Source: Black Hawk County, April 2007
Cedar Heights Elementary Study Area
INRCOG Safe Routes to School Study
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HELEN A. HANSEN ELEMENTARY AND HOLMES JUNIOR HIGH SCHOOLS

Existing Conditions

Helen A. Hansen Elementary and Holmes Junior High Schools are located in Cedar Falls just south of the 4-way STOP intersection of W. 4th Street and Angie Drive. Phone interviews were conducted with Dr. Tony Reid, principal of Helen A. Hansen Elementary School, and Dave Welter, principal of Holmes Junior High School. The following issues regarding pedestrian safety were described:

Dr. Tony Reid's Comments:

- The City of Cedar Falls supplies a crossing guard at the intersection of W. 4th Street and Angie Drive. He would like to see a city-supplied crossing guard at 8th Street and Barrington Street which only has student crossing guards.

- Parking on the south side of 8th Street during drop-off and pick-up times cause students to cross 8th Street at mid-block away from designated crosswalks.

- School buses and personal vehicles both use the school parking lot for drop-off and pick-up times. This causes congestion in the parking lot.

Dave Welter's Comments:

- Of the 525 students that attend Holmes Junior High School, approximately 40% walk or bike to school.

- He thought that the W. 4th Street and Hudson Road intersection was the most dangerous intersection for the students. The city recently added additional signing and pavement markings to improve the safety of this intersection.

- He would like to see additional bike trails placed on Hudson Road.

Within the Parent Survey conducted in the spring of 2009, the comments pointed out several issues that related to sidewalk improvements. Some parents commented that they did not like how the elementary students had to cross the school road to the sidewalk in front of Holmes Junior High School. Lack of sidewalks was a concern with one parent describing the lack of sidewalk on Angie Drive and Crescent Drive.

Site visits were completed October 8, 2009, and July 12, 2010. Below are the observations from these site visits:

Lack of Sidewalk in Key Locations

Sidewalk is missing along the east side of the Helen A. Hansen Elementary entrance road. Elementary students cross the entrance road at mid-block.

Lack of sidewalk was also observed on Angie Drive from W. 4th Street north. Students were observed walking down Angie Street on their way home from school.

Crosswalk on entrance road and location of missing sidewalk in front of Holmes Junior High School.

8th Street Drop-Off and Pick-Up Area

Student crossing guards are located at the school crosswalk on 8th Street at Barrington Road. Roll-out STOP signs are used to stop traffic on 8th Street. The drop-off and pick-up area is along the north side of 8th Street. No parking is along the south side of 8th Street but there are cars that park along the south side during drop-off and pick-up times. There is another school crosswalk on 8th Street at Warwick Drive.

Future Hudson Road Recreational Trail

A future recreational trail along the west side of Hudson Road from W. 12th Street to W. 1st Street is planned for construction in 2011. This future recreational trail will provide additional pedestrian facilities that will connect Hudson Road to W. 4th Street and W. 8th Street. Refer to the Helen A. Hansen school map for further information.

Lack of sidewalk on Angie Drive which is 31 feet wide.

Recommendations

It is recommended that additional sidewalk be constructed along the east side of the entrance road in front of Holmes Junior High School. Parents have commented that elementary students feel intimidated crossing the entrance road and walking through junior high students congregating in front of the school. By constructing this sidewalk, elementary students would avoid crossing the entrance road until possibly at the W. 4th Street and Angie Drive intersection where there is an adult crossing guard. Refer to the Helen A. Hansen Elementary School map.

It is also recommended to place sidewalk along the west side of Angie Drive from W. 3rd Street to Crescent Drive on both sides of W. 3rd Street from west and east of Angie Drive to fill in the gap along 3rd Street and along the south side of Crescent Drive just west of Angie Drive. Refer to the Helen A. Hansen Elementary School map.

The costs of these recommendations are shown in the table below.

HELEN A. HANSEN ELEMENTARY AND HOLMES JUNIOR HIGH SCHOOLS (CEDAR FALLS)
PLANNING LEVEL COST ESTIMATES

New Sidewalk on Entrance Road in Front of Holmes Junior High School. New Sidewalk on Angie Drive from W. 3rd Street to Crescent Drive. New Sidewalk on W. 3rd Street near Angie Drive.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Pavement Markings	LS	1.0	$1,000.00	$1,000.00
2	5-Foot PCC Sidewalk	SY	1,030.0	$55.00	$56,650.00
3	Earthwork and Subgrade Preparation	LF	1,850.0	$3.00	$5,550.00
4	Driveway Modification	Each	3.0	$2,000.00	$6,000.00
5	Topsoil	CY	480.0	$16.00	$7,680.00
6	Seeding and Fertilizing	Acre	0.5	$8,540.00	$4,270.00
7	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$8,200.00	$8,200.00
8	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$8,200.00	$8,200.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$97,550.00**

Hansen Elementary Attendance Area

Helen A Hansen Elementary School

North Cedar Elementary Attendance Area

Lincoln Elementary - Cedar Falls Attendance Area

Skyview Dr.
Cottage Row Rd.
River Bluff Dr.
Willow Ave.
Timberledge Dr.
Lake Shore Dr.
Lilliput Ln.
Alice Ave.
Juanita Ave.
Lakeridge Dr.
Minnetonka Dr.
Oak Park Blvd.
Stanley St.
Leclair St.
Baker Dr.
Forrest Rd.
Park Rd. S.
Center St.
Linda Dr.
Theimer St.
Francis St.
Higby Dr.
Ida St.
Parkway Ave.
N. College St.
Iowa 57
West 1st St.
Union Rd.
Crescent Dr.
Damascus Dr.
Parkgate Rd.
Barnett Dr.
Brentwood Dr.
Angie Dr.
Hill Ct.
Highland Dr.
Cedar Crest Dr.
Pheasant Dr.
Kaspend Pl.
Jessica Ln.
Ryan Dr.
Fandre Dr.
Fireside Dr.
Birdsall Dr.
Hearthside Dr.
Chateau Ct.
Abraham Dr.
Harvest Ln.
Oxford Ln.
Coventry Ln.
Yorkshire Dr.
Carriage Ln.
Bennington Dr.
W. 12th St.
Alden Ave.
Brenton Dr.
Delta Dr.
Hudson Rd.
Laurel Cir.
Clark Dr.
Sheldon Ave.
Summit Dr.
2nd St.
3rd St.
4th St.
5th St.
6th St.
7th St.
8th St.
9th St.
10th St.
11th St.
12th St.
13th St.
14th St.
15th St.
Ellen St.
Catherine St.
Olive St.
Iowa St.
Division St.
Pearl St.
College St.
Franklin St.
Washington St.
Fremont St.

0 0.1 0.2 0.3 0.4 0.5
Miles

7500 2009 ADT
Ⓢ Signalized Intersection
Ⓟ Signalized Ped. Crossing
Ⓖ Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Hansen Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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Holmes Jr. High Attendance Area

Holmes Junior High School

Carver Intermediate Attendance Area

Peet Jr. High Attendance Area

0 0.25 0.5 0.75 1 1.25 1.5

Miles

7500 2009 ADT

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Existing Sidewalk Centerline

Proposed Sidewalk Centerline

Aerial Photography Source: Black Hawk County, April 2007

Holmes Junior High Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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LINCOLN ELEMENTARY SCHOOL

Existing Conditions

Lincoln Elementary is located in downtown Cedar Falls in an established neighborhood with an extensive sidewalk system. The school was recently reconstructed and is located on two city blocks. The configuration of the school blocks Franklin Street between 7th Street and 8th Street.

During the phone interview, Deb Beving commented that there are crossing guards at 8th Street and Clay Street intersection with portable 4-way STOP signs used at the intersection. Some of the comments from the parent surveys include the following:

- A 4-way STOP is needed at the Clay and 8th Street intersection.
- Main concern is crossing Main Street and 7th Street.
- Speed of traffic on 12th Street and Hudson Road.
- 12th Street is very busy.
- Issue with crossing 12th Street and Hudson Road.
- 12th Street is my main concern.
- Dangerous intersection at Walnut and 12th Street, needs a 4-way STOP.
- Need a crossing guard at 12th Street and Franklin Street.
- Crossing 12th Street is unsafe with no STOP signs and high traffic.

A review of the school area on January 18, 2011, yielded the following observations:

School Crosswalks

There are school crosswalks marked at locations where there is no stop control. These locations are on Clay Street on the south side of 7th Street and the north side of 8th Street. The school crosswalk assemblies are not to the latest standards as specified by MUTCD.

Crossing Guards

Student crossing guards are located at all of the intersections surrounding the school. Crossing guards are located on 7th and 8th Street at Clay Street, Franklin Street and Tremont Street. An adult crossing guard is also stationed at 8th Street and Clay Street.

8th Street and Clay Street Intersection

8th Street has permanent STOP control and Clay Street has temporary roll-out STOP signs placed during the school day. A school crosswalk is marked on the north side of 8th Street crossing Clay Street. Diagonal parking is along the west side of Clay Street between 8th Street and 7th Street. In response to parent concerns, three parking stalls have been closed or barricaded off to improve sight distance to the intersection for south bound vehicles.

8th Street and Clay Street Intersection. A temporary roll-out STOP sign is placed on Clay Street during the school day. Three diagonal parking stalls have been closed to improve sight distance. An adult crossing guard is stationed here before and after school.

Parent Drop-Off and Pick-Up Zone

The drive in front of the school off of 8th Street is closed during drop-off and pick-up times. This is due to inadequate vehicle storage capacity and safety concerns. Vehicles would be lined up waiting to drop-off or pick-up students blocking traffic on Clay Street and 8th Street. The drive is closed with parents parking on 8th Street or side streets.

Drop-off and pick-up lane is closed before and after school due to inadequate vehicle storage capacity and safety concerns.

12th Street

There is STOP control on 12th Street at College Street and there is a traffic signal on 12th Street at Main Street. The 2009 Iowa DOT average daily traffic is 6,300 vehicles per day. The speed limit is 25 mph. Based on parent comments from the parent survey there is a need for a crossing of 12th Street between College Street and Main Street.

Recommendations

It is recommended that a school crossing be placed on 12th Street at Franklin Street. This location may be too far from the school to provide a crossing guard but that should be considered as well. The speed limit on 12th Street is 25 mph. A well-marked school crosswalk assembly is needed on either side of Franklin Street.

The cost of a new school crosswalk assembly on 12th Street for both east and westbound traffic is approximately $3,000.00.

Lincoln Elementary - Cedar Falls Attendance Area

Hansen Elementary Attendance Area

North Cedar Elementary Attendance Area

Lincoln Elementary School

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 2009 ADT

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Pedestrian Route

Existing School Crosswalk

Proposed School Crosswalk

Existing Sidewalk Centerline

Proposed Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Lincoln Elementary Study Area (Cedar Falls)

INRCOG Safe Routes to School Study

Jan 2011 111030

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MALCOLM PRICE LABORATORY SCHOOL

Existing Conditions

Malcolm Price Laboratory School is located on the north side of the University of Northern Iowa campus and is in an older established neighborhood in Cedar Falls. The front entrance to the school is off of Campus Street. On the north side of the school is 19th Street and along the south and west sides of the school are parking lots.

Following are selected comments that relate to traffic safety and sidewalks that were received from the parent surveys conducted in the spring of 2009:

- Crossing 18th Street is a huge problem. Cars do not stop for pedestrians who are already in the crosswalk. The police will do nothing about this.
- College Street is a problem. No safe places to cross.
- No sidewalks on 18th Street; poor supervision by police in the area; heavy traffic area, no crosswalks, very poor pedestrian safety in area.
- Child has to cross 18th Street -- traffic does not stop, not very safe for anyone.
- Safety patrol should be provided at 20th and Campus and 18th and Campus.
- Intersection of 18th and Summit is dangerous!

A review of the area yielded the following observations.

18th Street

18th Street is north of the school and is considered a barrier to walking and biking students. There are marked school crosswalks at Summit Drive and Merner Avenue. There is a signalized intersection on Hudson Road and a 4-way STOP at College Street. The Annual Average Daily Traffic based on the Iowa DOT Traffic Counts is 5,100 vehicles per day. There is no sidewalk on either side of 18th Street from Hudson Road to College Street.

Intersections Around School

19th Street and Summit Drive, 19th Street and Campus Street, and Campus Street and 20th Street are All-Way STOP control.

School crosswalk at 18th Street and Summit Drive. This crosswalk assembly is not the latest version of the school crosswalk assembly as shown in the MUTCD.

19th Street and Summit Drive intersection includes All-Way STOP control. This is similar to the intersections of 19th Street and Campus Street and Campus Street and 20th Street.

Drop-Off and Pick-Up Zones

The drop-off and pick-up zones are located at various locations around the school. The one bus uses Campus Street in front of the school. Campus Street is the main drop-off and pick-up area for parents. Other locations include the parking lot on the northwest side of the school and the parking lot on the south side of the school.

Alternatives and Recommendations

There does appear to be a lack of sidewalk around the 18th Street area north. The challenge is to identify the best location that would provide sidewalk for the most students. The following locations that are considered for sidewalk infill are as follows:

- Summit Street north of 18th Street to Clark Drive, approximately 1,230 feet.
- Merner Avenue from 19th Street to Ridgeway Lane, Ridgeway Lane to Columbia Drive, Columbia Drive to 15th Street, approximately 1,260 feet.
- Merner Avenue from 19th Street to 18th Street, on 18th Street to College Street, on College Street to 13th Street, approximately 2,230 feet.

To provide additional sidewalk within the neighborhood, it is recommended that a sidewalk be constructed along the east side of Merner Avenue from 19th Street to Ridgeway Lane, along the south side of 18th Street from Merner Avenue to just west of College Street, and along the west side of College Street from 18th Street to just north of 14th Street. The Merner Avenue sidewalk would provide a sidewalk connection to the neighborhood that lacks sidewalks and is close to the school. The College Street sidewalk would provide an additional sidewalk connection for the neighborhood along a busy street. Sidewalks along busy streets are needed more than sidewalks on quiet neighborhood streets.

It is also recommended that the school crosswalks on 18th Street be updated to the latest school crosswalk assembly standards as recommended by MUTCD.

The cost of the recommendations is shown in the following table.

MALCOLM PRICE LABORATORY
PLANNING LEVEL COST ESTIMATES

New Sidewalk on Merner Avenue from 19th Street to Ridgeway Lane on 18th Street from Merner Avenue to Just West of College Street from 18th Street to Just North of 14th Street.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	Signing	SF	88.0	$35.00	$3,080.00
2	Posts	LF	112.0	$20.00	$2,240.00
3	Pavement Markings	LS	1.0	$3,000.00	$3,000.00
4	5 Ft. PCC Sidewalk	SY	1,480.0	$55.00	$81,400.00
5	Earthwork and Subgrade Preparation	LF	2,660.0	$4.00	$10,640.00
6	Driveway Modification	Each	8.0	$1,500.00	$12,000.00
7	Topsoil	CY	690.0	$20.00	$13,800.00
8	Seeding and Fertilizing	Acre	0.7	$8,000.00	$5,600.00
9	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$13,200.00	$13,200.00
10	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$13,200.00	$13,200.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$158,160.00**

Malcom Price Attendance Zone

Malcolm Price Laboratory School

0 0.1 0.2 0.3 0.4 0.5

Miles

7500 ADT

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Pedestrian Route

Existing School Crosswalk

Proposed School Crosswalk

Existing Sidewalk Centerline

Proposed Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

Malcolm Price Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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NORTH CEDAR ELEMENTARY SCHOOL

Existing Conditions

North Cedar Elementary School is located in northern Cedar Falls on the east side of Center Street between Green Avenue and Lantz Avenue. During a phone interview with Principal Jennifer Hartman, she commented that most kids ride the bus to school due to the extended school boundary. A concern for her is the lack of sidewalk on Center Street to the south of Clair Street.

Some of the comments from the parent survey include the following:

- Busy intersection. Sidewalks on Center Street are in poor condition.
- Sometimes my child bikes to school, but the lack of sidewalks on Center Street makes this difficult.

Observations from a site visit conducted on June 3rd, 2010, included the following:

One-Way Streets

Green Avenue is a one-way eastbound street and Fern Avenue is a one-way northbound street. The one-way operation works well for drop-off and pick-up operation.

Crossing Guards

Student crossing guards are located at the corner of Green Avenue/Fern Avenue and at Lantz Avenue/Fern Avenue. An adult crossing guard is located on Center Street/Green Avenue intersection where there is a pedestrian signal.

Pedestrian Signal on Central Avenue

An interview with the adult crossing guard was completed. She comments that the biggest issue she has is with the occasional vehicle that is going the wrong way down Green Avenue.

Sidewalk

During the field review and a review of the map, it was observed that there is a sidewalk gap along the west side of Fern Avenue between Green Avenue and Lantz Avenue. There is also a sidewalk gap along the east side of Center Street from Thomas Street to Lone Tree Road.

Sidewalk gap along the west side of Fern Avenue. Parents park on the west side and buses park on the east side. Parents cross the street with students.

Recommendations

It is recommended that a sidewalk be constructed on the east side of Center Street from Thomas Street to Lone Tree Road. This sidewalk connection would provide suitable pedestrian access for students that live along Lone Tree Road between Center Street and Big Woods Road.

It is also recommended that the missing sidewalk segment along the west side of Fern Avenue be constructed to allow parking parents along the west side of Fern Avenue to traverse down to proper crossing locations that have crossing guards.

