

CITY OF MOUNT VERNON, OHIO

School Travel Plan



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Table of Contents

Section 1: The Safe Routes to School Team	2
Section 2: Introduction.....	3
Section 3: The Public Input Process.....	4-6
Section 4: Description of School(s).....	7-8
Section 5: School Demographics.....	9
Section 6: Current School Travel Environment	10-13
Section 7: Barriers to Active Transportation	14-17
Section 8: Creating Solutions and Countermeasures	18-19
Section 9: Mapping	20
Section 10: The Action Plan.....	21-26
Section 11: Plan Endorsements	27

Appendix

- Knox County School Districts Map
- Two Mile Radius Maps
 - Overall map showing all four schools
 - Dan Emmett Elementary School
 - Pleasant Street Elementary School
 - East Elementary School
 - Mount Vernon Middle School
- Existing Conditions
 - Dan Emmett Elementary School
 - Pleasant Street Elementary School
 - East Elementary School
 - Mount Vernon Middle School
- Safe Routes to School Engineering Study (complete with mapping)

Section 1: Safe Routes to School Team

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Pleasant Street Elementary School Karen Boylan, Principal Dirk Parker, Student and Family Advocate Brock Evans, Physical Education Teacher	Knox County Sheriff's Office Captain Richard Brenneman
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Mount Vernon City School District Dr. Lori Beach, Coordinator of Gifted, Enrichment & Federal Programs Janet Stutzman, School Nurse Kent Miller, PEP Grant Coordinator Todd Allen, Transportation	

Section 2: Introduction

The School Travel Plan was developed as a combined effort between the City of Mount Vernon, the Mount Vernon City School District and the Ohio Department of Transportation. The School Travel Plan will serve as a strategic planning tool for the entire City to improve children’s safety, enhance community life and protect the character of the community.

Four schools are included in the Plan—Dan Emmett Elementary School, Pleasant Street Elementary School, East Elementary School and Mount Vernon Middle School. While there are common issues with all schools regarding pedestrian and bicyclist safety, the unique characteristics and diverse location of each school provided an exciting opportunity to develop cohesive community wide goals and formulate a well-defined long range plan.

The Plan is committed to addressing issues in line with the “5 E’s”—education, encouragement, enforcement, engineering and evaluation. Each of these five facets provides an opportunity to develop a set of goals and objectives within the plan and to formulate strategies to provide positive solutions to insure long term success of the program.

Education

- Raising the awareness of children and adults relative to active transportation and pedestrian and bicycle safety issues is a vital part of the Plan.

Encouragement

- Promoting the benefits of walking and biking to the individual’s health and the environment as an active outcome of the program.

Enforcement

- Utilizing the skills and talents of law enforcement officers to make it safer and easier to bike and walk to school.

Engineering

- Reviewing existing conditions and selecting physical improvement projects that promote safe pedestrian and bicycle travel.

Evaluation

- Monitoring and evaluating the plan to ensure goals and objectives are being met.

Section 3: Public Input Process

In developing the public input portion of our School Travel Plan, the overall objective was to gain as much feedback as possible. To do that, we used several different methods including the Safe Routes Parent Surveys, devising a short survey for parents and students to complete in conjunction with our Walk to School event, establishing a public comment period, and talking with school staff about what they saw as safety and transportation issues.

Key Dates for the Process

- July 29, 2009 Kick-off meeting, School Superintendent and key City officials
- August 31, 2009 Meeting with East School Principal
- September 4, 2009 Meeting with Pleasant Street Principal and key staff
- September 4, 2009 Meeting with Dan Emmett Behavioral Support
- September 16, 2009 Meeting with Middle School Principal
- October 7, 2009 Walk to School Event
- October 16, 2009 Deadline for return of WTS Student/Parent Surveys
- February 9-11, 2010 Conduct Travel Tally, moved to February 23-25 due to weather
- February 9, 2010 Public meeting, Pleasant Street Elementary, cancelled for weather
- February 11, 2010 Public meeting, Dan Emmett Elementary
- February 16, 2010 Public meeting, East Elementary, cancelled for weather
- February 18, 2010 Public meeting, Middle School, cancelled for weather
- February 18, 2010 Deadline for parent surveys, date moved to February 25
- February 25, 2010 Deadline for public comment

Current Programs

- Safety Town. Overseen by the Knox County Health Department and embedded within the weeklong Kindergarten Camp program scheduled annually by Mount Vernon City Schools this module teaches children how to safely navigate sidewalks, how to get on and off the school bus, to understand what traffic signals mean, encourage use of seat belts and discusses the proper use of 9-1-1. The City of Mount Vernon's Police and Fire Departments teach safety skills during the week. The Knox County Sheriff's Office also teaches during the program. These three groups work with local communities and schools throughout the County safety awareness and skills.
- Bicycle Safety. The Knox County Health Department will work with police departments, the Sheriff's Office and the State Highway Patrol to conduct bicycle safety training. Bicycle safety is also a part of the City's summer recreation program.

Public Meetings and Invitation to Comment

In conjunction with our Walk to School Event held on October 7, 2009, we offered one prize at each of the four schools. In order to be eligible for the prize drawing, students had to answer five questions—how often do you walk to school; how does walking to school benefit you; how does walking to school benefit the environment; what would make your walking route more safe;

and by participating in this event, will you walk to school more often. The lower portion of the survey included a place for the parent or guardian signature and the question what can be done to insure safer walking and riding routes to school for children. This was a great way to engage students and parents to get them thinking about walking, biking, and safety. We received a wealth of information from both students and parents. Results of the survey are listed in Section 6.

We scheduled an open public meeting (similar to ODOT's project meetings) at each of the four schools. Unfortunately, we were only able to hold one meeting due to inclement weather. When the schools cancelled because of snowstorms, we cancelled the meeting at those locations. The meetings were scheduled to begin approximately one hour prior to dismissal and run for several hours after dismissal. At the meeting we held, the discussions with parents mirrored the responses from our Walk to School Surveys.

Notice of the public meetings were provided to and disseminated by the local newspaper *The Mount Vernon News*, WMVO/WQIO and WNZR radio stations. Notice of the public meeting scheduled for their school was sent home with each student along with the parent survey form from the National Safe Routes to School website. We posted the public notice and comment form on our website to allow better public access and encourage comments. Results of the parent survey are listed in Section 6.

Stakeholder Comments

In surveying stakeholders, we limited our survey pool to those individuals who would be actively involved in transportation issues—school staff (including the transportation director), City Street Department Superintendent and the City's Police Department and Engineering Department Administrative Staff. Results of the survey are listed in Section 6.

Existing Bike or Pedestrian Plan Recommendations

As a part of the original *Focus 2100 Plan* and the current Knox County Comprehensive Plan, the goals are to encourage alternate forms of transportation by strengthening the County and Municipal subdivision regulations to encourage pedestrian linkages and include bicycle and pedestrian facilities in proposed developments. This includes encouraging provision for bicycle and pedestrian facilities in existing areas.

Work continues on establishment of a network of bike routes through Mount Vernon. The Kokosing Gap Trail (from Mount Vernon east) is established and well-used. The Heart of Ohio Trail (west of Mount Vernon to Centerburg) continues to develop. The City of Mount Vernon continues to explore opportunities to improve the movement of bicycle traffic through the City.

Wellness Objectives

The Mount Vernon City Schools recognize the benefits of encouraging good health and nutrition habits. As a part of their administrative guidelines they have they have included the following:

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- Nutrition – Support classroom activities for all elementary students to encourage good nutrition practices to promote health and reduce obesity.
 - Health Education and Life Skills – Allow students the opportunity to practice behaviors that enhance health and/or reduce health risks during the school day and as a part of before or after school programs.
 - Physical Education – The physical education program shall be designed to stress physical fitness and encourage healthy, active lifestyles. The district was awarded a grant under the Carol M. White Physical Education Program and is working to development additional fitness opportunities and guidelines.
 - Health and Safe Environment – Provide a tobacco, alcohol and drug free environment. Also provide a violence and harassment free environment.
 - Social and Emotional Wellbeing – To provide a supportive environment including guidance, counseling and social work services to encourage students to request assistance when needed.
 - Family, School and Community Partnership – Actively develop and support the engagement of students, families and staff in community health enhancing activities and events at the school or throughout the community.

Section 4: Description of Schools

Four schools were selected to be the focus of Mount Vernon's School Travel Plan and our objective in this section is to provide a thumbnail sketch of each of the schools. They are Dan Emmett Elementary School, East Elementary School, Pleasant Street Elementary School, and the Mount Vernon Middle School.

Dan Emmett School – 108 Mansfield Avenue

Dan Emmett Elementary School was built in 1950 and named for Daniel Decatur Emmett, the author of *Dixie*. The south wing of the school was added to the building in 1988.



The building houses kindergarten through fifth grade students as well as the district's Intermediate Multiple Handicapped class. Classes run from 9:00 am to 3:30 pm and student population is 248.

Immediately adjacent to the school property is the City park known as Dan Emmett Park. The park houses two ball fields and a restroom/shelter structure.

The school is located in an area that is primarily residential consisting of traditional subdivision dwelling units and some multi-family housing.

State routes impacting school travel are State Route 3 and State Route 13.