NORTH CEDAR ELEMENTARY (CEDAR FALLS)
PLANNING LEVEL COST ESTIMATES

New Sidewalk on Center Street from Thomas Street to Lone Tree Road and on Fern Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	5-Foot PCC Sidewalk	SY	540.0	$50.00	$27,000.00
2	Earthwork and Subgrade Preparation	LF	965.0	$3.00	$2,895.00
3	Driveway Modification	Each	6.0	$2,500.00	$15,000.00
4	Topsoil	CY	260.0	$15.00	$3,900.00
5	Seeding and Fertilizing	Acre	0.3	$12,000.00	$3,600.00
6	Incidentals and Contingency *(Estimate at 10% of Construction Cost)*	LS	1.0	$5,300.00	$5,300.00
7	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$5,800.00	$5,800.00
8	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$5,800.00	$5,800.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$69,295.00**

North Cedar Elementary Attendance Area

North Cedar Elementary School

0 0.1 0.2 0.3 0.4 0.5
Miles

7500 2009 ADT
Ⓢ Signalized Intersection
Ⓟ Signalized Ped. Crossing
Ⓖ Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline

N W E S

Aerial Photography Source: Black Hawk County, April 2007

North Cedar Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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ORCHARD HILL ELEMENTARY SCHOOL

Existing Conditions

Orchard Hill Elementary School is located on the west side of Rownd Street just north of Valley High Drive. Kim Cross, an Orchard Hill Elementary School teacher, commented that a lot of students bike or walk to school. Students that live on the south side of Greenhill Road are bused. Crossing guards are located in the front of the building on Rownd Street. The new sidewalk on Valley High Drive has helped connect neighborhoods to the west of the school.

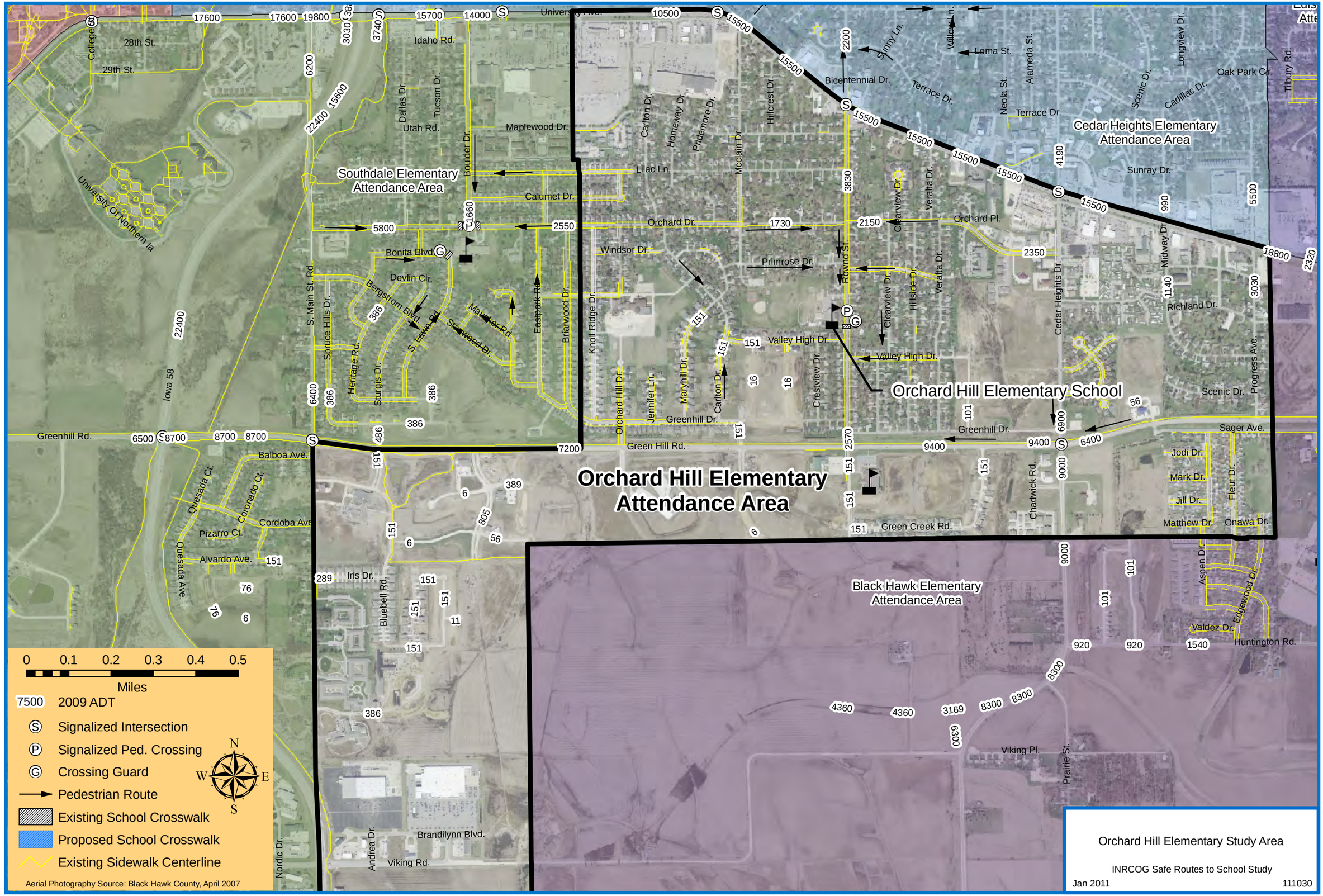
Some selected comments that pertain to traffic safety and sidewalk issues from the parent survey are as follows:

- There are no sidewalks along the whole route due to building.
- There are no sidewalks on Carlton or Lilac on their way to school.
- Fear of potential violence/kidnapping is the biggest factor.
- We need sidewalks badly.
- No sidewalks are a huge issue for living so far away!
- Definitely need sidewalks along all streets used to/from schools.
- Corner of Greenhill and Rownd is dangerous. A traffic light is needed.
- Would like a skywalk over University Avenue for when my children go to Peet. Crossing University Avenue is very dangerous.

During a site review conducted on June 2, 2010, the following notes were recorded:

- A pedestrian signal with a school crosswalk is on Rownd Street in front of the school. Student crossing guards are located at this location.
- There are “No Parking” signs on the east side of Rownd Street with 10-minute loading signing on the west side in front of the school.
- A bus loading zone is on Rownd Street in front of the school.
- The parking lot north of the school is coned-off to restrict parking during pick-up times. This prevents access in and out while students are on the sidewalk.
- A roll-out STOP sign is used at the pedestrian signal in front of the school in the morning and afternoon.

No alternatives or recommendations are given for Orchard Hill Elementary School.


Southdale Elementary Attendance Area
Cedar Heights Elementary Attendance Area
Orchard Hill Elementary School
Orchard Hill Elementary Attendance Area
Black Hawk Elementary Attendance Area
University Of Northern Ia
28th St.
29th St.
College St.
Idaho Rd.
Utah Rd.
Dallas Dr.
Tucson Dr.
Boulder Dr.
Maplewood Dr.
Calumet Dr.
Lilac Ln.
Orchard Dr.
Windsor Dr.
Primrose Dr.
Bonita Blvd.
Devlin Cir.
Bergstrom Blvd.
S. Main St. Rd.
Spruce Hills Dr.
Heritage Rd.
Sturgis Dr.
S. Lewis Rd.
Stanwood Dr.
Maucker Rd.
Eastpark Rd.
Briarwood Dr.
Knoll Ridge Dr.
Orchard Hill Dr.
Jennifer Ln.
Maryhil Dr.
Carlton Dr.
Crestview Dr.
Valley High Dr.
Greenhill Dr.
Green Hill Rd.
Greenhill Rd.
Balboa Ave.
Quesada Ct.
Coronado Ct.
Cordoba Ave
Pizarro Ct.
Quesada Ave.
Alvardo Ave.
Iris Dr.
Bluebell Rd.
Brandilynn Blvd.
Viking Rd.
Andrea Dr.
Nordic Dr.
Iowa 58
Carlton Dr.
Homeway Dr.
Pridemore Dr.
Mcclain Dr.
Hillcrest Dr.
Bicentennial Dr.
Terrace Dr.
Sunny Ln.
Loma St.
Neola St.
Alameda St.
Longview Dr.
Oak Park Cir.
Tilbury Rd.
Scenic Dr.
Cadillac Dr.
Sunray Dr.
Clearview Dr.
Veralta Dr.
Orchard Pl.
Rownd St.
Hillside Dr.
Cedar Heights Dr.
Midway Dr.
Richland Dr.
Progress Ave.
Sager Ave.
Jodi Dr.
Mark Dr.
Jill Dr.
Matthew Dr.
Onawa Dr.
Fleur Dr.
Chadwick Rd.
Green Creek Rd.
Aspen Dr.
Edgewood Dr.
Valdez Dr.
Huntington Rd.
Viking Pl.
Prairie St.
0 0.1 0.2 0.3 0.4 0.5
Miles
7500 2009 ADT
Ⓢ Signalized Intersection
Ⓟ Signalized Ped. Crossing
Ⓖ Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
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Aerial Photography Source: Black Hawk County, April 2007
Orchard Hill Elementary Study Area
INRCOG Safe Routes to School Study
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PEET JUNIOR HIGH SCHOOL

Existing Conditions

Peet Junior High School is located on the south side of Seerley Boulevard and is just north of University Avenue. On Seerley Boulevard in front of the school, there is a parking lot across from the school on the north side and head-in parking in front of the school along the south side.

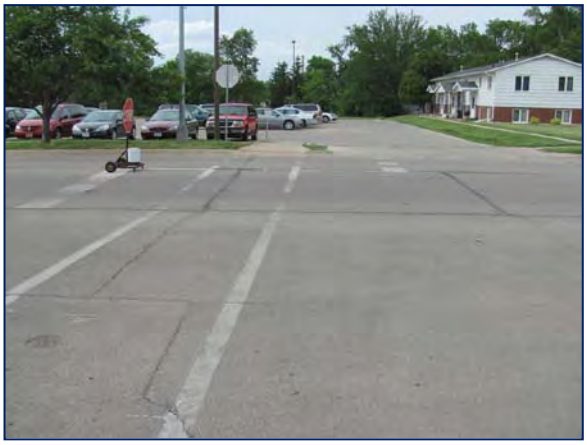
Mark Farland, the Peet Junior High School Principal had the following comments:

- School is undergoing some construction so traffic patterns and parking have been altered.
- The City of Cedar Falls has been responsive to any request for additional traffic control or safety measures for pedestrian accommodation.
- Of the 523 students, about 1/3 walk or bike to school.
- Safety instruction is covered in health classes.

Parent surveys were not completed for Peet Junior High School.

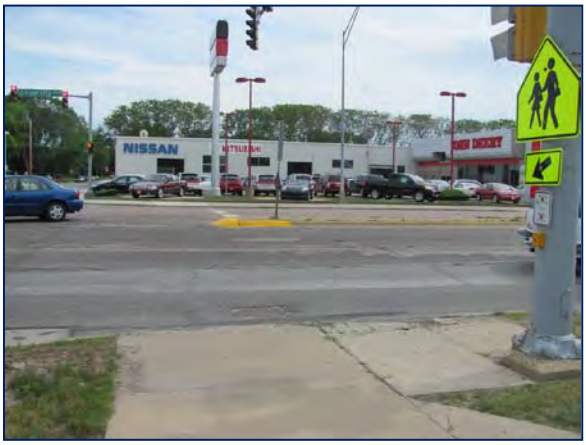
The following observations were made during a site visit and by analyzing the school map.

- Bus loading area is along the south side of Seerley Boulevard west of the main entrance of the school.
- A roll out STOP sign is used on Seerley Boulevard at the main entrance of the school and at the east entrance to the parking lot on the north side of Seerley Boulevard. The crosswalk does not have school crosswalk signs at the actual crossing.
- The students living south of University Avenue are to cross University Avenue at the Tucson Drive traffic signal. A sidewalk accesses school grounds between Tucson Drive traffic signal and the school.
- There is a lack of sidewalk on Tucson Drive from Idaho Road south.



The existing crosswalk on Seerley Boulevard includes a roll-out STOP sign. The crosswalk does not include school crossing assemblies.

Bus loading area along the south side of Seerley Boulevard just west of the main entrance to the school. Parking is restricted in this area during school hours.



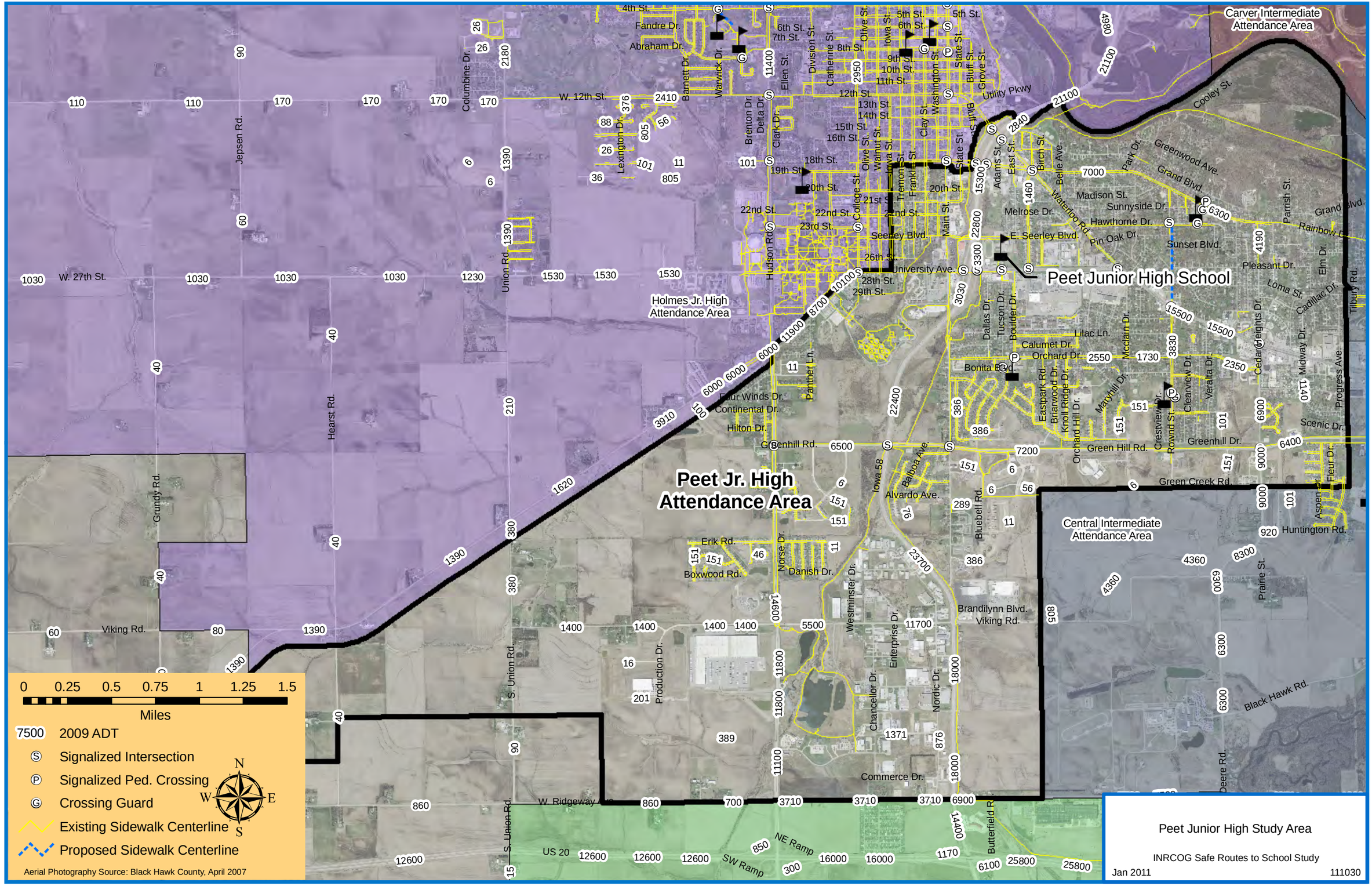
School crosswalk on University Avenue at Tucson Drive.

Sidewalk connection from the south side of the school to University Avenue.

Recommendations

Even though there is a lack of sidewalk on Tucson Drive from Idaho Road south, it is proposed that the main route for students south of University be along Boulder Drive, Idaho Road and Tucson Drive. This would eliminate the need to construct a sidewalk along Tucson Drive south of Idaho Road.

It is recommended that the school crosswalk on Seerley Boulevard in front of the main entrance be improved. New signing with updated school crosswalk assemblies are needed as well as new pavement markings. The STOP bar for the westbound traffic should be moved to the east side of the entrance so stopped traffic does not block the entrance to the parking lot. The cost of this improvement is approximately $3,000.00.