East Elementary School – 714 East Vine Street

Formerly known as the First Ward School, there has been a school building on this site since 1851. The current school was built in 1910 with an addition being added in 1952.



The building houses kindergarten through fifth grade students. Classes run from 9:00 am to 3:30 and student population is 325. Minimal bussing to this location.

The school is located in an area that is primarily residential consisting of traditional subdivision dwelling units

State route impacting school travel is State Route 229.

Pleasant Street Elementary School – 305 East Pleasant Street

Pleasant Street is the largest of the six elementary schools in the District. Originally constructed as a junior high in 1959, it is a large facility with a separate gymnasium and cafeteria.



The building houses kindergarten through fifth grade students. Classes run from 9:00 am to 3:30 pm and student population is 428.

The school is located in an area that is primarily residential consisting of traditional subdivision dwelling units and some multi-family housing.

State routes impacting school travel are State Route 3 and U S Route 36.

Mount Vernon Middle School – 298 Martinsburg Road

Constructed in 1995 the school is adjacent to the Mount Vernon High School and Knox County Career Center campuses as well as the campus of the Mount Vernon Nazarene University.



The building houses sixth through eighth grade students. Classes run from 7:45 am to 2:25 pm and student population is 1050.

The school is located in an area that is mixed in use including residential consisting of traditional subdivision dwelling units, multi-family housing, commercial and educational campuses and some manufacturing.

State routes impacting school travel are State Route 13, State Route 229 and State Route 586.

Section 5: School Demographics

Mount Vernon's Safe Routes to School Plan covers four schools located within the Mount Vernon City School District. The following table shows the demographic information for ethnicity for the schools, district and the State of Ohio for school year 2008-2009. (Source is www.greatschools.org)

Ethnicity	Dan Emmett Elementary	East Elementary	Pleasant Street Elementary	Mount Vernon Middle School	State Average
White	95%	93%	93%	96%	78%
Multiracial	4%		5%	3%	3%
Unspecified	1%	7%	2%	1%	n/a

The following table shows the demographic information for student subgroups for the schools and the State of Ohio. This information is current as of January and was provided by Dr. Lori Beach, Coordinator, Gifted, Enrichment and Federal Programs, Mount Vernon City Schools.

Subgroups	Dan Emmett Elementary	East Elementary	Pleasant Street Elementary	Mount Vernon Middle School	State Average
Economically disadvantaged	69.69%	41.23%	58.84%	44.72%	36%
Disabled	27.88%	12.28%	15.48%	0.01%	14%
Gifted	6.16%	16.79%	9.55%	24.81%	--
Migrant	0%	0%	0%	0%	--
Limited English proficient	0%	2.63%	0%	1.01%	--

Section 6: Current School Travel Environment

Summary of Surveys

As we indicated in Section 3, our overall objective in the Safe Routes process was to gain as much feedback as possible. Besides the required Safe Routes Parent Surveys, public comments, stakeholder surveys, and student travel tally, we devised a short survey to complement our Walk to School event and formally and informally spoke with staff from each of the schools.

Summary of Survey Results – Walk to School

Walk to School day was a great way to get parents and students thinking about walking and safety to give them an opportunity to express concerns about their routes to school. As indicated in Section 3 we asked students to answer five questions. The lower portion of the survey included a place for the parent or guardian signature and the question what can be done to insure safer walking and riding routes to school for children. The total student population eligible to survey was 1,926 and 427 surveys were returned giving a response rate of 22 percent. The results for the open ended questions have been summarized.

- ***How often do you walk to school? (Student response)***

Every day	26%
1-4 Days a week	23%
Never	51%

- ***By participating in this event, will you walk to school more often? (Student response)***

Yes	37%	
No*	35%	*Includes students that walk all the time
Maybe	14%	
Other answers	14%	

- ***How does walking to school benefit you? (Student response)***

Exercise	60%
Healthy	18%
Fun or makes happy	4%
All other answers	18%

- ***How does walking to school benefit the environment? (Student response)***

Lower pollution	64%
Save gas/energy	24%
Cuts down traffic	5%
All other answers	7%

- ***What would make your walking route more safe? (Student response)***

Sidewalks, paths and roadways	31%
Crosswalks and bus stops	15%
Street lights and traffic signals	1%

Enforcement, speed and signage issues	10%
Student safety and awareness	35%
All other answers	8%

- ***What can be done to insure safer walking and riding routes to school for children? (Parent response)***

Sidewalks, paths and roadways	31%
Crosswalks and bus stops	20%
Street lights and traffic signals	3%
Enforcement, speed and signage issues	18%
Student safety and awareness	28%

Summary of Surveys – Safe Routes Parent Surveys

We scheduled the parent surveys to run concurrent with our scheduled public meetings. Heavy snows during the month of February resulted in school closures. We received surveys from three of the four schools. No parent surveys were returned by the Middle School—therefore no information is included here or at the National Safe Routes website.

Included below are issues which affect a parent’s decision to allow or not allow their child to walk to or bike to school. The information shown covers children who do not walk or bike to school. Open enrollment and the fact that two of the elementary schools cover large rural areas must be considered in interpreting the parent responses to distance.

Issue	Dan Emmett Elementary	East Elementary	Pleasant Street Elementary	Mount Vernon Middle School
Distance	36.8%	44.1%	52.1%	0.0%
Convenience of driving	2.6%	11.7%	10.0%	0.0%
Time	10.5%	23.5%	23.6%	0.0%
Before/after school activities	5.3%	14.7%	7.1%	0.0%
Traffic speed along route to school	39.5%	70.6%	32.1%	0.0%
Traffic volume along route	42.1%	58.8%	37.1%	0.0%
Adults to walk/bike with	10.5%	26.5%	15.0%	0.0%
Sidewalks or pathways	39.5%	50.0%	22.9%	0.0%
Safety of intersections & crossings	34.2%	58.8%	33.6%	0.0%
Crossing guards	10.5%	23.5%	8.6%	0.0%
Violence or crime	26.3%	52.9%	40.0%	0.0%
Weather or climate	26.3%	55.9%	39.3%	0.0%

Summary of Surveys – Student Travel Tally

We scheduled our student travel tallies to run concurrent with our scheduled public meetings. Heavy snows during the month of February resulted in school closures on one or more of our planned survey days. The schools did their best to provide complete information for us; however responses were not submitted for all classes. The Middle School surveyed their social studies classes and provided information on how the students traveled to and from school. That

information is included in the table. They did not use the National Safe Routes Student Travel Tally form so the information was not uploaded to the national website.

Method	Dan Emmett Elementary	East Elementary	Pleasant Street Elementary	Mount Vernon Middle School*
Walk	12.7%	29.9%	16.2%	2.1%
Bike	0.0%	0.0%	0.1%	0.2%
School Bus	27.5%	7.3%	32.5%	53.7%
Family Vehicle	50.5%	53.1%	44.6%	44.1%**
Carpool	5.4%	4.0%	6.2%	0.0%
Transit	3.9%	5.6%	0.5%	0.0%
Other	0.0%	0.0%	0.0%	0.0%

*The Middle School did not use the form provided and the information was not uploaded to the National Safe Routes website.

**No differentiation was made between family vehicle and carpooling so all responses were included under family vehicle.

Summary of Surveys – Stakeholder Surveys

Summary of Surveys – Public Comments

We scheduled an open public meeting (similar to ODOT’s project meetings) at each of the four schools. Unfortunately, we were only able to hold one meeting due to inclement weather. At the meeting we held, the discussions with parents mirrored the responses from our Walk to School Surveys. The primary concerns involved sidewalks and crosswalks. However, one area we did get verbal comment on was concern for safety of children crossing Sandusky Street (State Route 13) a very busy street with heavy truck traffic. The following were issues cited in public comment:

- Sidewalks
 - Many areas adjacent to the school do not have sidewalks
 - Existing sidewalks are in poor condition or are no longer distinguishable
 - Clearing of sidewalks during inclement weather
- Crosswalks and routing
 - Lack of designated crosswalks
 - No adult crossing guards
 - No designated route for children to follow
- Enforcement/traffic issues
 - Parking in bus lane or school yard presents a hazard

Arrival and Dismissal Procedures

- Buses deliver students to a designated area at each school.

Section 7: Barriers to Active Transportation

Transportation Generally

The City of Mount Vernon, with a current area of 9.86 square miles, has developed significantly from its original plat containing 238 lots. Currently bisected by the Kokosing River, travel in the City is also impacted by Dry Creek and Center Run as well as the smaller Adams Run, Curtis Run and Delano Run. Also segmenting the City are US Route 36, State Routes 3, 13, 229, 586, 661 and 768. A regional short-line railroad also impacts travel in the City. Mount Vernon is the terminal point for this rail line.

North and south arteries within the City are Wooster Road/North Main Street/Harcourt (SR 3); Vernonview Drive (SR 768); Newark Road/Sandusky Street (R 13); and Martinsburg Road (SR 586). East/west arteries are Coshocton Avenue (USR 36) and West High Street (USR 36, SR 3, SR 229); and Gambier Street/Road (SR 229). Secondary and collector streets include Mansfield Avenue, Belmont Avenue, Clinton Road/Fairgrounds, Sychar Road, Beech Street, Edgewood Road, Mount Vernon Avenue, South Main Street/Granville Road, Parrott Street and Columbus Road (CR 80).

Obstacles that Prevent Safe Travel for Walkers and Bikers

The engineering study performed by Stantec Consulting Services, Inc. and prepared for the Ohio Department of Transportation, District 5, reviewed the attendance zones around each of the four schools (Dan Emmett Elementary, East Elementary, Pleasant Street Elementary and Mount Vernon Middle School). The attendance zones for the schools do not overlap and while we can begin by speaking generally about the types of obstacles and barriers, we will also discuss each school individually.

Sidewalks

Missing or insufficient sidewalks make it difficult for all pedestrian to walk safely. Included as a barrier are the lack of sidewalks in individual subdivisions and gaps in sidewalks along streets of all types (arterial, collector and minor streets). The physical condition of sidewalks also present difficulty to pedestrians when they are sunken, heaved, overgrown, deteriorated and missing slabs or segments. Car parking adjacent to and across sidewalks also impedes pedestrian and bike traffic.

Street Crossings and Intersections

Barriers in this category include lack of signalization, signal timing issues, location of signals and associated signage, warning signs, and pavement markings. Lack of designated crossings points on busy state routes presents a serious obstacle to safe walking and biking particularly when combined with high traffic volumes during peak travel times. The condition of intersections also impacts safe travel. In some of the older areas of town the transition from brick pavement to asphalt surface are ragged and uneven and physically within the designated

crosswalk. Uneven curb access and lack of handicapped ramps in also impact walking and biking.

Signage and Signalization

Signage and flashing signals are provided at schools and at some key crossing points; however the alignment of existing flashing signals and warning signage are not clearly visible to all vehicular traffic. The unique configuration of several signalized intersections presents a hazard to proper, safe crossing of busy state routes.

Dangerous Conditions, Driving and Speed

Parent and student surveys indicated a level of concern over the volume and speed of traffic in school zones. Stranger dangers and concern over violence and crime were also issues affecting whether children were permitted to walk or bike to school.

Distance to School

Particularly in the elementary school surveys, distance to the school was a significant factor impacting whether children were able to walk or bike to school. Childs age and the particular route the child would have to navigate to get to school are primary concerns.

School Grounds Traffic Flows, Access and Parking

Ingress and egress to school grounds and traffic flow on the grounds presents a significant challenge to walking and biking. Parking lots are chaotic at drop off and pick up times and driver and student inattention are particular concerns. On street parking is haphazard in front of some schools and is located in such a manner that vehicles impede student access to sidewalks.

Traffic Accidents

During the three year period from 2005 to 2007, 17 crashes involving pedestrians and bicyclists were reported in the City within a two-mile radius of the schools studied. Nine crashes occurred near downtown and were near the far edge of school attendance zones for the elementary schools. Middle school students travel through this area. Traffic volumes and congestion could be considered factors in the downtown area. The remainder of the crashes are scattered throughout the city suggesting they are isolated incidents.

City Ordinances

Chapter 521 of the Codified Ordinances of the City of Mount Vernon addresses obstruction of sidewalks and requires residents to keep sidewalks clean and in repair.

Obstacles at Dan Emmett Elementary School

- Lack of sidewalks in neighborhoods

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- Lack of sidewalks immediately adjacent to school on Nuce Road
 - Physical condition of existing sidewalks
 - Lack of key crossing points on state route and busy streets
 - Crosswalk markings
 - School zone signage and markings
 - Parking on sidewalk in front of school
 - School site traffic patterns
 - Interfere with walking access
 - Interfere with bus access
 - On-site congestion due to traffic volume and constriction

Obstacles at East Elementary School

- Lack of sidewalks in neighborhoods
- Lack of sidewalks east of Center Run and adequate bridge crossings
- Lack of sidewalks in the area of Gambier Road and Edgewood Road
- Narrow rights of way on some streets pose unique challenges to construction of sidewalk
- Physical condition of existing sidewalks
- Key crossing points
 - High Street at George/Greer
 - Beacon positioning
 - Directional signage
 - Vine Street at George and Rogers Streets
 - Lack of traffic control
 - Student safety patrol inadequate for level of responsibility
 - Visual access and signage
 - Gambier at Rogers and Liberty
 - Pedestrian timing of signal
 - Turning movements
- Crosswalks
 - Worn and inadequate markings
 - Transitions uneven between brick and asphalt surfaces
- School zone markings and signage
- Parking around school
- School site traffic patterns

Obstacles at Pleasant Street Elementary School

- Lack of sidewalks in neighborhoods
- Lack of sidewalks along and east of Sychar Road
- Lack of sidewalks in neighborhood east of Center Run
- Lack of sidewalks along Wooster Road
- Physical condition of existing sidewalks
- Key crossing points
 - Pleasant and Division

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- Signal timing
 - Crosswalk width
 - Missing curb ramp
 - Crosswalks
 - Worn and inadequate markings
 - School zone markings and signage
 - Parking around school
 - Parking near sidewalk impedes pedestrian traffic
 - School site traffic patterns
 - Bus and car access impedes student access to sidewalks
 - On-site congestion due to traffic volume and constriction

Mount Vernon Middle School

- Lack of sidewalks in neighborhoods
- Physical condition of existing sidewalks
- Lack of key crossing points
 - South Main at Viaduct
 - SR 13 - Main Street/Newark Road
 - SR 586 – Martinsburg Road
 - Lack of traffic controlled intersections
- Key crossing point
 - Pine at Division
 - Intersection design configuration
 - Signage
 - Lack of sidewalks
- Crosswalks
 - Worn and inadequate markings
- School zone markings and signals
- School site traffic patterns
 - Vehicular issues
 - Pedestrian issues

Section 8: Creating Solutions and Countermeasures

Implementing strategies that provide the greatest enhancement to student and pedestrian safety in a cost effective manner are the goals of the following solutions and countermeasures. By use of strategies from the five categories of countermeasures (Education, Encouragement, Enforcement, Engineering, Evaluation) this plan addresses specific issues impacting student's ability to safely walk to school. The anticipated outcome is an increased number of students walking and biking to school, improved student physical health, an increase in the number of adults who walk and bike and a greater awareness in the community of the benefits of active transportation.

Education

- Crossing guards. Implement crossing guard training and certifications for teachers and parent volunteers. Recruiting adults to be trained and certified to serve as crossing guards.
- Drop off/Pick up Policies. Monitor and revise school drop off and pick up policies.
- Newsletters. Develop newsletters and web information to update staff, students and parents on changes to policies.
- Safety Town. Continue this module as a part of the school system's Kindergarten Camp. The module teaches children how to get on and off the school bus, understand what traffic signals means and how to safely navigate sidewalks.
- Bicycle Safety. Continue the work of the Health Department to encourage bicycle safety with the police departments, Sheriff's Office and State Highway Patrol.

Encouragement

- Walk to School Day.
- Walking School Bus.
- Tie to modules about environment.
- Safe stops.
- PTO Involvement.
- Comprehensive Plan. Work continues on encouraging bicycle and pedestrian facilities.
- Wellness objectives. The Mount Vernon School District continues to encourage good health and nutrition habits.

Enforcement

- Adult Crossing Guards.
- Student Safety Patrols. Continue existing programs and periodically monitor effectiveness.
- Active Speed Monitors. Continue speed trailer placement.
- Active Police Patrols. Continue and increase as manpower allows.

Evaluation

- Surveys. Parent and student surveys to be conducted annually to gather information about success of program as well as gathering opinions and insight.
- Periodic counts of how many students walk or bike to school each week during the school year.
- Interviews. School interviews parents and students annually to gather their thoughts about the program and to consider suggestions for improvements.

Engineering - Generally

- Upgrade and add new and improved bike racks as needed.
- Improve pedestrian connectivity throughout the city.
- Improve the quality and accessibility of sidewalks throughout the city.
- Upgrade pedestrian signal heads as they require replacement.

Section 9: Improvement Mapping

The engineering study performed by Stantec Consulting Services, Inc. and prepared for the Ohio Department of Transportation, District 5, reviewed the attendance zones around each of the four schools (Dan Emmett Elementary, East Elementary, Pleasant Street Elementary and Mount Vernon Middle School). The Study includes maps of the walking routes for each school as well as aerial mapping showing proposed improvements in the area surrounding each school. These maps are in the Stantec study and the entire study is included in the appendix.

Section 10: The Action Plan

The following items were selected because they have the greatest impact on the barriers to active transportation. The primary barriers have been identified as lack of sidewalks and condition of sidewalks immediately adjacent to the schools and in neighborhoods; lack of key crossing points; school zone signage and markings; and school site traffic patterns.

Implementation of these items will increase children's safety and health as they travel to school. Improved walkability will also impact the community at large by encouraging walking at all ages which results in improved health for all citizens.

Since there are four schools in the travel plan, the action plan will be divided. Strategies for education, encouragement, evaluation and enforcement will be placed in one table as they may be generalized for all schools. Strategies for engineering will be listed in a separate table for each school.

The action plans begin on the next page.