Peet Junior High School
Peet Jr. High Attendance Area
Holmes Jr. High Attendance Area
Carver Intermediate Attendance Area
Central Intermediate Attendance Area
W. 27th St.
W. 12th St.
Utility Pkwy
Cooley St.
Grand Blvd.
Greenwood Ave.
Park Dr.
Madison St.
Sunnyside Dr.
Hawthorne Dr.
Sunset Blvd.
Pleasant Dr.
Rainbow Dr.
Parrish St.
Elm Dr.
Loma St.
Cadillac Dr.
Tilbury Rd.
Cedar Heights Dr.
Midway Dr.
Progress Ave.
Scenic Dr.
Fleur Dr.
Aspen Ln.
Huntington Rd.
Black Hawk Rd.
Prairie St.
Deere Rd.
Butterfield Rd.
Melrose Dr.
Waterloo Rd.
Pin Oak Dr.
E. Seerley Blvd.
Seerley Blvd.
University Ave.
Lilac Ln.
Calumet Dr.
Orchard Dr.
Bonita Blvd.
Eastpark Rd.
Briarwood Dr.
Knoll Ridge Dr.
Maryhill Dr.
Mcclain Dr.
Clearview Dr.
Crestview Dr.
Rownd St.
Veralta Dr.
Green Hill Rd.
Greenhill Dr.
Green Creek Rd.
Alvardo Ave.
Bluebell Rd.
Balboa Ave.
Iowa 58
Four Winds Dr.
Continental Dr.
Hilton Dr.
Greenhill Rd.
Erik Rd.
Boxwood Rd.
Norse Dr.
Danish Dr.
Westminster Dr.
Brandilynn Blvd.
Viking Rd.
Enterprise Dr.
Chancellor Dr.
Nordic Dr.
Commerce Dr.
Production Dr.
S. Union Rd.
Union Rd.
Hearst Rd.
Jepsen Rd.
Columbine Dr.
Grundy Rd.
Lexington Dr.
Brenton Dr.
Delta Dr.
Clark Dr.
Barnett Dr.
Warwick Dr.
Abraham Dr.
Fandre Dr.
Ellen St.
Division St.
Catherine St.
Olive St.
Iowa St.
Washington St.
Bluff St.
Grove St.
State St.
Clay St.
Walnut St.
Tremont St.
Franklin St.
College St.
Hudson Rd.
Main St.
Adams St.
East St.
Birch St.
Belle Ave.
Dallas Dr.
Tucson Dr.
Boulder Dr.
Panther Ln.
Four Winds Dr.
Continental Dr.
Hilton Dr.
Greenhill Rd.
Viking Rd.
Peet Junior High Study Area
INRCOG Safe Routes to School Study
Jan 2011
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Miles
7500 2009 ADT
Ⓢ Signalized Intersection
Ⓟ Signalized Ped. Crossing
Ⓖ Crossing Guard
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
Aerial Photography Source: Black Hawk County, April 2007
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SOUTHDALE ELEMENTARY SCHOOL

Existing Conditions

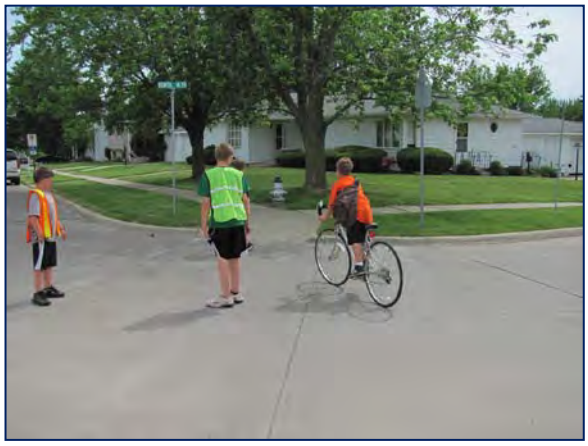
Southdale Elementary School is located on the south side of Orchard Drive at the end of Boulder Drive. It is located in a residential neighborhood with a good sidewalk network. Matt Brummond, the school principal, commented during the phone interviews that 73% of the students are bused to Southdale Elementary School. He would like to see improvements to the Greenhill Road and IA 58 intersection.

Following are selected comments from the parent surveys:

- I would love to have my kids bike, but we live too far away and we have a deadly intersection en route (Greenhill and IA 58).
- We need an over or underpass crossing Greenhill Road in Cedar Falls.
- The intersection of Greenhill and IA 58 is too dangerous.
- My child would have to cross IA 58.
- At present, kids would need to cross IA 58.

During a site review conducted on June 2, 2010, the following notes were recorded:

- Crossing guards are located at Bonita Boulevard and South Lawn Road which is the corner intersection on the southwest side of the school.
- Parking is prohibited along the South Lawn Road in front of the school parking lot and through the curved intersection.
- Parents use several locations to pick-up students: parking lot off of South Lawn Road, parking lot off of Round Street on the west side of the school, and a parking lot off of Round Street on the east side of the school.

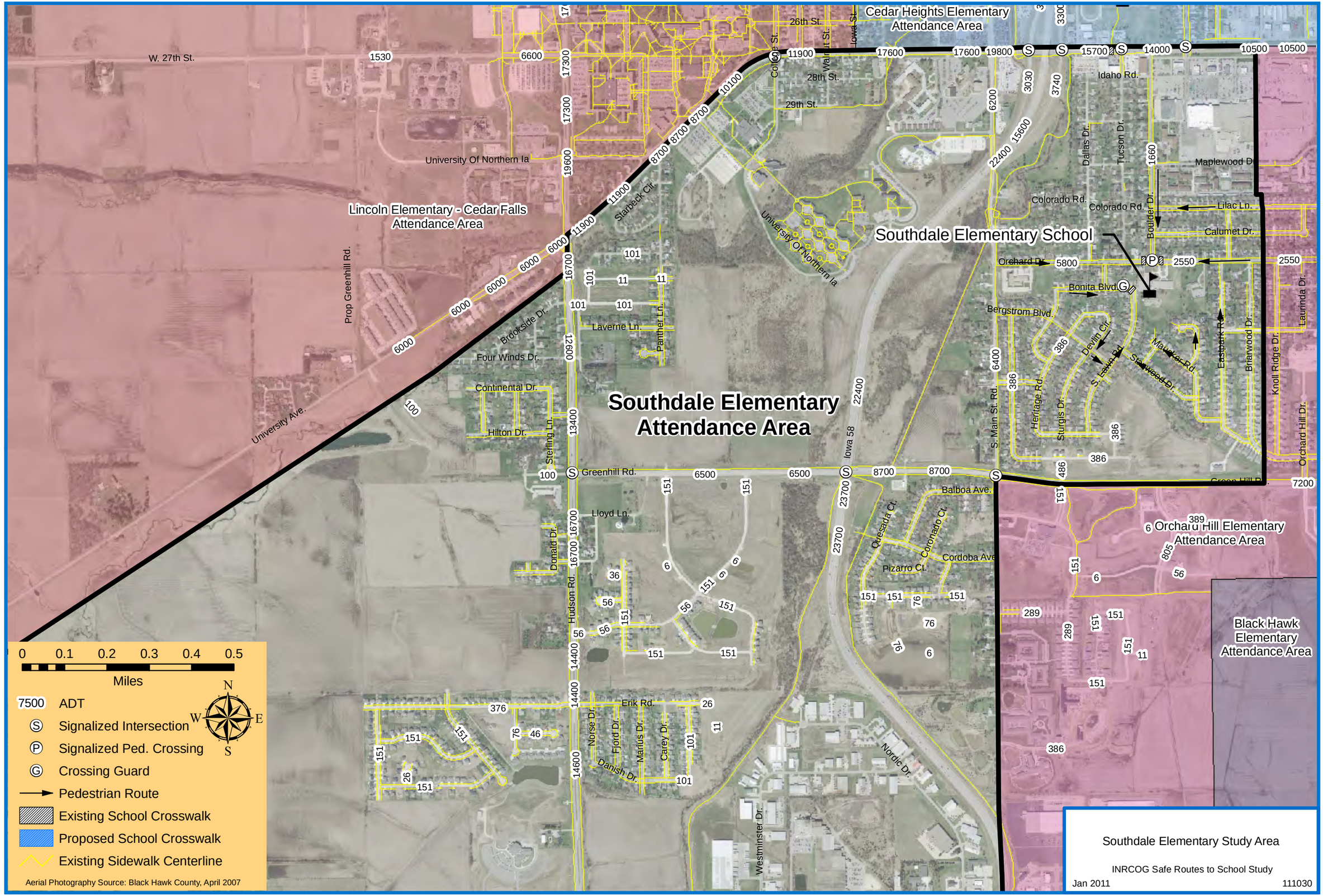


Student crossing guards at the corner of Bonita Boulevard and South Lawn Road.

Traffic signal at the Orchard Drive and Boulder Drive intersection. Turning traffic is prohibited except on flashing red.

Recommendations

It is recommended that improvements for pedestrian accommodation be completed at the IA 58 and Greenhill Road intersection. The City of Cedar Falls is in the process of developing improvements to the recreational trail system along IA 58 and Greenhill Road. These improvements include a bikeway bridge over IA 58 and an underpass of Greenhill Road.


Cedar Heights Elementary Attendance Area
Lincoln Elementary - Cedar Falls Attendance Area
Southdale Elementary School
Southdale Elementary Attendance Area
Orchard Hill Elementary Attendance Area
Black Hawk Elementary Attendance Area
W. 27th St.
26th St.
28th St.
29th St.
College St.
Walnut St.
Iowa St.
Idaho Rd.
Maplewood Dr.
Colorado Rd.
Lilac Ln.
Calumet Dr.
Orchard Dr.
Bonita Blvd.
Bergstrom Blvd.
Boulder Dr.
Dallas Dr.
Tucson Dr.
University Of Northern Ia
Starbeck Cir.
Prop Greenhill Rd.
Brookside Dr.
Four Winds Dr.
Laverne Ln.
Panther Ln.
Continental Dr.
Hilton Dr.
Sterling Ln.
University Ave.
Greenhill Rd.
Lloyd Ln.
Donald Dr.
Hudson Rd.
Erik Rd.
Norse Dr.
Fjord Dr.
Marius Dr.
Carey Dr.
Danish Dr.
Nordic Dr.
Westminster Dr.
Iowa 58
S. Main St. Rd.
Heritage Rd.
Sturgis Dr.
S. Lawn Rd.
Devlin Cir.
Stanwood Dr.
Maurer Rd.
Eastpark Rd.
Briarwood Dr.
Knoll Ridge Dr.
Laurinda Dr.
Orchard Hill Dr.
Balboa Ave.
Quesada Ct.
Coronado Ct.
Cordoba Ave
Pizarro Ct.
Green Hill Rd.
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Miles
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Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Aerial Photography Source: Black Hawk County, April 2007
Southdale Elementary Study Area
INRCOG Safe Routes to School Study
Jan 2011
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HUDSON SCHOOL DISTRICT

HUDSON ELEMENTARY AND MIDDLE SCHOOLS

Existing Conditions

The Hudson Elementary and Middle Schools are located on both sides of Washington Street between Woods Street and School Street. The phone interview with Hudson Elementary School Principal Mark Schlatter provided the following information:

- Adult crossing guards are present at the pedestrian signals on IA 58 and U.S. Highway 63. He has the most concern with the school crossing on U.S. Highway 63.
- Would like to see the parking lot on Washington Street removed and placed in back. This would eliminate some conflict with pedestrians in front of the school.
- Parents are not obeying the parking signs in front of the middle school or the elementary school. This causes some problems with traffic congestion.
- He would like to see a sidewalk along Woods Street from Washington Street to U.S. Highway 63.

Following are selected comments from the parent survey pertaining to traffic safety and sidewalk infrastructure:

- It is too congested in front on Washington. You need a drive around to drop off.
- There is not a safe crossing place across U.S. Highway 63 where we live.
- Without stop lights and a crossing guard, I am highly unlikely to let my children walk or ride bikes.
- U.S. Highway 63 very unsafe if no crossing guard is present.
- One block in front of school needs to be closed. All traffic in front of school should be one-way traffic. They should either close the one block or make it all one-way traffic.
- Lack of sidewalks is a concern outside of immediate area around school.
- Speed of traffic along route -- kids coming home on Sunset Drive.
- I think they do need sidewalks from Pleasant down Sunset to school. Possibly a guard on Eldora Road as well.

A site visit was completed with the following observations:

U.S. Highway 63 Pedestrian Signal and School Crosswalk

The pedestrian signal and school crosswalk are well designated with a school speed zone reducing the speed from 45 mph to 35 mph when sign is flashing. An adult crossing guard is present to assist students across U.S. Highway 63. The crosswalk is located north of Woods Street on a superelevated U.S. Highway 63 curve.

Pedestrian signal and school crosswalk are well designated with current signing and pavement markings.

Sidewalk from U.S. Highway 63 crosswalk leads across school grounds to the elementary school.

The IA 58 pedestrian signal and school crosswalk are located between Sunset Drive and School Street. There is no sidewalk on either side of the crosswalk.

IA 58 Pedestrian Signal and School Crosswalk

Like the U.S. Highway 63 school crosswalk, this pedestrian signal and school crosswalk are well designated with current signing and pavement markings. The signal normally flashes yellow until activated and is a solid red.

Alternatives

Several alternatives were considered for possible safety improvements. These alternatives include the following:

Sidewalk Along IA 58

An option to improve accessibility to the pedestrian signal on IA 58 is to construct a sidewalk along the east side of IA 58 from School Street to the pedestrian signal. This may provide more room for pedestrian to wait at the signal and provide separation from IA 58. This alternative was not considered a substantial enough project to receive a grant but would provide additional safety.

Sidewalk Along Woods Street

This alternative would include installing a sidewalk along the north side of Woods Street from Washington Street to U.S. Highway 63. Since there is a sidewalk that connects the pedestrian signal to the elementary school, this option was not recommended.

Grade Separation of U.S. Highway 63

This alternative would include a box culvert under U.S. Highway 63 to provide a grade-separated pedestrian crossing. This alternative is a possible solution to provide increased safety at this crossing.

Recommendations

It is recommended that a grade separation of U.S. Highway 63 be constructed at the location of the signalized pedestrian crossing. The recommended grade separation would include the installation of a 14' x 10' RCB culvert. An underpass structure at this location would provide a safe crossing of U.S. Highway 63 for students living on the east side of U.S. Highway 63 to access the elementary, intermediate and high schools near the proposed grade separation. The proposed grade separation will also provide safer access to school baseball, softball and soccer fields which are on the east side of U.S. Highway 63.

HUDSON ELEMENTARY SCHOOL
PLANNING LEVEL COST ESTIMATE

14' x 10' Underpass Structure of U.S. Highway 63.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	10" PCC Pavement	SY	140.0	$60.00	$8,400.00
2	Modified Subbase	CY	60.0	$40.00	$2,400.00
3	Pavement Removal	SY	140.0	$8.00	$1,120.00
4	Class 20 Excavation	CY	2,800.0	$20.00	$56,000.00
5	Granular Backfill	Ton	130.0	$18.00	$2,340.00
6	Precast Concrete Box Culvert, 14' x 10'	LF	100.0	$1,800.00	$180,000.00
7	Precast End Section, 14' x 10'	Each	2.0	$28,000.00	$56,000.00
8	4" PCC Textured Overlay in RCB	SY	150.0	$60.00	$9,000.00
9	Seeding and Fertilizing	Acre	0.1	$15,100.00	$1,510.00
10	Traffic Control	LS	1.0	$45,000.00	$45,000.00
11	Lighting	LS	1.0	$15,000.00	$15,000.00
12	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$37,700.00	$37,700.00
13	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$37,700.00	$37,700.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$452,170.00**

Hudson Elementary School

Hudson Elementary School Attendance Area

Proposed 14' x 10' Pedestrian Underpass of U.S. Hwy. 63

Hollis Rd.
Watters Rd.
W. Eldora Rd.
E. Eldora Rd.
W. Washburn Rd.
Holmes Rd.
W. Schrock Rd.
Dale Dr.
Wesson Ave.
Usher Rd.
US 63
Griffiths St.
Main St.
Cedar St.
Jefferson St.
Washington St.
Celeste Dr.
Rebecca Rd.
Ardis St.
Pirate St.
Michelle Dr.
Thelma St.
Woods St.
School St.
1st St.
2nd St.
4th St.
5th St.
6th St.
7th St.
Oak St.
Elm St.
Hudson Rd.
Sunny Ln.
Sunset Dr.
Pleasant Dr.
Rosebay Ln.
Primrose Dr.

0 0.1 0.2 0.3 0.4 0.5
Miles

N W E S

7500 2009 ADT
Ⓢ Signalized Intersection
Ⓟ Signalized Ped. Crossing
Ⓖ Crossing Guard
Pedestrian Route
Existing School Crosswalk
Proposed School Crosswalk
Sidewalk Centerline

Aerial Photography Source: Black Hawk County, April 2007

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Hudson Elementary Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

PAROCHIAL SCHOOLS

BLESSED SACRAMENT SCHOOL

Existing Conditions

Blessed Sacrament is located in an established neighborhood on the west side of Waterloo. This neighborhood has virtually no sidewalks. The neighborhood is bound by University Avenue on the south, Greenhill Road on the west, U.S. 218 on the north and Ansborough Avenue on the east. All of these roads are high-traffic multi-lane roadways that are barriers to students that may walk or bike to school. Refer to the Blessed Sacrament School map for location information.

In a phone interview with Principal Nancy Stirm, she commented that sidewalks are needed all around the school area. Buses and cars drop-off and pick-up at different locations. Some parents go the wrong way though so this adds to the confusion. She is working on communication with the parents. She also commented that for a school with an enrolment of around 250, approximately 10% of the students walk or bike to school. This is high for a parochial school. She analyzed the location of where her walking students lived and roughly 80% live in the neighborhood just north of Blessed Sacrament School.

Parent surveys were developed for Blessed Sacrament and one comment was given on sidewalk infrastructure and traffic safety. The comment was as follows: No sidewalks along route and must cross busy street that cars speed on.

A site visit of the area yielded the following observations:

Drop-off and Pick-up Areas

The drop-off and pick-up areas are split between buses and cars. The buses use Shady Lane and park along the south side of the street. Parents in cars park along the north side of Stratford Avenue to drop-off and pick-up students. Stratford Avenue is reduced down to one-lane traffic when cars are parked along the north side.

Lack of Sidewalk

There is a lack of sidewalk in the neighborhood. All of the streets within the immediate neighborhood are low volume. There is a school crossing on Carriage Hill Drive at the intersection of Stephan Avenue. There is no sidewalk in the vicinity and the school crosswalk is not marked properly.

Looking south on Stephan Avenue toward the school crosswalk on Carriage Hill Drive shows students walking in the grass and the lack of sidewalk. School crosswalk does not include advance warning for northbound or southbound turning vehicles.

School bus drop-off and pick-up location along the south side of Shady Lane. Lack of sidewalk requires the bus to be out in the street to allow students enter and exit the bus.

Possible Improvements or Alternatives

To provide improvements for a safer walking environment around the school, additional sidewalks and improvements are needed. These improvements include the following:

- Sidewalk along the south side of Shady Lane for approximately 230 feet to allow for a proper drop-off and pick-up location for buses.

- Sidewalk along the north side of Stratford Avenue from Blessed Sacrament to Galloway Park to provide a good connection to the park which is used by the school often, a good location for drop-off and pick-up zone for parents and a good beginning to provide sidewalk in the neighborhood. The length of this sidewalk is approximately 830 feet.

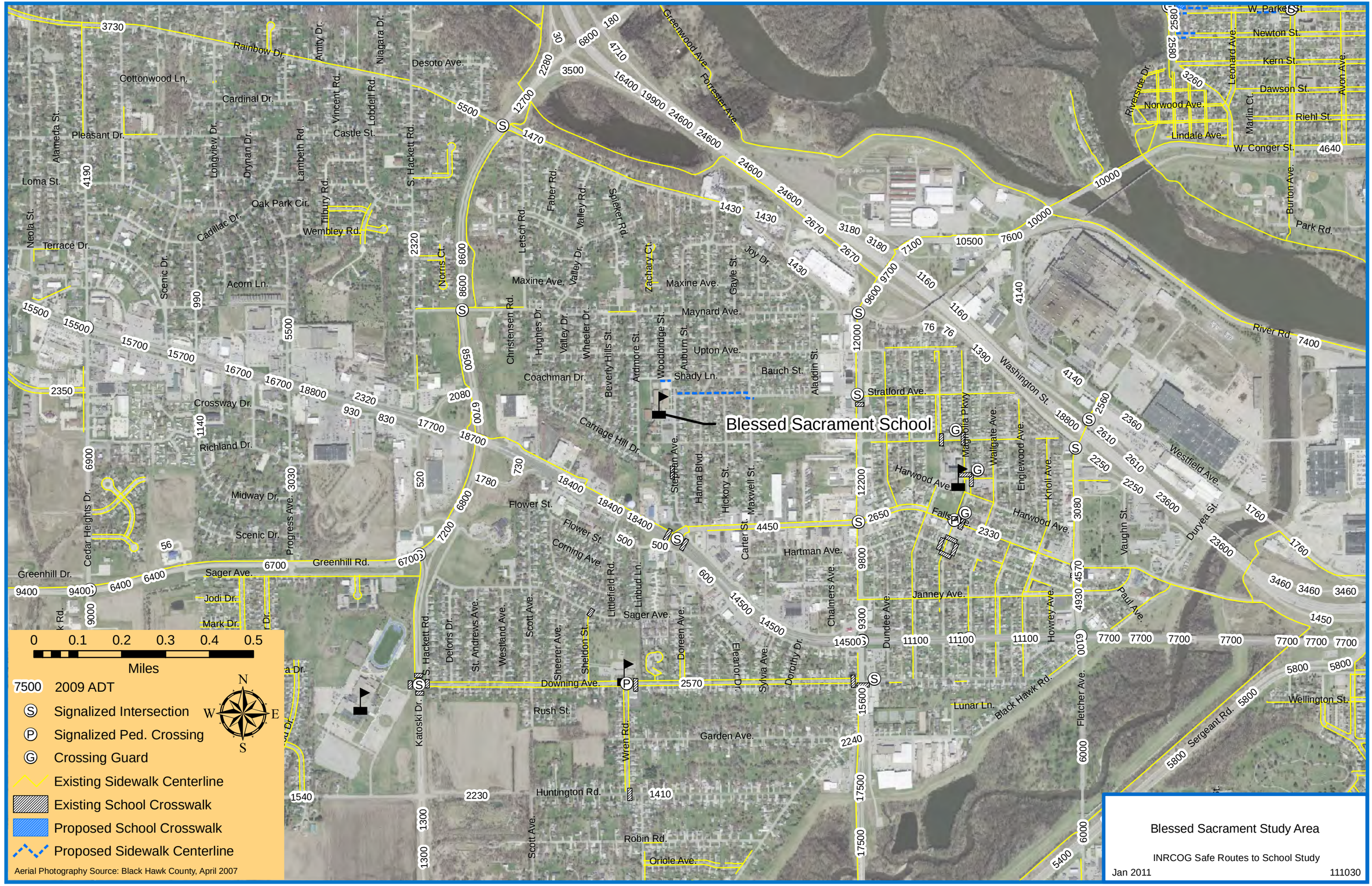
- An improved school crosswalk on Carriage Hill Drive at Stephan Lane. This would include advance warning signs on Stephan Lane for southbound and northbound turning traffic on to Carriage Hill Drive.

The cost for these possible improvements is shown below.

BLESSED SACRAMENT SCHOOL
PLANNING LEVEL COST ESTIMATE

New Sidewalk on Shady Lane and on Stratford Avenue from School to Galloway Park. Improved School Crosswalk on Carriage Hill Drive at Stephan Avenue.

Item No.	Description	Units	Estimated Quantity	Estimated Unit Cost	Total Amount
1	5-Ft PCC Pavement	SY	590.0	$50.00	$29,500.00
2	Earthwork and Subgrade Preparation	LF	1,060.0	$3.00	$3,180.00
3	Driveway Modification	Each	4.0	$1,500.00	$6,000.00
4	Topsoil	CY	280.0	$15.00	$4,200.00
5	Seeding and Fertilizing	Acre	0.3	$12,000.00	$3,600.00
6	Signing	SF	44.0	$30.00	$1,320.00
7	Posts	LF	56.0	$15.00	$840.00
8	Incidentals and Contingency *(Estimate at 10% of Construction Cost)*	LS	1.0	$4,700.00	$4,700.00
9	Design and Contract Administration Services *(10% of Construction Cost)*	LS	1.0	$5,400.00	$5,400.00
10	Construction Survey and Inspection Services *(10% of Construction Cost)*	LS	1.0	$5,400.00	$5,400.00
	TOTAL PLANNING LEVEL COST ESTIMATE				**$64,140.00**


Blessed Sacrament School
Rainbow Dr.
Desoto Ave.
Cottonwood Ln.
Cardinal Dr.
Pleasant Dr.
Loma St.
Oak Park Cir.
Wembley Rd.
Terrace Dr.
Acorn Ln.
Crossway Dr.
Richland Dr.
Midway Dr.
Scenic Dr.
Greenhill Dr.
Greenhill Rd.
Sager Ave.
Jodi Dr.
Mark Dr.
Alameda St.
Neola St.
Longview Dr.
Drynan Dr.
Lambeth Rd.
Tilbury Rd.
Vincent Rd.
Castle St.
Lobdell Rd.
Niagara Dr.
Amity Dr.
Cedar Heights Dr.
Progress Ave.
S. Hackett Rd.
Norris Ct.
Cadillac Dr.
Scenic Dr.
Letsch Rd.
Faber Rd.
Valley Rd.
Spieker Rd.
Valley Dr.
Christensen Rd.
Hughes Dr.
Wheeler Dr.
Beverly Hills St.
Ardmore St.
Zachary Ct.
Maxine Ave.
Maynard Ave.
Upton Ave.
Coachman Dr.
Shady Ln.
Bauch St.
Auburn St.
Woodbridge St.
Aladdin St.
Gayle St.
Joy Dr.
Carriage Hill Dr.
Flower St.
Corning Ave.
Littlefield Rd.
Linbud Ln.
Sager Ave.
Deloris Dr.
St. Andrews Ave.
Westland Ave.
Scott Ave.
Sheerer Ave.
Sheldon St.
Doreen Ave.
Downing Ave.
Rush St.
Garden Ave.
Wren Rd.
Huntington Rd.
Robin Rd.
Oriole Ave.
Katoski Dr.
Stephan Ave.
Hanna Blvd.
Hickory St.
Carter St.
Maxwell St.
Hartman Ave.
Chalmers Ave.
Janney Ave.
Dundee Ave.
Howrey Ave.
Elenor Dr.
Sylvia Ave.
Dorothy Dr.
Stratford Ave.
Harwood Ave.
Falls Ave.
Magnolia Pkwy
Wallgate Ave.
Englewood Ave.
Knoll Ave.
Vaughn St.
Paul Ave.
Lunar Ln.
Black Hawk Rd.
Fletcher Ave.
Sergeant Rd.
Wellington St.
Westfield Ave.
Durvea St.
Washington St.
River Rd.
Park Rd.
Burton Ave.
Riverside Dr.
Norwood Ave.
Lindale Ave.
W. Conger St.
Marlin Ct.
Leonard Ave.
Riehl St.
Dawson St.
Kern St.
Newton St.
W. Parker St.
Avon Ave.
Greenwood Ave.
Forrester Ave.
Miles
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Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Existing Sidewalk Centerline
Existing School Crosswalk
Proposed School Crosswalk
Proposed Sidewalk Centerline
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Aerial Photography Source: Black Hawk County, April 2007
Blessed Sacrament Study Area
INRCOG Safe Routes to School Study
Jan 2011
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IMMACULATE CONCEPTION SCHOOL

Existing Conditions

Immaculate Conception School is located in Gilbertville as part of the Don Bosco Catholic School System. It is part of the Catholic Church and school campus which includes Don Bosco High School, Immaculate Conception Church and Immaculate Conception School. The campus is bound by 1st Street on the west, 20th Avenue on the north, 5th Street on the east and a combination of 16th Avenue/4th Street/15th Avenue on the south.

During a phone conversation and an interview during the site visit, Principal Julie Neimeyer had the following comments:

- There are adult crossing guards in the parking lot and at the corner of 16th Avenue and 4th Street.
- If students are walking from school, they will exit the campus at the 16th Avenue and 4th Street intersection on the south side of the school or exit to the north and cross 20th Avenue near the 3rd Street intersection.
- A teacher is posted on the south side of Don Bosco High School to prevent students from cutting through yards to cross 5th Street mid-block instead of at the marked school crosswalk at 5th Street and 16th Avenue intersection.

Parent survey information was not submitted by Immaculate Conception School.

During a site visit the following observations were made:

Parking Lot

The school parking lot serves both Don Bosco High School and Immaculate Conception School. Immaculate Conception School is on the west side of the parking lot and Don Bosco High School is on the east side.

Students crossing the parking lot walking toward Don Bosco High School.

Students loading on buses which are parked in the parking lot. In the background, students are seen walking home. These students will cross 20th Avenue at the marked school crosswalk.

The school bus loading zone is in front of the Immaculate Conception School in the parking lot. Students walking to parked cars in the parking lot will cross parking lot traffic with the aid of an adult crossing guard.

School Crosswalks

There are school crosswalks surrounding the school and church campus. There is a school crosswalk on 20th Avenue near the 3rd Street intersection, 5th Street at 16th Avenue and 14th Avenue at 4th Street.

Adult crossing guard at 16th Avenue and 4th Street. Students are seen walking down 16th Avenue to the marked school crosswalk on 5th Avenue.

The school crosswalk on 20th Avenue has no sidewalks leading to it. The speed limit on 20th Avenue is 35 mph. The existing signing does not meet the latest standards as stipulated by the Manual on Uniform Traffic Control Devices.

The school crosswalk on 5th Street at 16th Avenue includes sidewalk on all streets at the intersection. The speed limit on 5th Street is 25 mph.

Mid-Block Crossing

During the visit, it was observed that numerous students crossed 5th Avenue midway between 17th Avenue and 16th Avenue. Principal Neimeyer commented that a teacher that prevents students from making the short cut was not there. Most of the time, this behavior is limited by adult supervision. During the site visit, it was observed that 10 to 15 students crossed 5th Avenue at mid-block and not at the designated school crosswalk location.

Students crossing mid-block between 16th Avenue and 17th Avenue.

The school crosswalk on 14th Avenue at 4th Street. The actual sign location for the crossing on the west side of the crosswalk is 50 feet away. 14th Avenue is the main entrance into Gilbertville from the west. This is County Road D38. The speed limit on 14th Avenue is 25 mph. Up-to-date MUTCD signing is needed at this crosswalk as well.

Recommendations

It is recommended that current signing and pavement markings be installed at the school crosswalks on 20th Avenue and 14th Avenue. It is also recommended that a student crossing guard program be implemented by Immaculate Conception School so that student crossing guards could be utilized to assist adult crossing guards in the parking lot. It is assumed that the mid-block crossing of students on 5th Street will be eliminated once the school teachers direct students down to 16th Avenue. To upgrade the signing and pavement markings at the school crosswalks, it is estimated that it would cost approximately $3,500.00.

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IMMANUEL LUTHERAN SCHOOL

Existing Conditions

Immanuel Lutheran School is located at the corner of Franklin Street and U.S. Highway 63. It is located on the north edge of downtown Waterloo in an old established neighborhood. As a private school, most of the students are bused or driven to school by their parents.

Following are some selected comments from the parent surveys:

- We live near Southdale, and would allow the kids to walk there, but we take them to Immanuel over 7 miles away. So I am not sure you can really fix that for us.
- We live 15 miles from the school so walking is impossible.
- There are just too many negatives in that area of Waterloo that Immanuel Lutheran School is located in to have our children walk or ride their bikes to school. Busy streets, i.e. Franklin and Conger, registered sex offenders in the area, high crime rates, and the fact the neighborhood has had shootings in it over the last few years have made the decision for us. We understand the importance of grant monies. I am afraid no amount of safety measures would change our minds in this case.
- If my child were in the 8th grade and only had to go 2-3 blocks, I might agree. Otherwise, I think it is just too risky.

A site visit was completed with the following observations:

Drop-Off and Pick-Up Area

The drop-off and pick-up area is adequate for the school. There is a long curb line with sidewalk for students to unload and load. The traffic circulation within the parking lot allows for proper unloading and loading of students.

The drop-off and pick-up area for Immanuel Lutheran School is adequate.

Other Observations

Some of the observations of the site around Immanuel Lutheran School include the following:

- Immanuel Lutheran School is located near busy streets such as Franklin Street and U.S. Highway 63 with both streets averaging over 13,000 vehicles per day.
- The existing sidewalk network is good in the immediate vicinity of the school.
- The traffic signal at Almond Street and U.S. Highway 63 lacks pedestrian signals.
- The playground is located on the other side of Walnut Street which is a dead-end street. Signing and traffic control is lacking for the crosswalk at Walnut Street and Clay Street.

Traffic signal at Almond Street and U.S. Highway 63 lacks pedestrian signals.

Even though Walnut Street is a dead-end street, proper traffic control is needed for the crosswalk and Walnut Street and Clay Street.

Recommendations

It is recommended that additional signing and pavement marking is needed at the intersection of Walnut Street and Clay Street. This would include a STOP sign for eastbound Walnut Street traffic and a school crossing assembly for both directions. It is estimated that this would cost approximately $3,000.00.

Immanuel Lutheran School

0 0.1 0.2 0.3 0.4 0.5 0.6

Miles

7500 2009 ADT

Ⓢ Signalized Intersection

Ⓟ Signalized Ped. Crossing

Ⓖ Crossing Guard

Existing School Crosswalk

Proposed School Crosswalk

Existing Sidewalk Centerline

Proposed Sidewalk Centerline

Aerial Photography Source: Black Hawk County, April 2007

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Immanuel Lutheran Study Area

INRCOG Safe Routes to School Study

Jan 2011 111030

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SACRED HEART SCHOOL

Existing Conditions

Sacred Heart School is located just south of downtown Waterloo along "Church Row" on W. 4th Street. The school entrance is off of W. 5th Street. This older established neighborhood has a good sidewalk network.

The results of a site visit include the following observations:

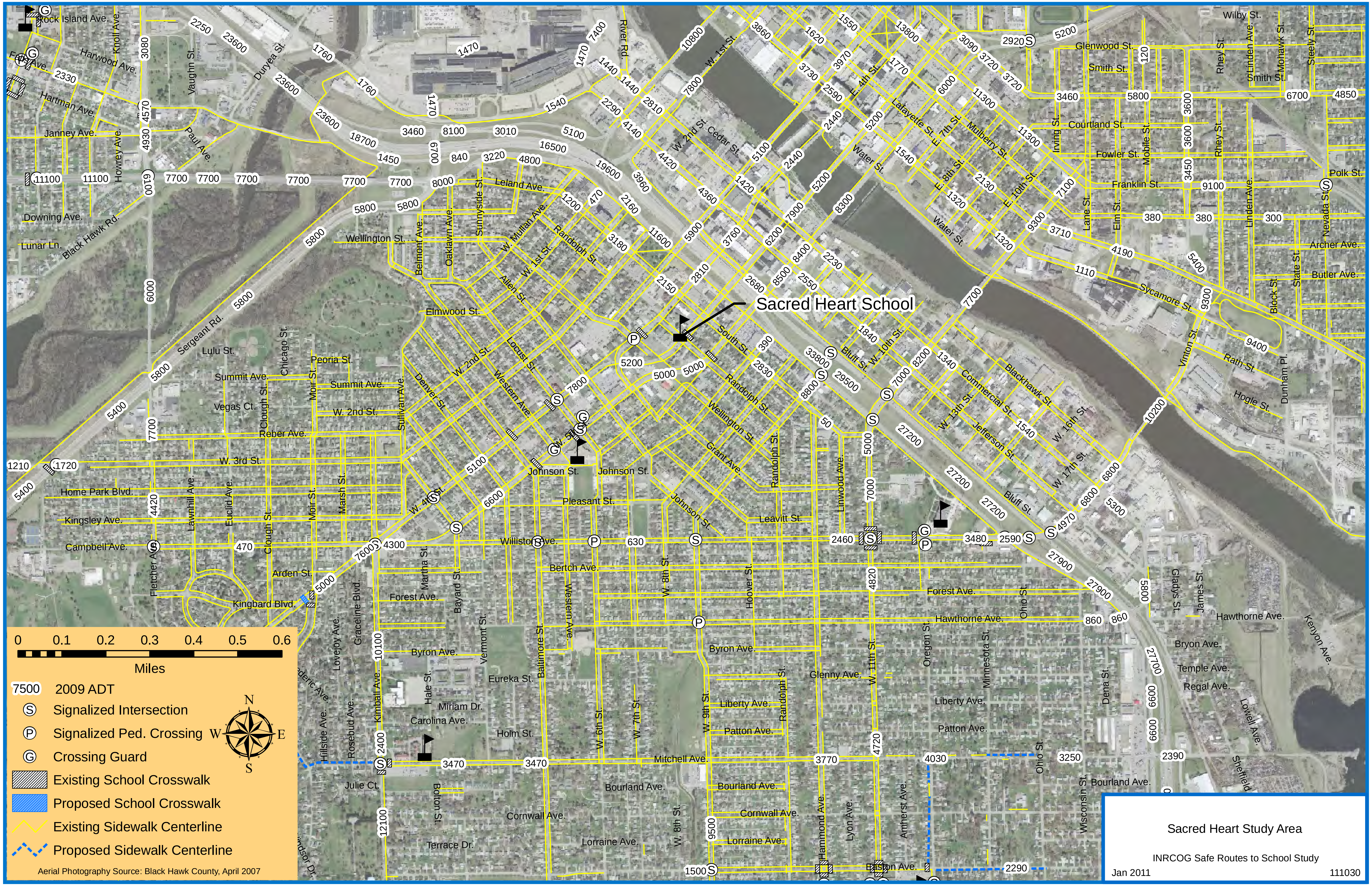
- There is a marked school crossing at W. 5th Street and Randolph Street.
- The parent pick-up and drop-off zone is in front of the school along W. 5th Street.
- Parents park on the far side of W. 5th Street to unload and load students.
- There is a portable STOP sign that is used on W. 5th Street at Randolph Street during drop-off and pick-up times.
- Randolph Street is a one-way street.
- The speed limit on W. 5th Street is 35 mph. A school speed limit assembly of 25 mph with flashing beacons is in place just south of South Street.