**General Strategies Action Plan
Table 1**

<i>Strategy Type</i>	<i>Strategy Detail</i>	<i>Time Frame</i>	<i>Responsible Party</i>	<i>Status</i>	<i>Estimated Cost</i>	<i>Possible Funding Source</i>	<i>Percent of Students Affected</i>
Education	Student safety patrol	Yearly	Schools	Current	Not applicable	Not applicable	Walkers and bikers
Education	Drop off/pick up policies	Yearly	Schools	Current	Not applicable	Not applicable	100
Education	Newsletters/communications	Yearly	Schools	Current	Not applicable	Not applicable	100
Education	Safety Town	Yearly	Schools	Current	Not applicable	Not applicable	100
Education	Bicycle Safety	Yearly	Health Department and Law Enforcement	Current	Not applicable	Not applicable	Bikers
Encouragement	Walk to School Day	Yearly	Schools	Proposed	Not applicable	Not applicable	Walkers and bikers
Encouragement	Walking School Bus	Yearly	Schools	Proposed	Not applicable	Not applicable	Walkers and bikers
Encouragement	Tie to modules about environment	Yearly	Schools	Proposed	Not applicable	Not applicable	100
Encouragement	Safe stops	Yearly	Schools and Law Enforcement	Proposed	Not applicable	Not applicable	Walkers and bikers
Encouragement	PTO Involvement	Yearly	Schools	Current	Not applicable	Not applicable	100
Encouragement	Comprehensive Plan	Periodic	Local Officials	Current	Not applicable	Not applicable	Entire population
Encouragement	Wellness objectives	Yearly	Schools	Current	Not applicable	Not applicable	100
Enforcement	Adult crossing guards	Yearly	Schools	Proposed	Not applicable	Not applicable	Walkers and bikers
Enforcement	Student safety patrol	Yearly	Schools	Current	Not applicable	Not applicable	Walkers and bikers
Enforcement	Active speed monitors, trailer placement	Periodic throughout year	City	Current	Not applicable	Not applicable	100
Enforcement	Active police patrols	Daily	City	Current	Not applicable	Not applicable	100
Evaluation	Parent and student surveys about program success	Yearly	Schools	Proposed	Not applicable	Not applicable	100
Evaluation	Periodic counts on number of students walking or biking weekly	Yearly	Schools	Proposed	Not applicable	Not applicable	Walkers and bikers
Evaluation	Parent and student interviews	Yearly	Schools	Proposed	Not applicable	Not applicable	100

**Dan Emmett School Action Plan
Table 2**

<i>Strategy Type</i>	<i>Strategy Detail</i>	<i>Time Frame</i>	<i>Responsible Party</i>	<i>Status</i>	<i>Estimated Cost</i>	<i>Possible Funding Source</i>	<i>Percent of Students Affected</i>
Engineering	Reconstruct sidewalk, curb, ramps, Mansfield from Nuce to south side of school property	<1 year	City	Proposed	\$28,000	Grants/City Funds	100
Engineering	Sidewalks, curb ramps, Nuce Road	<1 year	City	Proposed	\$107,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Nash to Belmont	<1 year	City	Proposed	\$40,000	Grants/City Funds	Walkers and bikers
Engineering	Intersection Mansfield/Nuce, construct curb/pedestrian heads	<1 year	City	Proposed	\$45,000	Grants/City Funds	Walkers and bikers
Engineering	Intersection Mansfield/Belmont, construct curb/pedestrian heads	<1 year	City	Proposed	\$35,000	Grants/City Funds	Walkers and bikers
Engineering	Relocate bike rack, place on gravel/concrete pad	<1 year	Schools	Proposed	\$1,500	Schools	Bikers
Engineering	Sidewalks, curb ramps, Sandusky, Tilden to Upper Fredericktown	1-3 years	City	Proposed	\$173,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Mulberry, Belmont to Northridge	1-3 years	City	Proposed	\$326,000	Grants/City Funds	Walkers and bikers
Engineering	Traffic calming devices, Mulberry at Crestview, James and Sunset	1-3 years	City	Proposed	\$75,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, Mansfield, Nuce to Northridge	1-3 years	City	Proposed	\$182,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Belmont	1-3 years	City	Proposed	\$200,000	Grants/City Funds	Walkers and bikers
Engineering	Traffic flow improvements on/adjacent to school	1-3 years	City/School	Proposed	Dependent	Schools/City Funds	100
Engineering	Sidewalk, curb ramps west side, Mulberry, Belmont to Calhoun	>3 years	City	Proposed	\$79,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk link, Yoakam to Taylor	>3 years	City	Proposed	\$73,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk, curb ramps, Mansfield, Northridge to Grange	>3 years	City	Proposed	\$186,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk, curb ramps, Sunset, Sandusky to Mulberry	>3 years	City	Proposed	\$131,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk, curb ramps, Calhoun, Sandusky to Mansfield	>3 years	City	Proposed	\$142,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk, curb ramps, Northridge, Oakway, Clearview, Crestview, Shirley, Rose, Miller, Kimberly	>3 years	City	Proposed	\$705,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk, curb ramps, Decatur, Marcia, Emmett, Marma, Northgate	>3 years	City	Proposed	\$385,000	Grants/City Funds	Walkers and bikers
Engineering	HAWK Beacon signal, James and Sandusky	>3 years	City	Proposed	\$60,000	Grants/City Funds	Walkers and bikers

**East School Action Plan
Table 3**

<i>Strategy Type</i>	<i>Strategy Detail</i>	<i>Time Frame</i>	<i>Responsible Party</i>	<i>Status</i>	<i>Estimated Cost</i>	<i>Possible Funding Source</i>	<i>Percent of Students Affected</i>
Engineering	4-Way stop intersections, Vine at George, Vine at Rogers	<1 year	City	Proposed	\$8,000	Grants/City Funds	100
Engineering	Intersection improvement, curbs, High at George/Greer, High at Rogers/Ringold	<1 year	City	Proposed	\$40,000	Grants/City Funds	Walkers and bikers
Engineering	Intersection improvement, beacon realignment, High at George/Greer, High at Rogers/Ringold	< 1 year	City	Proposed	\$1,000	Grants/City Funds	Walkers and bikers
Engineering	Intersection improvement, striping, High at George/Greer, High at Rogers/Ringold	< 1 year	City	Proposed	\$10,000	Grants/City Funds	Walkers and bikers
Engineering	Crosswalk transition smoothing and crosswalk restriping, entire attendance area	< 1 year	City	Proposed	\$2000 per approach	Grants/City Funds	Walkers and bikers
Engineering	All four intersections around the school, restripe crosswalks ladder style, replace curb ramps	<1 year	City	Proposed	\$45,000	Grants/City Funds	100
Engineering	Sidewalks, curb ramps, George, High to Gambier	1-3 years	City	Proposed	\$62,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Rogers, High to Oak	1-3 years	City	Proposed	\$29,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Vine, Center to Gambier	1-3 years	City	Proposed	\$104,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Greer, High to Chestnut	1-3 years	City	Proposed	\$26,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Brown, High to Chestnut	1-3 years	City	Proposed	\$96,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Ringold, High to Chestnut	1-3 years	City	Proposed	\$26,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Center, High to Coshocton	1-3 years	City	Proposed	\$77,000	Grants/City Funds	Walkers and bikers
Engineering	Stripe travel lane to 11 feet, High	1-3 years	City	Proposed	\$4,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Gambier and Edgewood	>3 years	City	Complete	\$231,000	Grants/City Funds	Walkers and bikers
Engineering	Pedestrian heads, signal buttons, Gambier at Edgewood	>3 years	City	Proposed	\$50,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Colonial Hills area	>3 years	City	Proposed	\$294,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Wilson, Howard, Compromise, Pennsylvania	>3 years	City	Proposed	\$243,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Quarry	>3 years	City	Proposed	\$75,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, High, Ringold to Edgewood	>3 years	City	Proposed	\$219,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Edgewood, Marita to Vine	>3 years	City	Proposed	\$187,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Whiteheirs, High to Coshocton	>3 years	City	Proposed	\$67,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Chestnut, Edgewood to Teryl	>3 years	City	Proposed	\$167,000	Grants/City Funds	Walkers and bikers
Engineering	Traffic calming devices, High at Division and Catherine	>3 years	City	Proposed	\$50,000	Grants/City Funds	Walkers and bikers
Engineering	Vegetative median, High, Park to Division, Clinton to Potwin	>3 years	City	Proposed	\$20,000	Grants/City Funds	Walkers and bikers
Engineering	Reduce speed limit to 25 on High east of Park	>3 years	City	Proposed	\$1,000	Grants/City Funds	Walkers and bikers