Marked school crossing on W. 5th Street at Randolph Street.

Randolph Street looking toward W. 4th Street. Randolph Street is along the south side of Sacred Heart School and is used as a playground during the day.

Recommendations and Alternatives

There are no recommendations or alternatives for Sacred Heart School at this time.


Sacred Heart School
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Miles
7500 2009 ADT
Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
Aerial Photography Source: Black Hawk County, April 2007
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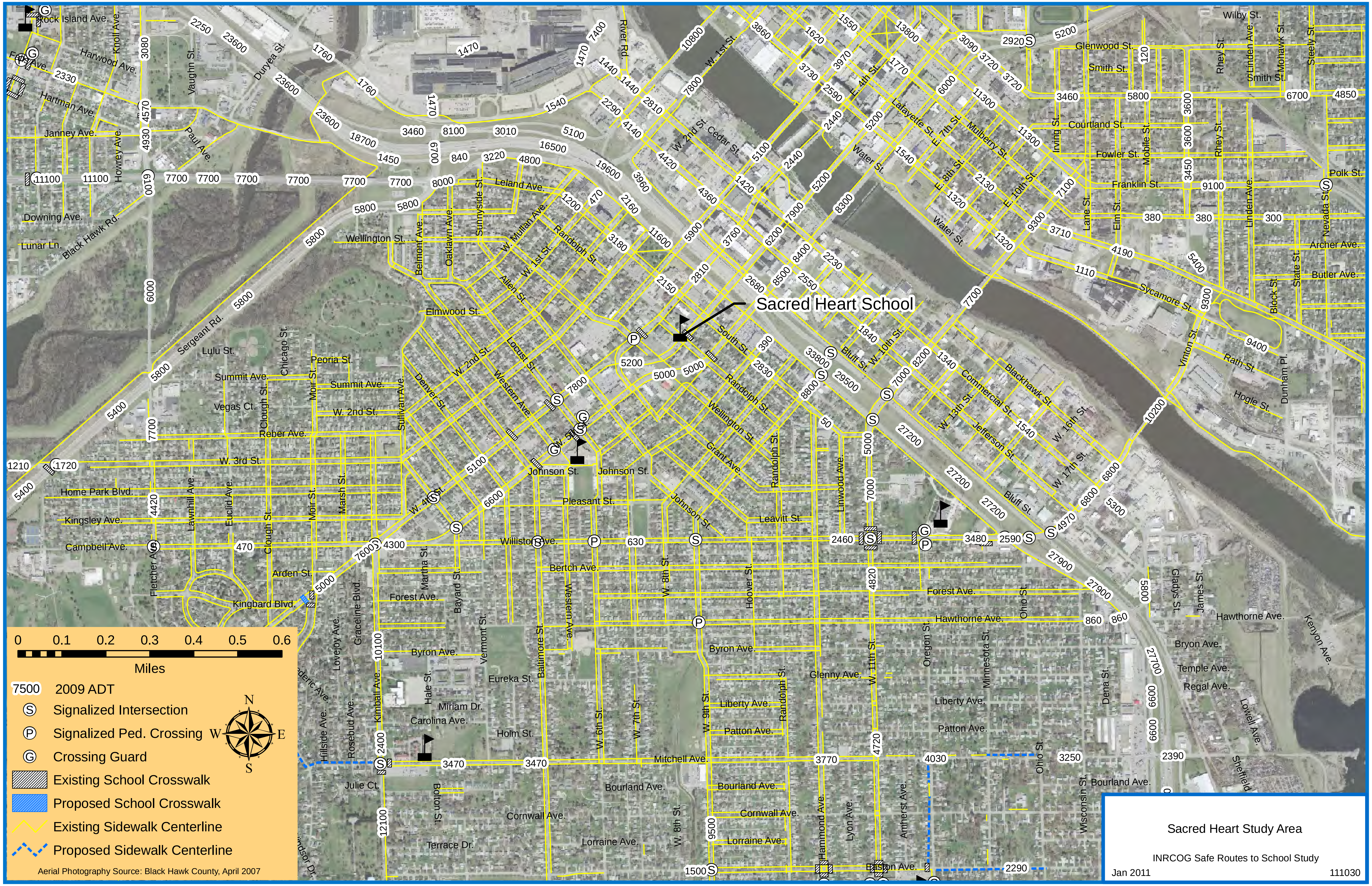
Sacred Heart School
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Aerial Photography Source: Black Hawk County, April 2007
Sacred Heart Study Area
INRCOG Safe Routes to School Study
Jan 2011
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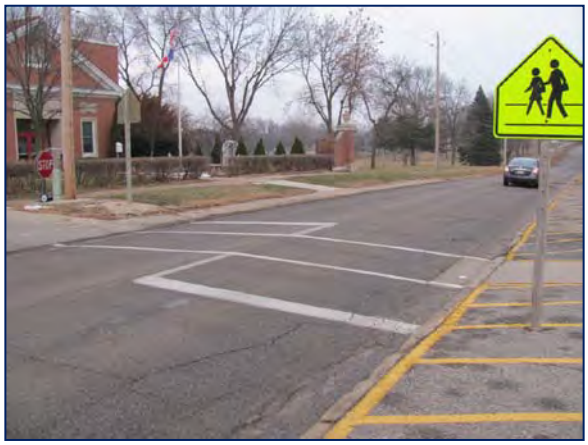
ST. EDWARD'S SCHOOL

Existing Conditions

St. Edward's School is located at the corner of Kimball Avenue and Mitchell Avenue in Waterloo. Both streets have relatively high-traffic volumes. Kimball Avenue averages 9,900 to 12,000 vehicles per day and Mitchell Avenue averages 3,470 vehicles per day according to the 2009 Iowa DOT traffic data. The parking lot is located on the south side of Mitchell Avenue with the school entrance on the north side of Mitchell Avenue. There is an existing school crossing assembly on Mitchell Avenue east of Kimball Avenue near the entrance to the school. The speed limit on Mitchell Avenue is 25 mph.

A site visit was completed on December 14, 2010. During the site visit the school principal, Mrs. Pam Schowalter, provided the following information:

- Parent and bus drop-off and pick-up area is in the school parking lot south of Mitchell Avenue. The parent zone is to the west of the school bus zone.
- Teachers escort students to and from drop-off and pick-up zones.
- There are student crossing guards before and after school at the school crossing on Mitchell Avenue.
- The drive entrance on the north side of Mitchell Avenue near the school is closed to entering traffic.
- They use a roll out STOP sign before and after school at the school crossing.
- There are vehicles that go through the STOP sign without stopping. When they notice five or more vehicles going through the STOP sign in a given morning or afternoon, the school will ask that the police monitor the crossing.
- Buses and parents enter parking lot off of Kimball Avenue and exit on to Mitchell Avenue.

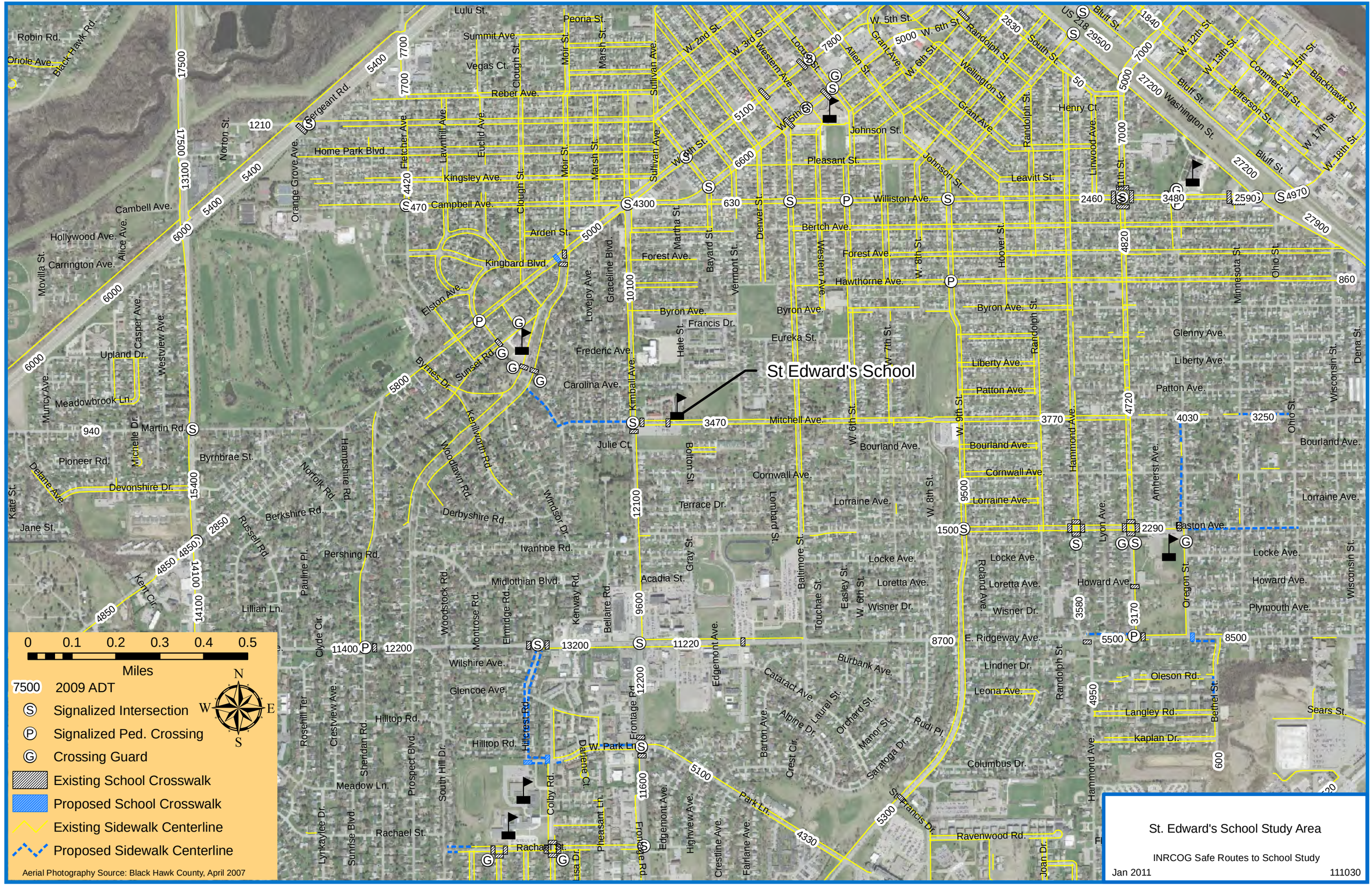


School crossing on Mitchell Avenue in front of St. Edward's School. Roll out stop sign is used in the morning and afternoon.

As part of Kingsley Elementary recommendations, there is a proposed sidewalk along Mitchell Avenue from Kimball Avenue west down Derbyshire Road toward Prospect Boulevard. This sidewalk would also provide additional sidewalk that could serve St. Edward's School as well. It would provide a link to the neighborhoods to the west of Kimball Avenue and would allow a better walking environment for St. Edward's School.

Recommendations

It is recommended that the existing school crossing signing near the school be upgraded. The existing signs are outdated and do not include advance warning. The recommendation includes school advance crossing assembly on both sides of the crossing and updated school crossing assemblies at the school crossing. The estimated cost of the proposed changes is approximately $3,500.00.


St Edward's School
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Miles
7500 2009 ADT
Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
Aerial Photography Source: Black Hawk County, April 2007
St. Edward's School Study Area
INRCOG Safe Routes to School Study
Jan 2011
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ST. PATRICK SCHOOL

Existing Conditions

St. Patrick School is located in downtown Cedar Falls in an established neighborhood with an extensive sidewalk system at the corner of 7th Street and Washington Street. The school is located several blocks away from Lincoln Elementary School.

In a conversation with Principal Sr. Marilou Irons, she commented that there are no problems that she is aware of with students walking or biking to school. The drop-off and pick-up area is in the school playground area and has provided safety for elementary-aged students.

The parent surveys had no comments relating to specific safety or traffic issues around St. Patrick School.

The following observations are based on a site visit on January 18, 2011.

Drop-Off and Pick-Up Zones

Parents of preschool and younger elementary-aged students pick-up students from the fenced play ground area to the west of the school off of 7th Street. Buses park in front of the school along Washington Street. Parents park along both sides of 7th Street.

Traffic Signal, 7th Street and Washington Street Intersection

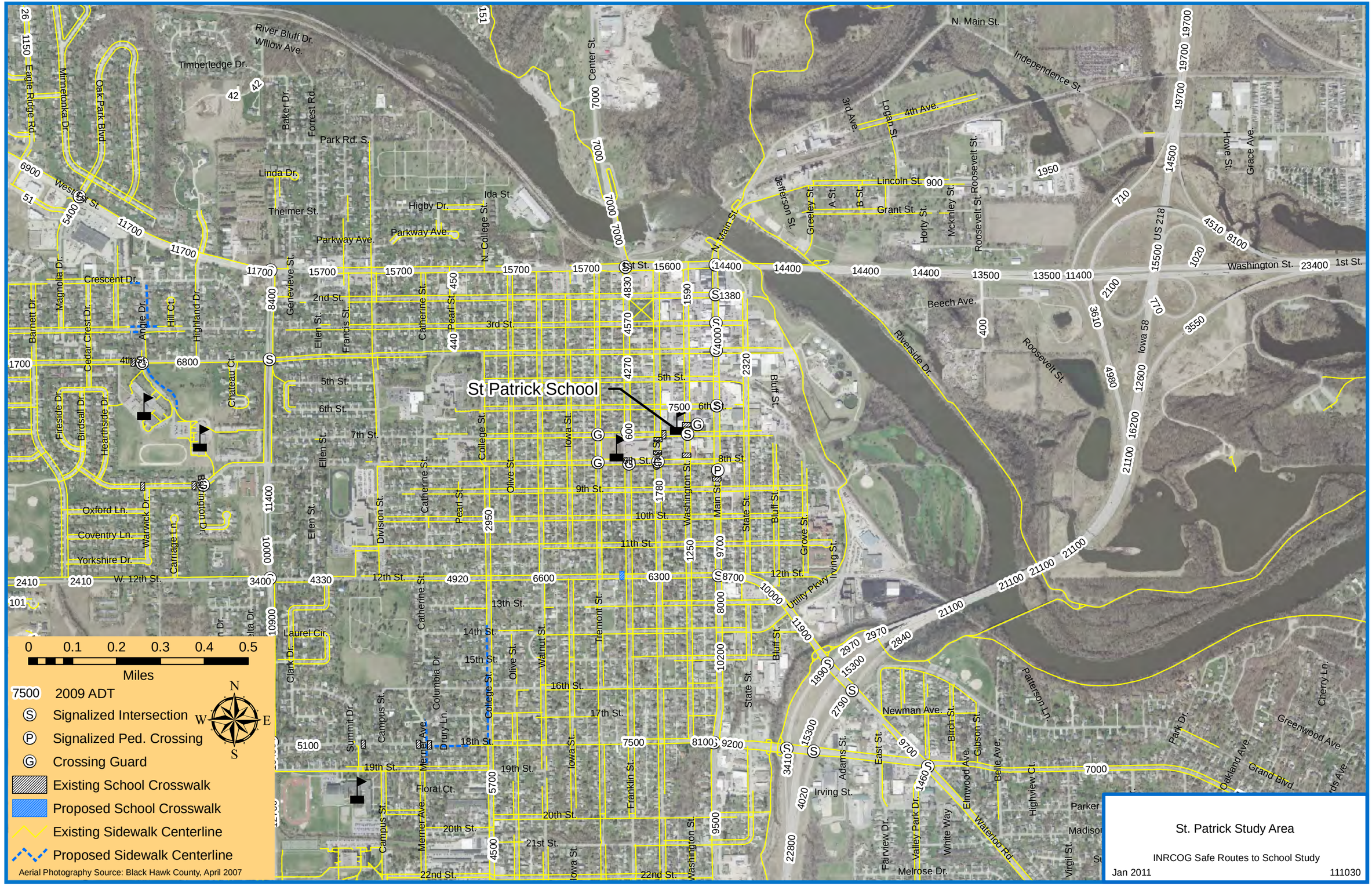
The traffic signal includes a school crosswalk on the north leg, student crossing guards and signing that prohibits right turns on red.

Playground area west of the school and off of 7th Street is used as a pick-up area for students.

7th Street and Washington Street traffic signal is monitored by student crossing guards. One lane of traffic is open on 7th Street during pick-up time.

Alternatives and Recommendations

There are no alternatives or recommendations for the St. Patrick School area.


St Patrick School
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Miles
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Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
Aerial Photography Source: Black Hawk County, April 2007
St. Patrick Study Area
INRCOG Safe Routes to School Study
Jan 2011
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WATERLOO CHRISTIAN SCHOOL

Existing Conditions

Waterloo Christian is located in the southwest quadrant of Ridgeway Avenue and Ansborough Avenue on the south side of Waterloo. The school is K-12 and is attached to Walnut Ridge Baptist Church.

Based on discussions with a parent that has children that attend the school, all students are dropped off on the west side of the school through the parking lot that is accessed off of Ridgeway Avenue. In the afternoon, the K-5th grade students are picked up on the east side of the school through the parking lot that is accessed off of Ansborough Avenue. The 6th -12th grade students are picked up where they were dropped off.

There were several comments received from the parent surveys that relate to traffic safety and sidewalk infrastructure:

- I would allow my children to walk if there were sidewalks.
- Too much traffic at intersection by the school.

Ansborough Avenue

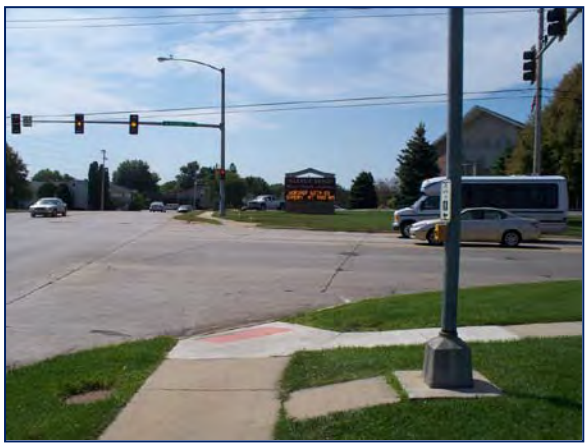
Ansborough Avenue averages 14,100 vehicles per day north of Ridgeway Avenue and 11,300 vehicles per day south of Ridgeway Avenue. The speed limit is 35 mph. It is a 4-lane roadway with curb and gutter. There is sidewalk along the west side from Meadow Lane north to U.S. Highway 63. There is a school crosswalk on Ansborough Avenue south.

Ridgeway Avenue

Ridgeway Avenue averages 7,900 vehicles per day west of Ansborough Avenue and 11,400 vehicles per day east of Ansborough Avenue. The speed limit is 35 mph. It is a 4-lane roadway with curb and gutter. There is sidewalk along the north side from 4th Street to Ansborough Avenue.

Ansborough Avenue/Ridgeway Avenue Intersection

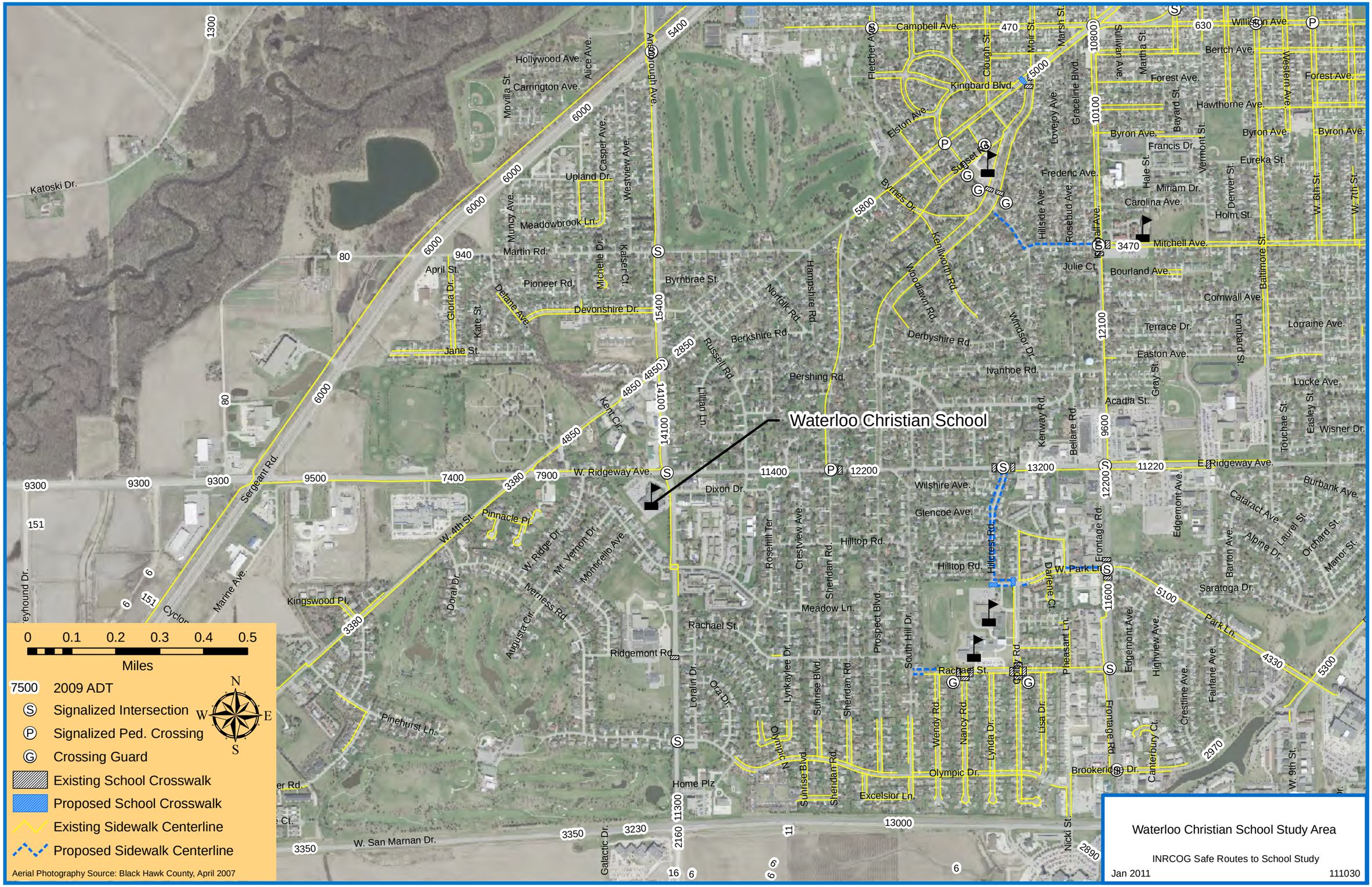
The Waterloo Christian School is located at this signalized intersection. The intersection includes left-turn lanes on Ansborough Avenue and pedestrian signals for the west and south legs of the intersection. The school has entrances on both Ansborough Avenue and Ridgeway Avenue. The Ansborough Avenue entrance is 380 feet south of Ridgeway Avenue and the Ridgeway Avenue entrance is 300 feet west of Ansborough Avenue.



Traffic signal at Ansborough Avenue and Ridgeway Avenue. Push-button pedestrian signals are located on the west and south legs of the intersection. The pedestrian signals on the south side of the intersection do not lead to any sidewalk on the east side of Ansborough Avenue or the south side of Ridgeway Avenue.

Recommendations

While there is a lack of sidewalks in the area, it would be difficult to argue that construction of sidewalks would lead to an increase in more students walking to school. There are very few students that live within one mile from Waterloo Christian School and those that do are spread out in various neighborhoods.


Waterloo Christian School
Katoski Dr.
Hollywood Ave.
Carrington Ave.
Alice Ave.
Moville St.
Arlington Ave.
Upland Dr.
Casper Ave.
Westview Ave.
Meadowbrook Ln.
Muncy Ave.
Martin Rd.
Michelle Dr.
Kaser Ct.
April St.
Gloria Dr.
Kate St.
Delaine Ave.
Pioneer Rd.
Devonshire Dr.
Jane St.
Byrnbrae St.
Hampshire Rd.
Norfolk Rd.
Berkshire Rd.
Russell Rd.
Lillian Ln.
Pershing Rd.
Kent Cir.
Campbell Ave.
Fletcher Ave.
Clough St.
Moir St.
Marsh St.
Kingbard Blvd.
Elston Ave.
Sunset Rd.
Byrnes Dr.
Kenilworth Rd.
Woodlawn Rd.
Derbyshire Rd.
Windsor Dr.
Ivanhoe Rd.
Lovejoy Ave.
Graceline Blvd.
Hillside Ave.
Rosebud Ave.
Julie Ct.
Sullivan Ave.
Martha St.
Bayard St.
Vermont St.
Denver St.
Hale St.
Frederic Ave.
Francis Dr.
Miriam Dr.
Carolina Ave.
Holm St.
Mitchell Ave.
Bourland Ave.
Cornwall Ave.
Terrace Dr.
Easton Ave.
Gray St.
Lombard St.
Baltimore St.
Lorraine Ave.
Locke Ave.
Easley St.
Touchae St.
Wisner Dr.
Acadia St.
Kenway Rd.
Bellaire Rd.
Bertch Ave.
Forest Ave.
Hawthorne Ave.
Byron Ave.
Eureka St.
W. 6th St.
W. 7th St.
Williston Ave.
Westmount Ave.
E. Ridgeway Ave.
Burbank Ave.
Cataract Ave.
Alpine Dr.
Laurel St.
Orchard St.
Manor St.
Barton Ave.
Edgemont Ave.
Frontage Rd.
Saratoga Dr.
Park Ln.
Highview Ave.
Crestline Ave.
Fairlane Ave.
Canterbury Ct.
Brookeridge Dr.
Olympic Dr.
Excelsior Ln.
Wilshire Ave.
Glencoe Ave.
Hilltop Rd.
Hillcrest Rd.
W. Park Ln.
Prospect Blvd.
South Hill Dr.
Meadow Ln.
Rachael St.
Ridgemont Rd.
Dixon Dr.
Rosehill Ter
Crestview Ave.
Sheridan Rd.
Lynkaylee Dr.
Sunrise Blvd.
Wendy Rd.
Nancy Rd.
Lynda Dr.
Lisa Dr.
Nicki St.
Loralin Dr.
Ora Dr.
Olympic Cir.
Home Plz
W. Ridgeway Ave.
W. 4th St.
Pinnacle Pl.
W. Ridge Dr.
Mt. Vernon Dr.
Monticello Ave.
Iverness Rd.
Augusta Cir.
Doral Dr.
Kingswood Pl.
Pinehurst Ln.
Sergeant Rd.
Marine Ave.
W. San Marnan Dr.
Galactic Dr.
Cyclone Rd.
Greyhound Dr.
1300
5400
6000
940
80
9300
9500
7400
3380
7900
11400
12200
13200
11220
10800
10100
9600
12100
5000
5800
3470
15400
14100
14000
2850
4850
11300
2160
3350
3230
13000
2890
2970
5100
4330
5300
11600
12200
630
470
0 0.1 0.2 0.3 0.4 0.5
Miles
7500 2009 ADT
Signalized Intersection
Signalized Ped. Crossing
Crossing Guard
Existing School Crosswalk
Proposed School Crosswalk
Existing Sidewalk Centerline
Proposed Sidewalk Centerline
N
W
E
S
Aerial Photography Source: Black Hawk County, April 2007
Waterloo Christian School Study Area
INRCOG Safe Routes to School Study
Jan 2011
111030
L:\work\project\111030\gis\Middle MapsWalnut.mxd

EDUCATION AND ENCOURAGEMENT

IV. EDUCATION AND ENCOURAGEMENT

Project Overview

Hellman, a public relations firm based in Waterloo, Iowa, was selected as a subcontractor of AECOM during the Black Hawk Metropolitan Area Bicycle and Pedestrian Safety Study. As concepted, the project would provide activities incorporating the 5 E's of the federal Safe Routes to School (SRTS) program which are Engineering, Education, Enforcement, encouragement and Evaluation. Hellman was tasked with assisting AECOM in the Education and Encouragement aspects.

In February 2009, following the data collection phase of the project, Hellman began the planning for the campaign and presented sample initiatives to the Advisory Committee that is comprised of INRCOG's Safety Council. By March 2009, it had been determined that the infrastructure and campaign resources were best suited to implement a pilot program featuring three schools -- one within each district (Waterloo, Cedar Falls, Hudson), as well as a tentative timeline and action items had been defined as follows:

1. School Selection
    a. Student demographics and survey statistics
    b. Principal involvement
    c. Parent Teacher Organizations (PTOs)
    d. District Representatives

2. Implementation Plan
    a. Select SRTS program(s) and establish timeline at the selected schools
    b. Establish a task force at each school to monitor program effectiveness
    c. Hellman to develop reference "tool kit" for future program initiatives

At that time, the program remained on the schedule as proposed in the initial proposal documents provided by AECOM and Hellman, which indicated that the Education and Encouragement campaign implementation would begin in the fall of 2009. The March 2009 timeline provided by Hellman included implementation at the three target schools in the fall of 2009, with district-wide implementation to follow in spring 2010 (if resources allowed).

Hellman reviewed the resources and activities recommended through the federal SRTS program. Four initiatives were determined to be best suited for implementation (due to infrastructure at target schools -- Kingsley Elementary, Lincoln Elementary in Cedar Falls and Hudson Elementary):

1. <u>Map It Cedar Valley</u>

The proposed project involved having elementary-aged students illustrate the route they currently take to school, or would potentially have taken to school, if they were to not be engaged in vehicular travel. The intent of this project was to educate students and parents of the infrastructure resources in their community and foster an open dialog about alternate methods of transit.

2. <u>Walking School Bus</u>

This no-cost program involved organizing groups of students accompanied by adults, who walk a predetermined route to/from school. Routes could originate from a particular neighborhood, or include children who live too far away to walk, beginning from a central meeting point. This program had the versatility to exist as either a loosely structured or highly organized event. The intent of this project was to encourage group participation and improve the behavioral inclinations of students and parents.

3. Live Healthy Iowa Kids

This project did not originate with the federal SRTS program. It is a state program that encouraged students to register (at no-cost) for a 100-day challenge designed to increase physical activities and make better food choices. Benefits include team activities and competition, weekly activity and nutrition tips, and monetary awards/incentives provided by the Iowa Sports Foundation.

4. Walk and Bike Across America

This project is a Web-based interactive program that promotes physical activity and learning. Students travel across the country (virtually) according to how many miles a class collectively walked/biked, to school each day or each week. Classes can use accumulated miles to symbolically travel across the United States, visiting noteworthy and historic locations.

Upon approval of these programs, recommendations and packets were developed for distribution to each of the target schools and meetings were scheduled to review the programs. Unfortunately, it was at this stage where challenges began to arise.

Key Challenges

Following the implementation of the Safe Routes to School project, the Hellman team has determined potential influences on the program implementation:

- The intended initial outreach was to speak with district officials to gain support and assist in encouraging school participation. Formal meetings with these individuals could not occur due to retirements and time constraints. Therefore, brief phone discussions took place and AECOM/Hellman was asked to move forward in contacting principals.

- Each of the schools had already instituted fitness activities that had been eliminated due to resources or were presently active and successful. This may have eliminated a sense of urgency. Following the introductory meetings with each principal (Kingsley February 25, 2010; Hudson April 12, 2010; Lincoln April 20, 2010), they were asked to assist in facilitating PTO presentations; few have occurred to date.

- Each principal was receptive and interested in implementing the programs, but had concerns over the in-classroom time/resources that may be required. Therefore, the Walking School Bus program provided the most realistic chances for success, utilizing a mix of staff and parent volunteers.

- Each principal was asked to assist by facilitating introductions to key PTO ("PALS" at Lincoln Elementary) individuals and/or provide opportunity for AECOM/Hellman to present at a regularly scheduled PTO meeting. To date, Kingsley Elementary PTO presentations have been made (March 9, 2010) and have been well received.

- Existing map resources were believed to be too complex for younger students and therefore, caused low adoption of Map It Cedar Valley.

School Results

Hudson Elementary

Past Projects. In recent years, Hudson had participated in health education programs and bike rodeo events that partnered with the local police department. These events were held after school utilizing grant funds (awarded to police department, not the school). The project was eliminated in 2009 because of impact on staffing challenges. Teachers are considered "off-contract" after 3:45 p.m., causing employment and policy concerns.

Current Programs. Recent infrastructure changes have provided a safer environment for pedestrians in and around the pick-up and drop-off area. This project was implemented following a school-initiated parent survey, which revealed the perception of dangerous conditions for students that may walk or bike from local neighborhoods.

Participation in Proposed Program. Although Principal Mark Schlatter expressed initial interest in the proposed program, he also provided some challenges that would need to be overcome for the program to be successful:

- Highways 63 and 58 provided barriers for participation by many students.
- The elementary school backs up to the high school. Students with older siblings are likely to travel in older siblings' vehicles.
- At the time of the meeting (spring 2010), Mr. Schlatter believed the safety concern was behavior on buses and thought bus safety (including movement by pedestrians entering/exiting the bus) would be beneficial.

At the time of this Final Report, the proposed programs have not been presented to the Hudson Elementary parent organization.

Lincoln Elementary

Past Projects. Lincoln Elementary has implemented several successful projects including a bike education program where students were provided safety education and discounted helmet purchases (Europa partnership), as well as a project very similar to the proposed walking school bus. In this later program, UNI Wellness and Physical Education students worked with the school to identify four locations where elementary-aged students would meet with the UNI volunteers to walk to school.

Current Programs. The programs that exist currently require fewer partners than previous events. They include:

- "Lincoln University" -- curriculum content featuring safety and nutritional education.
- "Mileage Club" -- fitness program, executed during school hours that encourages walking and running activities. Students are awarded a "charm" to mark various milestones of achievement.

Participation in Proposed Program. Lincoln Elementary was very interested in participating in the proposed projects. Specifically, Principal Debra Beving felt the Walking School Bus provided good opportunity for fitness activity before and after school that could be integrated with their "Big Buddy/Little Buddy" student mentor program. Additionally, she believed Map It Cedar Valley could be included in classroom education due to its geography applications.

On the recommendation of Debra Beving, a meeting was set to present the concepts to the Chair of PALS (Lincoln's PTO) prior to the formal PALS meeting. The meeting was originally set for May 20, 2010, but did not occur. Attempts to coordinate a fall 2010 meeting have not been successful. However, Lincoln continues to host Mileage Club activities and successfully executed a Walk to School Day October 6, 2010, which utilized school staff and parent volunteers.