**Pleasant Street School Action Plan
Table 4**

<i>Strategy Type</i>	<i>Strategy Detail</i>	<i>Time Frame</i>	<i>Responsible Party</i>	<i>Status</i>	<i>Estimated Cost</i>	<i>Possible Funding Source</i>	<i>Percent of Students Affected</i>
Engineering	Sidewalks and ramps, Pleasant, School to McKenzie	<1 year	City	Proposed	\$75,000	Grants/City Funds	Walkers and bikers
Engineering	Reconstruct drive to school parking area	<1 year	Schools	Proposed	\$25,000	Schools	100
Engineering	Crosswalks, stripe all near school	< 1year	City	Proposed	\$27,000	Grants/City Funds	Walkers and bikers
Engineering	Ladder crosswalks all directions, Pleasant at Division, McKenzie, Sychar, Gay	< 1year	City	Proposed	\$10,000	Grants/City Funds	Walkers and bikers
Engineering	Crosswalk markings all legs, Division at Hamtramck/Burgess, Hamtramck/McKenzie, Pleasant/Catherine	< 1year	City	Proposed	\$5,000	Grants/City Funds	Walkers and bikers
Engineering	Pedestrian heads and push buttons, Pleasant and Main	<1 year	City	Proposed	\$40,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, McKenzie, Pleasant to Wooster	1-3 years	City	Proposed	\$149,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Sychar, Pleasant to Beech	1-3 years	City	Proposed	\$126,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Beech, Sychar to Hilltop	1-3 years	City	Proposed	\$63,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Coshocton, Center to Shalimar	1-3 years	City	Current	\$97,000	ODOT	Walkers and bikers
Engineering	Inspect, repair sidewalks around the school neighborhood	1-3 years	City	Proposed	Variable	Grants/City Funds	100
Engineering	Sidewalks, curb ramps, east side Sychar, Pleasant to Ash	>3 years	City	Proposed	\$426,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, east side Sychar, Ash to Beech	>3 years	City	Proposed	\$312,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Eastgate Subdivision	>3 years	City	Proposed	\$441,000	Grants/City Funds	Walkers and bikers

**Middle School Action Plan
Table 5**

<i>Strategy Type</i>	<i>Strategy Detail</i>	<i>Time Frame</i>	<i>Responsible Party</i>	<i>Status</i>	<i>Estimated Cost</i>	<i>Possible Funding Source</i>	<i>Percent of Students Affected</i>
Engineering	Sidewalks and ramps, Jacket Drive, Martinsburg Road to Career Center	<1 year	Schools	Proposed	\$50,000	Schools	100
Engineering	Sidewalks, curb ramps, Martinsburg, Ames to Pine	<1 year	City	Proposed	\$118,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Division, Jacket to Martinsburg	<1 year	City	Proposed	\$74,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Pine, Martinsburg to Main	<1 year	City	Proposed	\$150,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalks, curb ramps, Delano, Martinsburg to Newark	<1 year	City	Proposed	\$148,000	Grants/City Funds	Walkers and bikers
Engineering	Intersection alignment, signal heads, Martinsburg, Division and Pine	1-3 years	City	Proposed	\$40,000	Grants/City Funds	Walkers and bikers
Engineering	Widen sidewalk, eliminate travel lane, add beacon to promote connectivity, Viaduct over Kokosing River	1-3 years	City	Proposed	\$130,000	Grants/City Funds	Walkers and bikers
Engineering	Intersection alignment, curbing, Columbus Road at Main	1-3 years	City	Proposed	\$100,000	Grants/City Funds	Walkers and bikers
Engineering	Sidewalk and path, levee path to Viaduct	>3 years	City	Proposed	\$225,000	Grants/City Funds	Walkers and bikers
Engineering	HAWK Beacon, Martinsburg at Delano	>3 years	City	Proposed	\$60,000	Grants/City Funds	Walkers and bikers

Section 11: Plan Endorsements

Letters of endorsement are attached after this page.



City of Mount Vernon
40 Public Square
Mount Vernon, OH 43050

Phone 740-393-9520
Fax 740-397-6595

Richard K. Mavis
Mayor

City Council

Bruce E. Hawkins
President

Sam Barone
First Ward

John Francis
Second Ward

Nancy R. Vail
Third Ward

John L. Fair
Fourth Ward

Mike Hillier
At Large

Susan Kahl
At Large

Janis Seavolt
At Large

Administration

Richard K. Mavis
Mayor

David C. Glass
Safety Service Director

Chip McConville
Law Director

Paul E. Spurgeon
Judge

Anton J. Krutsch
Treasurer

Terry L. Scott
Auditor

Tanya Newell
Clerk of Council

Dee M. Wood
Assistant Clerk of Council

January 14, 2013

To Whom it May Concern:

I fully support the City of Mount Vernon's School Travel Plan being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

The funds available through the Safe Routes to School Program would allow the City to build safety improvements including sidewalks, curb ramps, striping, signals and other pedestrian based enhancements to our infrastructure.

We value the opportunity for our community to improve the safety of our youth today and in the future.

Sincerely,

Richard K. Mavis, Mayor



City of Mount Vernon
40 Public Square
Mount Vernon, OH 43050

Phone 740-393-9520
Fax 740-397-6595

David C. Glass
Safety Service Director

City Council

Bruce E. Hawkins
President

Sam Barone
First Ward

John Francis
Second Ward

Nancy R. Vail
Third Ward

John L. Fair
Fourth Ward

Mike Hillier
At Large

Susan Kahrl
At Large

Janis Seavolt
At Large

Administration

Richard K. Mavis
Mayor

David C. Glass
Safety Service Director

Chip McConville
Law Director

Paul E. Spurgeon
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January 14, 2013

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We value the opportunity for our community to improve the safety of our youth today and in the future.

Sincerely,

David C. Glass
Safety Service Director
mtvssd@mountvernonohio.org



MOUNT VERNON FIRE DEPARTMENT

200 West Gambier Street • Mount Vernon, Ohio 43050

Phone: (740) 393-9515 • Fax: (740) 397-7393

www.mountvernonohio.org

Christopher Menapace - Fire Chief

January 15, 2013

ODOT District 5
9600 Jacksontown Road
Jacksontown, OH 43030

To Whom It May Concern:

I fully support the City of Mount Vernon's School Travel Plan being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

The funds available through the Safe Routes to School Program would provide safe travel to and from school for students each day.

Sincerely,

Chief Christopher Menapace



Mount Vernon
Office of the Chief of Police
5 North Gay Street
Mount Vernon, Ohio 43050-3241

January 15, 2013

To Whom It May Concern,

I am writing this letter to show my full support regarding the City of Mount Vernon's School Travel Plan. The school travel plan is being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

The funds available through the Safe Routes to School Program would provide safe travel to and from school for students each day. This comprehensive plan will allow for current and future improvements that are critical to the safety of our children.

We commit ourselves and the agencies we represent to building and strengthening the network of security that surrounds our school systems.

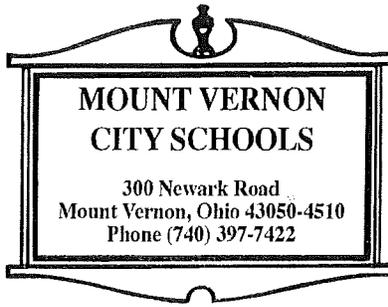
Sincerely,



Chief Michael K. Merrilees

.drb

Board of Education
Dr. Margie Bennett, President
Mrs. Jody Goetzman, Vice President
Mrs. Paula Barone
Mrs. Cheryl Feasel
Mr. Steve Thompson



District Leadership
Mr. Stephen Short, Superintendent
Mrs. Judy Stahl-Reynolds, Treasurer
Mrs. Pam Rose,
Director of Student Services
Dr. Mitch Emmons,
Director of Teaching and Learning

January 31, 2013

To Whom It May Concern:

The Mount Vernon City School District fully supports the City of Mount Vernon's School Travel Plan being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

This plan will not only help alleviate traffic congestion around the schools but will also provide a safe and healthy option for those who choose to walk or bike to school.

A handwritten signature in black ink, appearing to read "Stephen J. Short".

Stephen J. Short
Superintendent of Schools

SJS:ts



Dan Emmett Elementary
108 Mansfield Avenue
Mount Vernon, Ohio 43030
(740) 393-5950
Margy Arck, Principal

January 23, 2013

To Whom It May Concern,

Dan Emmett Elementary School fully supports the City of Mount Vernon's School Travel Plan being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

This plan will not only help alleviate traffic congestion around the school but will also provide a safe and health option for those who choose to walk or bike to school.

Respectfully,

Margy Arck, Principal

Dan Emmett Elementary School
Mount Vernon City Schools

East Elementary School

*714 East Vine Street
Mount Vernon, Ohio 43050
393-5985*

February 8, 2013

To Whom It May Concern,

East Elementary School fully supports the City of Mount Vernon's School Travel Plan being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

This plan will not only help alleviate traffic congestion around the school but will also provide a safe and healthy option for those who choose to walk or bike to school.

Sincerely,



Eric Brown
Principal, East Elementary

Board of Education

Dr. Margie Bennett, President
Mrs. Jody Goetzman, Vice President
Mrs. Paula Barone
Mrs. Cheryl Feasel
Mr. Steve Thompson



District Leadership

Mr. Stephen Short, Superintendent
Mrs. Judy Stahl-Reynolds, Treasurer
Mrs. Pam Rose,
Director of Student Services
Dr. Mitch Emmons,
Director of Teaching and Learning

February 8, 2013

To Whom It May Concern:

Mount Vernon Middle School fully supports the City of Mount Vernon's School Travel Plan being submitted to the Ohio Department of Transportation under the Safe Routes to School Program.

This plan will not only help alleviate traffic congestion around the schools but will also provide a safe and healthy option for those who choose to walk or bike to school.

A handwritten signature in blue ink, appearing to read "G. Hankins", with a long horizontal stroke extending to the right.