Kingsley Elementary

Past Projects. Past activities have been exclusively safety programs featuring crossing guards and limited in-classroom education.

Current Programs. At the present time, the Physical Education teacher was heading all health and safety education, as well as leading fitness activities. In addition, Jason Gomez, the P.E. teacher, is the acting crossing guard on 4th Street near Hubbard.

Participation in Proposed Program. At the time of this report, Kingsley Elementary has seen very significant progress toward implementing the proposed activities. Following the initial meeting in February 2010, with Kingsley's principal, Susan Flodeen, the Hellman team attended the March 9, 2010, PTO meeting to gain support for the program. A highly-attended and enthusiastic meeting, the parents immediately developed a roster of interested parties. In the months to follow, the PTO plotted the interested households on an AECOM-provided map. This allowed tentative routes for a Walking School Bus event to be developed.

In addition, the PTO has organized leadership in the effort that will allow the program to become a sustainable effort. In the months that followed, the original leadership has transitioned without conflict. This effort to "pass the torch" has ensured the progression of the project.

As of this report, the following projects are being completed in order to support Kingsley's PTO in implementing the project:

- Hellman has discussed the availability of a household list for the entire Kingsley area for use in a mailer with INRCOG. INRCOG has recommended utilizing the PTO to acquire the list and have the school implement the mailing.
- A parents letter will be drafted (or revise the current letter in the packet, if appropriate) by Hellman to introduce a Walking School Bus event that has been tentatively scheduled for the first day of spring 2011.
- Provide the previous family/volunteer list (previously supplied by Kingsley with map) to Christa Miehe, Kingsley Elementary School, PTO representative, in MS Excel format.

- Create an informational display to be hung at parent conferences (November 4 and 5) that provides a positive message for the event and a bulleted reasoning for it.
- Create a flyer that mirrors the informational display. Christa Miehe will coordinate the insertion of this into the daily take-home packets.

Following the close of efforts by INRCOG and the contracted support team, Kingsley is expected to utilize the PTO and its leadership team to implement Safe Routes to School programs.

A copy of the parent letter, Walking School Bus informational display and flyer are included at the end of the Education and Encouragement section.

The Walking School Bus Event:
A Safe, Fun Way
to Walk to School

Dear Parent/Guardian,

Your child has the opportunity to participate in a **fun, social way to keep fit and get to school safely**.

Kingsley Elementary School is hosting a one-day **Walking School Bus Event** on <WEEKDAY>, March <DATE>, 2011. This is to teach the importance of taking a safe route to school, while promoting exercise. The Walking School bus involves organizing groups of students, accompanied by adults, to walk a preplanned route to school.

The Walking School Bus is a **free** event. It has at least one "driver" (an adult volunteer) who walks along an agreed route, picking up all children waiting at designated "bus stops" (their homes or meeting locations). The "driver" then walks them to school. After school, the group walks back along the same route. If your child lives too far to walk from home, remote parking and meeting locations offer a way for your family to participate.

Help us make the Walking School Bus Event a success by signing up your child to participate and/or by signing up as a volunteer "driver." Please contact <NAME> at <NUMBER> to take part in this event.

It is our hope that this one-day event will inspire you and other families to continue the Walking School Bus throughout the school year.

An on-going Walking School Bus program would ease the congestion around school grounds, as well as provide a safe, social and fit journey to school for our students. You'll appreciate having more time to yourself, making fewer trips to school, and knowing your child is supervised by an adult on the way to school.

Yours in school safety,

<NAME>
<TITLE>
Kingsley Elementary School

P.S. Mark your calendar for the Walking School Bus on <WEEKDAY>, March <DATE>. Then contact <NAME> at <NUMBER> to sign up.

A safe, fun way to walk to school.

FREE!

The Walking School Bus Event:

Thursday, March 00, 2011

Ask about this fun, fit way for your child to get to and from school safely. Then sign your child up and volunteer to help.

Call: 333.222.4444

A safe, fun way to walk to school.

FREE!

What is a Walking School Bus?

A Walking School Bus has at least one "driver" (an adult volunteer) who walks along an agreed route, picking up all children waiting at designated "bus stops" (their homes or meeting locations). The "driver" then walks them to and from school.

The Walking School Bus Event:

Thursday, March 00, 2011• Kingsley Elementary School

Your child has the opportunity to participate in a fun, social way to keep fit and get to school safely.

Kingsley Elementary School is organizing groups of students, accompanied by adults, to walk a pre planned route to school.

It is our hope that this one-day event will inspire you and other families to continue the Walking School Bus throughout the school year.

Help us make the Walking School Bus Event a success:

- Sign up your child to be picked up at a designated "bus stop" (their home or meeting place).
- Volunteer to be a "driver" (an adult volunteer) who walks along an agreed route, picking up all children waiting at designated stops.

To participate:

NAME: _____

NUMBER: _____

APPENDIX

Gap Study on 4th Street at Prospect Boulevard

GAP STUDY FIELD SHEET

Group Size Survey Location Prospect Blvd + 4th St.
Date 11/19 Time: From 3:17 To 4:00
Crossing Distance 40'42 ft Walking Speed ≠3.5 ft/sec

No. of Rows	Tally	Total	Cumulative
1	𝍸		
2	𝍸		
3	𝍸 |		
4			
5			
6			
7			

N = 0.85 x ____ = ____ or ____ rows H = ____sec R = ____sec

Minimum Acceptable Gap, G = W/S + (N-1)H + R = 42/3.5 (1-1)H + 3 = 15 sec

Available Gap Survey Date ____
Time: From ____ To ____ Duration ____ min

Gap (sec)	Tally	Total
10		
11		
12		
13		
14		
15	𝍸	4
16	𝍸	3
17	||	2
18	|	1
19	𝍸 |	3
20	|	1
21	|||	3
22	|	1
23	||	2
24	| 𝍸	3
25	|	1
26	||	2
27	|	1
28	|	1
29	𝍸 ||	4
30	|	1
31		
32	𝍸 ||	3
33	|	1
34		
35		
36		
37		
38	|	1
39		
40	||	3
40+		

Total Adequate Gaps 43

55 1

Figure G-19 Refer to Figure 13-5 on page 248.

GAP STUDY FIELD SHEET

Group Size Survey Location 4th and Pros
Date 11/19/09 Time: From 8:16 To 8:52
Crossing Distance 42 ft Walking Speed _____ ft/sec

No. of Rows	Tally	Total	Cumulative
1	|| ||	4	
2			
3			
4			
5			
6			
7			

N = 0.85 x _____ = _____ or _____ rows H = _____sec R = _____sec

Minimum Acceptable Gap, G = W/S + (N-1)H + R = _____ sec

Available Gap Survey Date _____
Time: From _____ To _____ Duration _____ min

Gap (sec)	Tally	Total
10		
11		
12		
13		
14		
15	||||	6
16	|||| ||||	10
17	|||| |||	8
18	||	2
19	||||	4
20	||||	5
21	||||	5
22	||	2
23	||	2
24	||	3
25	|	1
26		0
27	|	1
28		0
29	|	1
30	|	1
31	|	1
32		0
33		
34		
35		
36		
37	||	2
38		
39		
40		
> 40	||	2

Total Adequate Gaps 51

Figure G-19 Refer to Figure 13-5 on page 248.

Gap Study on Ridgeway Avenue at Oregon Street

Speed Limit = 35 mph

GAP STUDY FIELD SHEET

Group Size Survey Location Ridgeway and Oregon
Date 5/4/10 Time: From 3:25 To 4:23
Crossing Distance 31 ft Walking Speed _____ ft/sec

No. of Rows	Tally	Total	Cumulative
1	𝍸 𝍸 |||	13	
2			
3			
4			
5			
6			
7			

N = 0.85 x _____ = _____ or _____ rows H = _____ sec R = _____ sec

$31/3.5 + (1-1)H + 3 =$

Minimum Acceptable Gap, G = W/S + (N-1)H + R = 11.9 sec

Available Gap Survey Date 5/4/2010
Time: From 3:25 To 4:23 Duration 58 min

Gap (sec)	Tally	Total
10	|| Discard Gaps less than 12 sec.	
11	𝍸 𝍸 𝍸 𝍸	
12	𝍸 𝍸 𝍸 𝍸	15
13	𝍸 𝍸 |||	8
14	𝍸 𝍸 |||	10
15	𝍸 𝍸 |	6
16	||	2
17	𝍸 ||	5
18	|| |	3
19	𝍸 𝍸	5
20	𝍸 𝍸 |	6
21	|	1
22	||	2
23	|	1
24	||	2
25	|	1
26		
27	|	1
28	|	1
29	|	1
30		
31		
32	|	1
33		
34	|	1
35	||	2
36		
37		
38		
39		
40		
40	|	1

Total Adequate Gaps 75

Figure G-19 Refer to Figure 13-5 on page 248.

Beginning List of Engineering Issues

Safe Routes to School
Black Hawk County Metropolitan Area
List of Engineering Issues

School	Community	Issue
Black Hawk Elementary	Waterloo	Speed of Traffic Along Downing Avenue Lack of Connection from the North
Cunningham Elementary	Waterloo	Crossing Improvements at Sumner and Beach Pick-Up and Drop-Off Congestion Lack of Sidewalk on Mobile from School to Newell Street Pedestrians Crossing at Cottage Street and Mobile
Edison Elementary	Waterloo	Students Cross Street to get to Cars During Pick-Up / Drop Off
Irving Elementary	Waterloo	Speed of Traffic Along 4th Street and 5th Street
Kingsley Elementary	Waterloo	Pick-Up and Drop-Off Zones are Congested Crossing Improvements at Moir / Prospect and 4th Street
Kittrell Elementary	Waterloo	Lack of Sidewalk on Easton West of 9th Street Lack of Sidewalk on the South Side of Ridgeway Ave. Pick-Up and Drop-Off Congestion Warrant for a 4-way Stop Sign on Oregon and Easton Crossing Improvements on 9th Street
Lincoln Elementary	Waterloo	Lack of Sidewalk on Longfellow North of Walker Street
Lou Henry Elementary	Waterloo	Lack of Signalized Pedestrian Crossing on Ansborough Avenue No Sidewalk on Hillcrest Drive Pick-Up and Drop-Off Congestion / Parking on Side Streets and Walking No Sidewalk on both sides of Rachael Street near South Hills Drive No Sidewalk on East Side of Colby Street from Rachael to Park Kimball Ave. is a Difficult Crossing Even with Signals
Lowell Elementary	Waterloo	Highway 218 is a Difficult Crossing Even with Signals Pick-Up and Drop-Off Zone Congestion Crossing Improvements at 11th Street and Williston
Highland Elementary	Waterloo	Dubuque Road is a Difficult Crossing Even with Signals Pick-Up and Drop-Off Zone on the north side of Independence Ave. Crossing Improvements at Independence Ave. at Idaho Street
Orange Elementary	Waterloo	Speed of Traffic Along Orange Road
Poyner Elementary	Waterloo	No Sidewalk on Grand Blvd. South of Central Crossing Improvements at Roosevelt Rd. and Central Ave. No Sidewalk on the North Side of Central Ave.
Bunger Intermediate	Waterloo	No Sidewalk on Lafayette Ave. Speed of Traffic Along Lafayette Ave. Dubuque Road is a Difficult Crossing Even with Signals
Central Intermediate	Waterloo	
Hoover Intermediate	Waterloo	No Sidewalks on Hillcrest Road No Sidewalks on Ridgeway Ave. Near Hillcrest Road Difficult Street Crossings of Ansborough, Kimball and Ridgeway Ave.
Carver Academy Intermediate	Waterloo	No Sidewalks on Louise Street Traffic Congestion During Shift Changes at Allen and Deere Crossing of Hwy. 63
Orchard Hill Elementary	Cedar Falls	No Sidewalk on Carlton Drive Crossing Improvements at Greenhill and Rownd Street Pick-Up and Drop-Off Zone Problems Along Valley High Drive
Lincoln Elementary	Cedar Falls	Speed of Traffic Along Clay Street Improve Portable Stop Signs at Clay and 8th Street Crossing 12th Street at Franklin and Walnut

School	Community	Issue
Hansen Elementary	Cedar Falls	Adult Crossing Guard Needed at Barrington and 8th Street Drop-Offs Occur on the South Side of 8th Street Cars and Busses Utilizing Same Parking Lot Lack of Sidewalk on Angie Dr. North of 4th Street Speed of Traffic Along 4th Street
Cedar Heights Elementary	Cedar Falls	Lack of Sidewalk on Rownd Street Crossing Improvements at Rownd Street and Hawthorne
North Cedar Elementary	Cedar Falls	No Sidewalk on Center Street East Side South of Lone Tree Rd.
Southdale Elementary	Cedar Falls	Greenhill Road and IA. 58 Intersection Improvements
Holmes Junior High	Cedar Falls	Hudson Road, W 1st Street is a Difficult Crossing Even with Signals
Peet Junior High	Cedar Falls	No Sidewalk on University Ave. from Boulder Drive East
Hudson Elementary / Jr. High	Hudson	Crossing Improvement at U.S. 63 and Woods Street Crossing Improvement at IA. 58 and School St. Pick-Up and Drop-Off Congestion at School St. and Washington St. Lack of Sidewalk on Woods St from Washington to U.S. 63
Blessed Sacrament School	Waterloo	Lack of Sidewalks Near School
Immanuel Lutheran	Waterloo	
Immaculate Conception	Gilbertville	
Sacred Heart	Waterloo	
St. Edward	Waterloo	
St. Patrick	Cedar Falls	
Walnut Ridge Baptist Academy	Waterloo	

Notes from Principal Interviews

Notes on Principal Interviews

School	Principal	Comments
Cedar Falls		
Cedar Heights Elementary	Jon Wiebers	Crossing guards at Rainbow Dr provided by the city; students are at Hawthorne. Stranger danger is biggest safety concern.
Hansen Elementary	Dr. Tony Reid	Crossing guard provided by the city. Need another crossing guard at 8th & Barrington. A study was done on kids walking/biking to school recently. Buses and cars use the same parking lot for drop off/pick up so congestion is a problem. Cars park on the south side of 8th St but they encourage parking on the north.
Lincoln Elementary	Debra Beving	Crossing guards (students) at Clay & 8th. Bike racks added recently. No program on bike safety but they participated in a grant funded National Walk to School Day with UNI.
North Cedar Elementary	Jennifer Hartman	Most kids ride the bus. Crossing guards are at Green & Center (adults) and at Green & Francis, Lantz & Francis (students). Sidewalk on Lantz has been extended to the east. A concern is the lack of sidewalk on Center St to the south.
Orchard Hill Elementary	Kim Cross	Bike racks were purchased recently. Quite a few students bike and walk to school. Students are bused across Greenhill Rd. Crossing guards are located in front of the building. Sidewalk added to Valley High and this has helped in connecting to the school.
Southdale Elementary	Matt Brummond	About 73% of the students ride the bus. Crossing guards are at Orchard in front of the school and South Lawn behind the school. Safety (fire, bus, bike, etc.) instruction is done at Kindergarten; stranger danger safety is done in older grades. If there were a good crossing of Greenhill Rd and Hwy 58, more kids would walk/bike.
Holmes Jr. High	Dave Welter	Of the 525 students, about 40% walk or bike to school. Additional bike racks were installed this year. They received a grant that aids in developing and offering more physical education programs. Current construction will add a 2nd gym. No issues with traffic safety. Corner of 4th and Hudson is most dangerous but city has added safety measures for pedestrians. Would like to see bike trails to all schools and particularly on Hudson Rd. A couple times/year Holmes has a 'walk to school day' where the busses stop at Thunder Ridge Mall and the students walk to school from there.
Peet Jr. High	Mark Farland	School is undergoing some construction so traffic

Notes on Principal Interviews

		patterns and parking are altered. They have worked with the city so that if any additional signage, cross walks or other safety measures are needed they can be put in place. Of the 523 students, about 1/3 walk/bike to school. Safety instruction is covered in health classes.
Waterloo		
Black Hawk Elementary	Melinda Ostergren	
Cunningham Elementary	Liz Crowley	Some sidewalk needed on Mobile. Parking lot congested and traffic backs up. Crossing guards are located at Sumner & Mobile and Mobile & Cottage. Pedestrian lights at Cottage & Mobile would be a good addition. About ½ the student population rides the bus to/from school.
Edison Elementary	Melissa Steggall	Crossing guards (students w/adult supervision) at Magnolia & Falls and Magnolia & Stratford. Buses and cars have drop off/pick up at the same location. Kids dart in between buses to get to parents' cars which is very unsafe. Most staff is outside after school to assist. Keeping kids from walking/biking is safety concerns and parents work schedules.
Irving Elementary	Loleta Montgomery	Crossing guards (adults) in front of the building and at 5th & Locust. Concerns at 5th & Western where cars park up to the intersection and block the view for kids trying to cross. Some kids dash between the cars and that is not safe. Would help to have another crossing guard near the DQ (Western). Bikes stolen during school have discouraged some from biking to school. Drop off/pick up zone has a lot of congestion.
Kingsley Elementary	Sue Flodeen	New Principal at this school. Crossing guards (students w/adult supervision) are located in front of the building and a block down on Prospect Blvd. Drop off is a concern because parents have their children walk across the street w/o pulling up to the curb. About 25-30% of the students are bused to school.
Kittrell Elementary	Audrey Wallican-Green	Crossing guards (students) at Easton & 11th and Easton & Oregon. Concerns of traffic safety. Oregon & Easton should be a 4-way stop instead of 2-way as it is now. Ridgeway & Oregon needs a stop sign or light. Speed humps near the school would help slow down traffic.