Gary Hankins, Principal
Mount Vernon Middle School

Pleasant Street Elementary School
Karen Boylan, Principal
305 East Pleasant Street, Mount Vernon, Ohio 43050
740-393-5990 - fax 740-393-3175
Visit our website at www.mt-vernon.k12.oh.us/pleasant



Friday, February 01, 2013

Pleasant Street Elementary School fully supports the City of Mount Vernon's School Travel Plan that is being submitted to the Ohio Department of Transportation under the Safe Routes to School Program. This plan will not only help alleviate traffic congestion around the school but will also provide a safe and health option for those who choose to walk or bike to school.

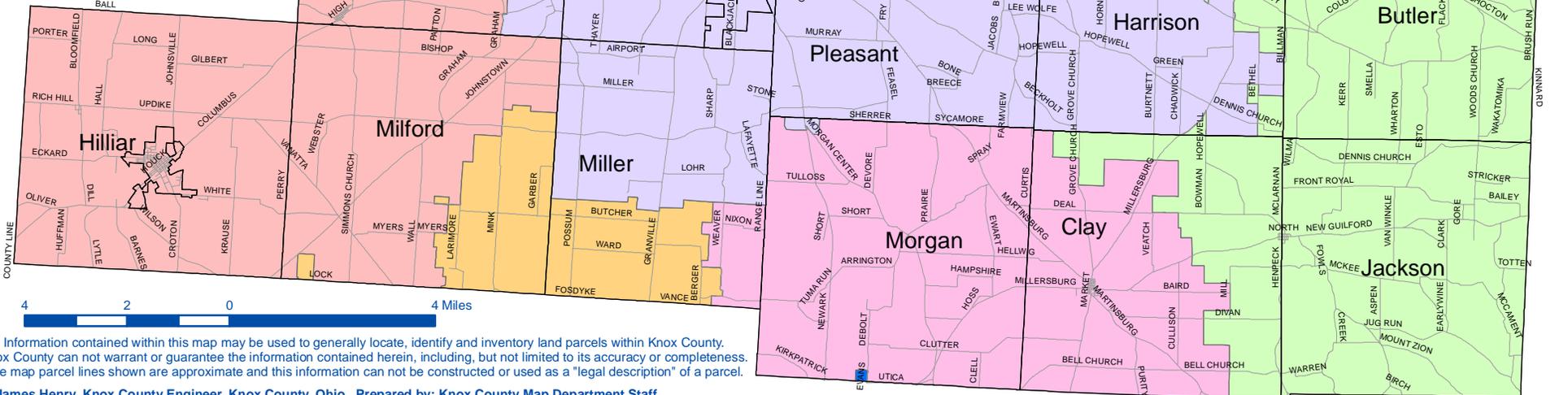
Thank you,
Karen Boylan
Principal, Pleasant Street Elementary School

Appendix

Knox County School Districts

Legend

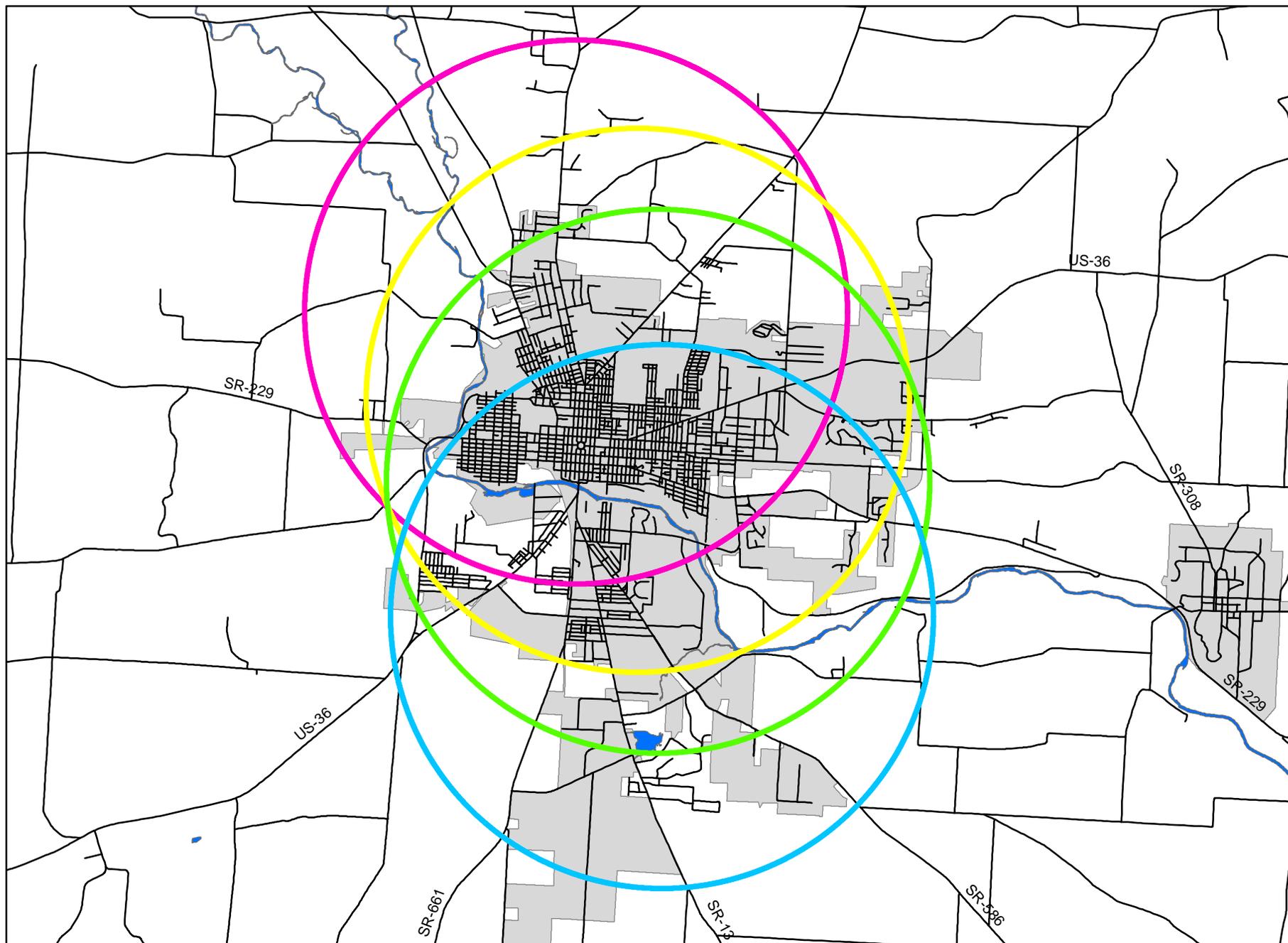
-  Roads
-  Townships
- School Districts**
-  Centerburg
-  Clear Fork Valley
-  Danville
-  East Knox
-  Fredericktown
-  Loudonville
-  Mt Vernon
-  North Fork
-  Northridge
-  Utica



Information contained within this map may be used to generally locate, identify and inventory land parcels within Knox County. Knox County can not warrant or guarantee the information contained herein, including, but not limited to its accuracy or completeness. The map parcel lines shown are approximate and this information can not be constructed or used as a "legal description" of a parcel.

James Henry, Knox County Engineer, Knox County, Ohio. Prepared by: Knox County Map Department Staff.
Please report any errors or omissions to the Knox County Map Department. Map current as of 6/2007.