Notes on Principal Interviews

Lincoln Elementary	Lucy Evans	Spoke with Carrie Heinzerling, Lead Teacher/Assistant Principal. Parker/Longfellow/Cedar Bend intersection a big concern. Adult crossing guard and children have nearly been hit by cars here. Additional sidewalks would be helpful to extend from the school out and up Longfellow and Cedar Bend. Week long safety units are done for grades 2-4. Pick-up/drop off is congested but it doesn't interfere with walkers and bikers too much.
Lou Henry Elementary	Brian Ortman	Crossing guards at Rachael & Colby and Rachael & Linda (students only). Keeping kids from walking/biking: traffic, lack of sidewalk on Colby, Rachael and several other neighborhood streets and distance. Would like to see parking lot reconfigured to expand and have access off Colby.
Lowell Elementary	Amber Dietz	Spoke with Julie Danker, Secretary since the principal is new to Lowell. Williston & Oregon is a busy crossing; Parking lot congestion is an issue during drop off/pick up times. Kids are bussed across US 218 for safety.
McKinstry (Highland) Elementary	Mary Jo Wagner	Accessibility has improved with the new school. Sidewalk is needed along Independence; kids walk on the shoulders. Adding bike lanes or sidewalks would be a big improvement because many kids want to bike/walk but too many locations lack sidewalks. Drop off/pick up for buses and parents is separated so this helps with congestion.
Orange Elementary	Ken Erpelding	No crossing guards because 98% of students ride to school in buses or cars. A few kids do walk but virtually no bikers. Very rural.
Poyner Elementary	Pam Zeigler	Classroom education on bike safety is provided. Crossing guards are at NE corner of school and NW corner of school and an adult with a stop sign is in front of the school building. Stranger danger safety keeps more kids from walking/biking. Adding more parking and reconfiguring the parking lot could help some congestion.
Bunger Intermediate	Andy Miehe	Currently doing some "Healthy Iowa" activities such as promoting exercise, healthy eating, etc. Concerns at two intersections: Roosevelt & Lafayette, Evans Rd & Lafayette. Traffic is high speed on Lafayette and at Roosevelt there is only a 2-way stop. Would like to see some Roosevelt made into a 4-way stop.
Carver Academy (Formerly Logan	Brad Schweppe	Concerned with sidewalk on the north side of the entrance as most students need to go south so have

Notes on Principal Interviews

Intermediate)		to cross where cars, buses, etc are driving. Also kids cross US 63 wherever they can. Just south of the campus there is an abandoned gas station where kids loiter. Fights and other activities occur here so teachers/staff walk down to keep kids from congregating. Sometimes staff/teachers go farther south into the neighborhood to deter bad behavior. Liability of doing this is a concern. About ½ the students walk/bike to school. Sometimes a staff/teacher rides a bus to assist the bus driver. A good solution for safety would be to have all students on a bus with an associate so that none cross US 63.
Central Intermediate	Marla Padget	
Hoover Intermediate	Dan Cox	Hillcrest is a major concern since there are no sidewalks. The intersection of Hillcrest, Hoover entrance and Park Ln should be reconfigured to make it more pedestrian friendly. Bike riders have to walk through drop off/pick up area due to location of bike racks.
Hudson		
Hudson Elementary	Mark Schlatter	Crossing guard at US 63 and IA 58 by custodial staff. US 63 is of most concern. Would like to see parking lot on Washington eliminated and add new parking in back of school. Drop off and pick up zones are congested. Parents are not parking where they should and this causes problems.
Parochial		
Blessed Sacrament	Nancy Stirm	Some safety education in the past but not currently. More sidewalks are needed all around the school area. Buses and car drop off/pick up are in different locations so this helps but some parents go the wrong way which adds to the congestion. Signs erected have helped.
Immaculate Conception	Julie Neimeyer	Crossing guard at the corner by Don Bosco HS after school. No safety instruction at this time. Some congestion occurs during pick up. Much of the student body is bused.

Blank Form for Student Surveys

Safe Routes to School Students Arrival and Departure Tally Sheet

CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY

School Name:

Teacher's First Name:

Teacher's Last Name:

Grade: (PK,K,1,2,3...) 0 2

Monday's Date (Week count was conducted) M M D D Y Y Y Y

Number of Students Enrolled in Class: 1 5

- Please conduct these counts **on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)**
- **Please do not conduct these counts on Mondays or Fridays.**
- Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.
- Ask your students as a group the question **"How did you arrive at school today?"**
- Then, reread each answer choice and record the number of students that raised their hands for each. **Place just one character or number in each box.**
- Follow the same procedure for the question **"How do you plan to leave for home after school?"**
- You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

Step 1.
Fill in the weather conditions and number of students in each class

Step 2.
AM – **"How did you arrive at school today?"** Record the number of hands for each answer.
PM – **"How do you plan to leave for home after school?"** Record the number of hands for each answer.

Key	Weather	Student Tally	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
	S= sunny R= rainy O=overcast SN=snow	Number in class when count made	-	-	-	Only with Children from your family	Riding with children from other families	City bus, subway, etc.	Skate-board, scooter, etc.
Sample AM	S N	2 0	2	3	8	3		3	1
Sample PM	R	1 9	3	3	8	1	2	2	
Tues. AM									
Tues. PM									
Wed. AM									
Wed. PM									
Thurs. AM									
Thurs. PM									

Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.

Student Survey Results Summary

Student Survey Results Conducted Fall of 2008
Mode of Transportation Survey

School District Name of School	Grades of Students	Number of Students (07-08 Enrollment)	Survey Reponses	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Cedar Falls										
Cedar Heights Elementary	K-6	481	443	16.7%	0.1%	31.7%	33.6%	3.9%	0.0%	0.4%
Helen A. Hansen Elementary	K-6	469	415	18.8%	4.0%	42.4%	28.3%	3.6%	0.1%	2.2%
Lincoln Elementary	K-6	460								
North Cedar Elementary	K-6	194	179	9.0%	5.3%	33.0%	47.8%	3.2%	0.0%	0.7%
Orchard Hill Elementary	K-6	327	352	13.0%	6.9%	33.9%	39.7%	5.3%	0.1%	0.1%
Southdale Elementary	K-6	459	426	13.3%	1.7%	47.5%	31.7%	4.9%	0.5%	0.2%
Holmes Junior High	7-9	524								
Peet Junior High	7-9	530	63	7.6%	0.4%	28.0%	60.4%	3.6%	0.0%	0.0%
Waterloo										
Black Hawk Elementary	K-5	208	143	26.5%	4.2%	30.5%	34.0%	3.0%	0.0%	1.9%
Cunningham Elementary	K-5	344								
Highland Elementary	PK-5	409	370	17.3%	2.3%	40.8%	33.5%	3.6%	0.0%	0.6%
Eddison Elementary	PK-5	320								
Irving Elementary	K-5	364	280	33.9%	1.2%	8.2%	47.4%	7.3%	0.9%	0.3%
Kingsly Elementary	K-5	317	328	12.7%	4.1%	19.6%	59.1%	3.4%	0.3%	0.3%
Kittrell Elementary	K-5	408								
Lincoln Elementary	K-5	423								
Lou Henry Elementary	K-5	434								
Lowell Elementary	K-5	249								
Orange Elementary	K-5	328	324	2.4%	0.0%	82.2%	15.6%	0.0%	0.0%	0.0%
Poyner Elementary	K-5		450	6.5%	4.3%	37.2%	43.4%	7.2%	0.0%	0.6%
Bunger Intermediate	6-8	471								
Carver Intermediate	6-8	441								
Central Intermediate	6-8	568								
Hoover Intermediate	6-8	698								
Hudson	K-8	477								
Hudson Elementary	K-4		233	16.5%	2.7%	29.9%	43.2%	5.7%	0.0%	1.4%
Hudson Middle School	5-8		204	21.0%	7.5%	18.6%	39.8%	10.1%	0.0%	0.9%
Malcolm Price Laboratory School	K-8	173	161	23.0%	7.2%	2.5%	61.0%	3.1%	0.0%	1.5%
Parochial										
Blessed Sacrament	K-5	269	209	5.6%	2.4%	19.0%	67.3%	5.4%	0.0%	0.0%
Immaculate Conception	K-8	269	183	4.2%	0.0%	14.3%	63.5%	17.9%	0.1%	0.0%
Immanuel Lutheran	PK-8	188								
Sacred Heart	PK-8	266								
St. Edward	PK-8	421	251	5.7%	1.5%	15.6%	70.2%	6.4%	0.0%	0.2%
St. Patrick	PK-8	246	213	6.7%	1.0%	13.1%	68.8%	10.0%	0.0%	0.3%
Waterloo Christian Academy	K-8	107								

Blank Form for Parent Surveys

SURVEY ABOUT WALKING AND BIKING TO SCHOOL
- FOR PARENTS -

Dear Parent or Caregiver,

Your child's school wants to learn your thoughts about children walking and biking to school. This survey will take about 5 - 10 minutes to complete. We ask that each family complete only one survey per school your children attend. If more than one child from a school brings a survey home, please fill out the survey for the child with the next birthday from today's date.

After you have completed this survey, send it back to the school with your child or give it to the teacher. Your responses will be kept confidential and neither your name nor your child's name will be associated with any results. **Thank you for participating in this survey!**

School Name: _____

Completing this form: Please write with CAPITAL letters. Mark boxes with "X" instead of "✓".

1. **What is the grade of the child who brought home this survey? (K – 8)** ☐ grade

2. **Is the child who brought home this survey male or female?** ☐ MALE ☐ FEMALE

3. **How many children do you have in Kindergarten through 8th grade?** ☐ children

4. **What is the street intersection nearest your home?** *(provide the names of two intersecting streets)*

   _____ AND _____

5. **How far does your child live from school?** *(choose one and mark box with X)*

   ☐ a. less than 1/4 mile
   ☐ b. 1/4 mile up to 1/2 mile
   ☐ c. 1/2 mile up to 1 mile
   ☐ d. 1 mile up to 2 miles
   ☐ e. More than 2 miles
   ☐ f. Don't know

6. **On most days, how does your child arrive at school and leave for home after school?** *(select one choice per column, mark box with X)*

Arrive at school	Leave for home
☐ a. Walk	☐ a. Walk
☐ b. Bike	☐ b. Bike
☐ c. School Bus	☐ c. School Bus
☐ d. Family vehicle (only with children from your family)	☐ d. Family vehicle (only with children from your family)
☐ e. Carpool (riding with children from other families)	☐ e. Carpool (riding with children from other families)
☐ f. Transit (city bus, subway, etc.)	☐ f. Transit (city bus, subway, etc.)
☐ h. Other (skateboard, scooter, inline skates, etc.)	☐ h. Other (skateboard, scooter, inline skates, etc.)

7. **How long does it normally take your child to get to/from school?** *(fill-in circle for one choice per column)*

Travel time to school	Travel time from school
☐ a. Less than 5 minutes	☐ a. Less than 5 minutes
☐ b. 5 - 10 minutes	☐ b. 5 - 10 minutes
☐ c. 11 - 20 minutes	☐ c. 11 - 20 minutes
☐ d. More than 20 minutes	☐ d. More than 20 minutes
☐ e. Don't know / Not sure	☐ e. Don't know / Not sure

8. **Has your child asked you for permission to walk or bike to/from school in the last year?** *(select one)* ☐ YES ☐ NO

9. **At what grade would you allow your child to walk or bike without an adult to/from school?**
(select a grade between K – 8) ☐ grade (or ☐ I would not feel comfortable at any grade)

10. **Which of the following issues affected your decision to allow, *or not allow*, your child to walk or bike to/from school?**
(select all that apply, mark with X in box)

- ☐ **Distance**
- ☐ **Convenience of driving**
- ☐ **Time**
- ☐ **Child's before or after-school activities**
- ☐ **Speed of traffic along route**
- ☐ **Amount of traffic along route**
- ☐ **Adults to walk or bike with**
- ☐ **Sidewalks or pathways**
- ☐ **Safety of intersections and crossings**
- ☐ **Crossing guards**
- ☐ **Violence or crime**
- ☐ **Weather or climate**

11. **Would you probably let your child walk or bike to/from school if this problem were changed or improved?** *(select one choice per line)*
(☐ My child already walks or bikes to/from school)

☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure
☐ YES	☐ NO	☐ Not Sure

12. **In your opinion, how much does your child's school encourage or discourage walking and biking to/from school?** *(select one, mark with X in box)*

Strongly Encourage	Encourage	Neither	Discourage	Strongly Discourage
☐	☐	☐	☐	☐

13. **How much FUN is walking or biking to/from school for your child?** *(select one)*

Very Fun	Fun	Neutral	Boring	Very Boring
☐	☐	☐	☐	☐

14. **How HEALTHY is walking or biking to/from school for your child?** *(select one)*

Very Healthy	Healthy	Neutral	Unhealthy	Very Unhealthy
☐	☐	☐	☐	☐

15. **What is the highest grade or year of school you completed?** *(select one, mark with X in box)*

- ☐ Grades 1 through 8 (Elementary)
- ☐ Grades 9 through 11 (Some high school)
- ☐ Grade 12 or GED (High school graduate)
- ☐ College 1 to 3 years (Some college or technical school)
- ☐ College 4 years or more (College graduate)
- ☐ Prefer not to answer

16. **Please provide any additional comments below:**

Thank you for participating in this survey!

Parent Survey Results Summary

Safe Routes to School
Parent Surveys (Spring of 2009)
Mode of Transportation

School District Name of School	Number of Students (08-09 Enrollment)	Survey Reponses	Walk		Bike	School Bus		Family Vehicle		Carpool		Transit	Other
			To:	From:		To:	From:	To:	From:	To:	From:		
Cedar Falls													
Cedar Heights Elementary	454	104	22.8%	25.8%	10.0%	26.8%	29.8%	35.6%	28.8%	5.0%	6.0%	0.0%	0.0%
Helen A. Hansen Elementary	449	188	18.3%	22.7%	1.8%	46.5%	46.5%	29.3%	24.3%	0.6%	1.2%	0.0%	3.9%
Lincoln Elementary	445	81	27.5%	28.8%	3.8%	33.8%	33.8%	35.2%	34.0%	0.0%	0.0%	0.0%	0.0%
North Cedar Elementary	201	77	15.8%	17.9%	2.6%	39.4%	34.2%	40.7%	42.5%	0.0%	1.4%	0.0%	1.3%
Orchard Hill Elementary	364	73	12.6%	22.3%	6.9%	26.3%	27.8%	51.3%	37.5%	2.8%	4.2%	0.0%	0.0%
Southdale Elementary	464	143	13.4%	16.3%	4.2%	50.7%	51.7%	24.5%	21.3%	5.6%	4.9%	0.0%	1.4%
Holmes Junior High	520												
Peet Junior High	539												
Waterloo													
Black Hawk Elementary	269	101	35.7%	34.7%	2.0%	25.4%	26.4%	30.6%	30.6%	6.0%	5.1%	0.0%	0.0%
Cunningham Elementary	420	26	9.5%	5.3%	0.0%	57.3%	63.2%	33.3%	31.6%	0.0%	0.0%	0.0%	0.0%
Edison Elementary	380	83	11.0%	12.6%	1.2%	40.6%	47.6%	44.4%	36.4%	1.2%	1.3%	0.0%	1.2%
Irving Elementary	404	58	32.7%	40.8%	1.8%	7.2%	7.4%	45.5%	39.0%	10.9%	11.3%	0.0%	1.8%
Kingsly Elementary	351	91	7.9%	14.9%	2.2%	18.3%	17.1%	67.7%	60.7%	3.4%	3.4%	0.0%	0.0%
Kittrell Elementary	379	124	12.0%	19.8%	1.7%	16.2%	17.1%	53.8%	47.0%	16.2%	13.7%	0.0%	0.0%
Lincoln Elementary	433	46	0.0%	4.4%	0.0%	44.6%	46.6%	51.1%	42.2%	4.4%	6.6%	0.0%	0.0%
Lou Henry Elementary	465	158	15.8%	20.4%	2.0%	33.6%	32.8%	43.3%	40.8%	5.3%	3.4%	0.0%	0.0%
Lowell Elementary	318	65	17.5%	31.8%	1.6%	28.5%	30.1%	46.0%	30.2%	4.8%	6.3%	0.0%	1.6%
McKinstry Elementary	417	77	9.6%	13.9%	1.4%	45.4%	48.6%	39.7%	33.5%	4.2%	2.8%	0.0%	0.0%
Orange Elementary	338	116	2.7%	3.6%	0.0%	86.8%	88.4%	9.8%	8.1%	0.9%	0.0%	0.0%	0.0%
Poyner Elementary	476	128	4.0%	3.3%	4.0%	34.6%	37.3%	48.3%	48.8%	8.8%	6.5%	0.0%	0.0%
Bunger Intermediate	532	26	0.0%	4.0%	0.0%	60.0%	64.0%	20.0%	16.0%	20.0%	16.0%	0.0%	0.0%
Central Intermediate	538	2											
Hoover Intermediate	813	84	7.4%	22.8%	0.0%	32.1%	34.2%	39.5%	22.9%	21.1%	19.0%	0.0%	0.0%
Jack M. Logan Intermediate	360	12	16.6%	9.1%	0.0%	41.7%	54.6%	41.6%	36.4%	0.0%	0.0%	0.0%	0.0%
Hudson	477 (*)												
Hudson Elementary		110	11.3%	27.4%	5.6%	12.2%	15.9%	61.3%	44.3%	9.3%	5.6%	0.0%	0.0%
Hudson Middle School													
Malcolm Price Laboratory School	173 (*)												
Parochial													
Blessed Sacrament	269 (*)	32	3.1%	3.1%	6.2%	18.8%	18.8%	59.4%	59.4%	12.6%	12.6%	0.0%	0.0%
Immaculate Conception	269 (*)												
Immanuel Lutheran	188 (*)	24	4.3%	4.3%	0.0%	21.7%	21.7%	52.1%	47.8%	21.7%	26.1%	0.0%	0.0%
Sacred Heart	266 (*)												
St. Edward	421 (*)											-	
St. Patrick	246 (*)	28	3.6%		0.0%	17.8%		78.6%		0.0%		0.0%	0.0%
Walnut Ridge Baptist Academy	107 (*)	29	0.0%	0.0%	0.0%	0.0%	3.4%	93.1%	86.2%	6.8%	10.3%	0.0%	0.0%

(*) 2007 - 2008 Enrollment