Safe Routes to School - Mount Vernon, Ohio - Two Mile Radius



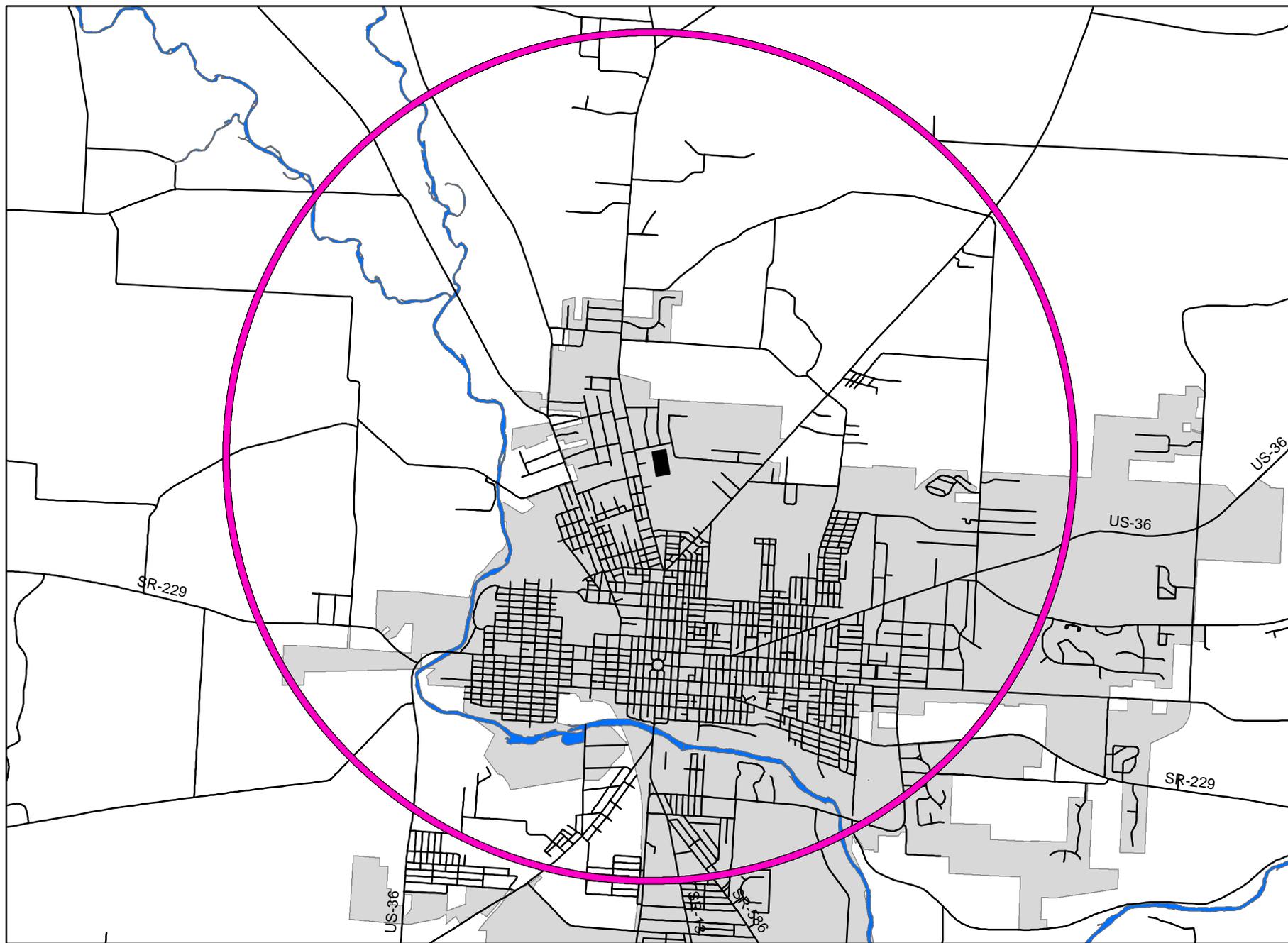
Map date - January 4, 2010

Red - Dan Emmett Elementary
Yellow - Pleasant Street Elementary

Green - East Elementary
Blue - Middle School



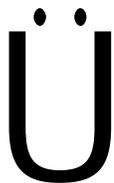
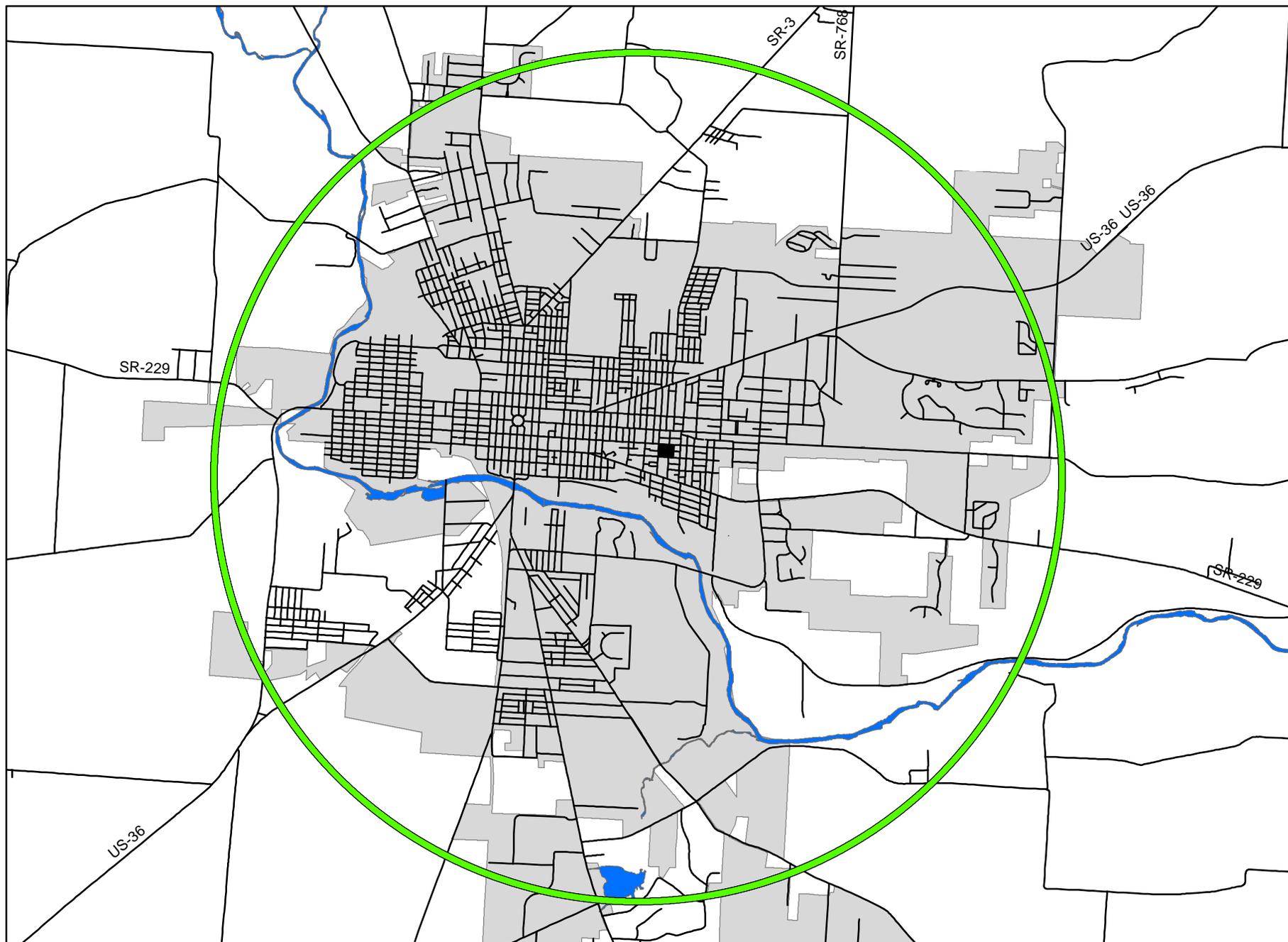
Safe Routes to School - Mount Vernon, Ohio - Two Mile Radius



Map date - February 4, 2010

Dan Emmett Elementary

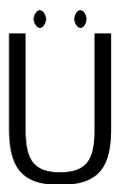
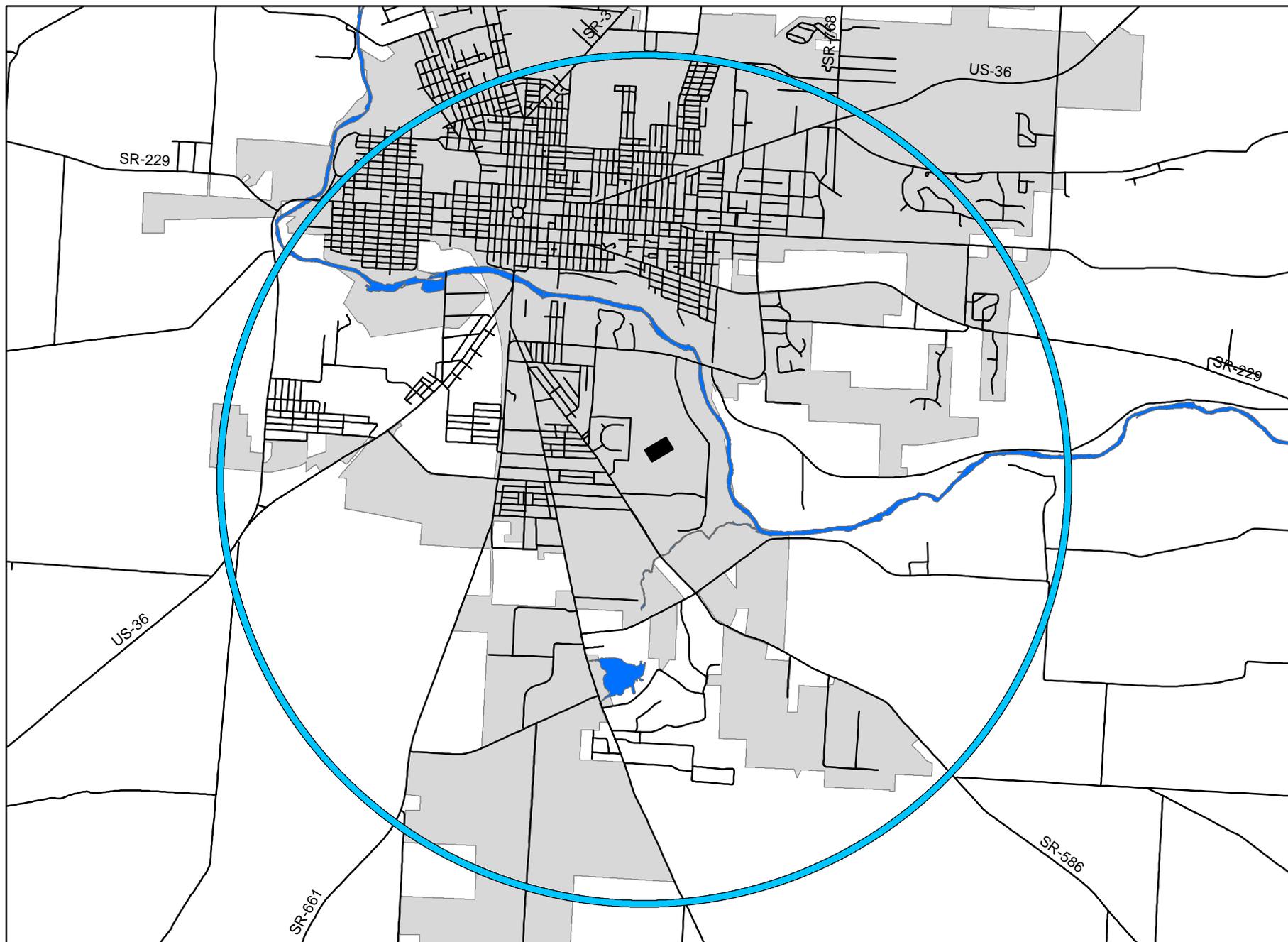
Safe Routes to School - Mount Vernon, Ohio - Two Mile Radius



Map date - February 4, 2010

East Elementary

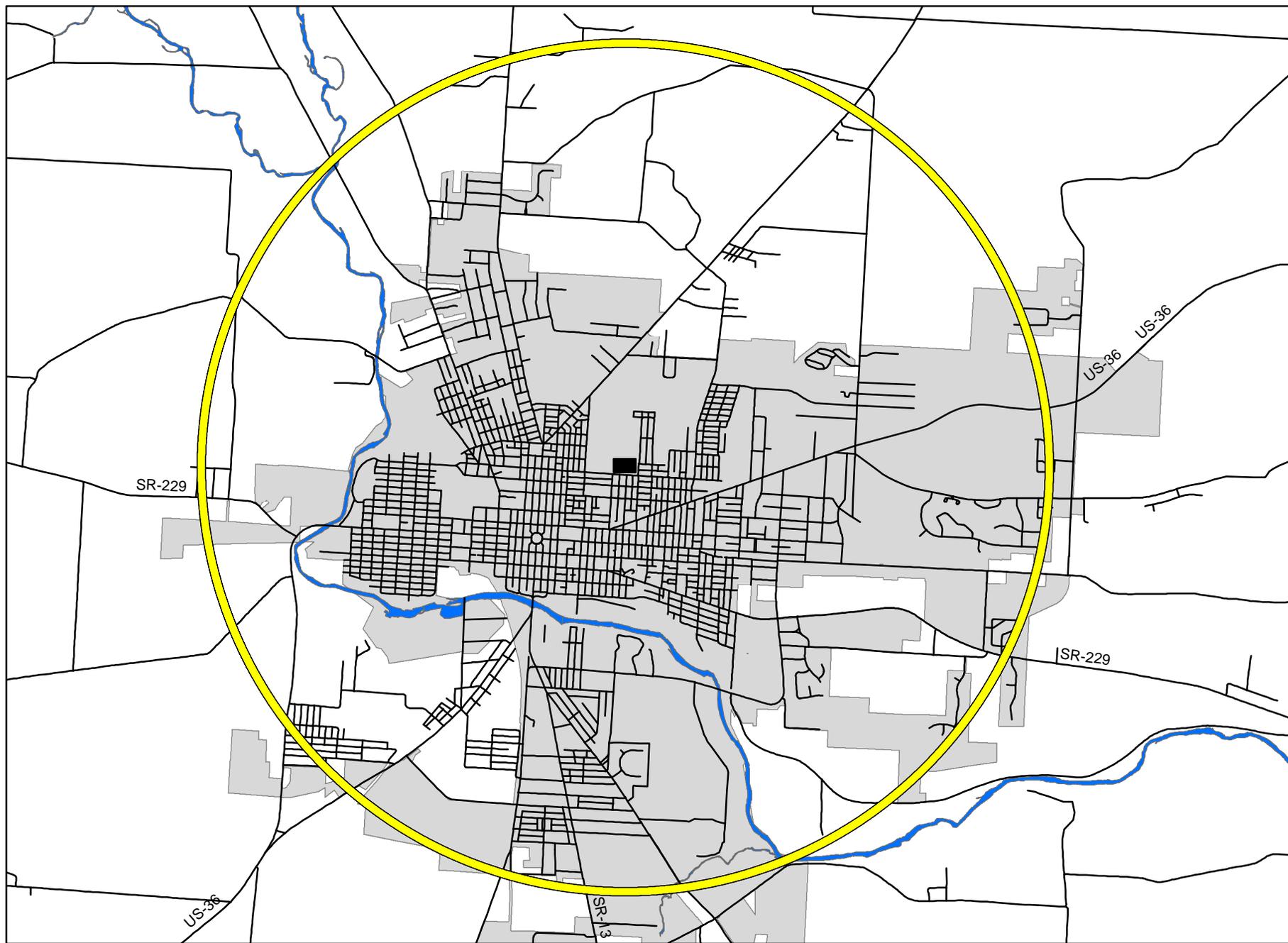
Safe Routes to School - Mount Vernon, Ohio - Two Mile Radius



Map date - February 4, 2010

Mount Vernon Middle School

Safe Routes to School - Mount Vernon, Ohio - Two Mile Radius



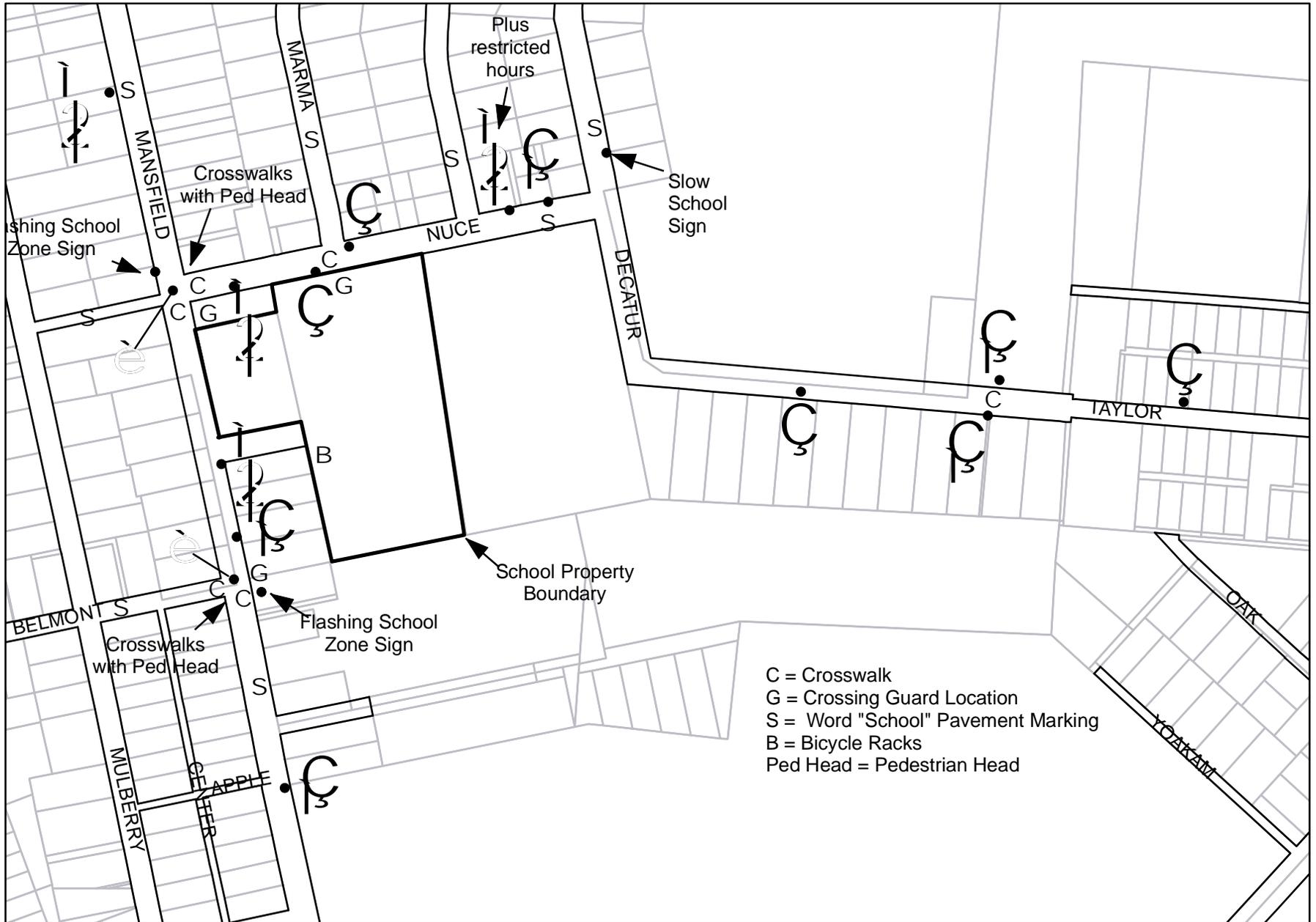
Map date - February 4, 2010

Pleasant Street Elementary



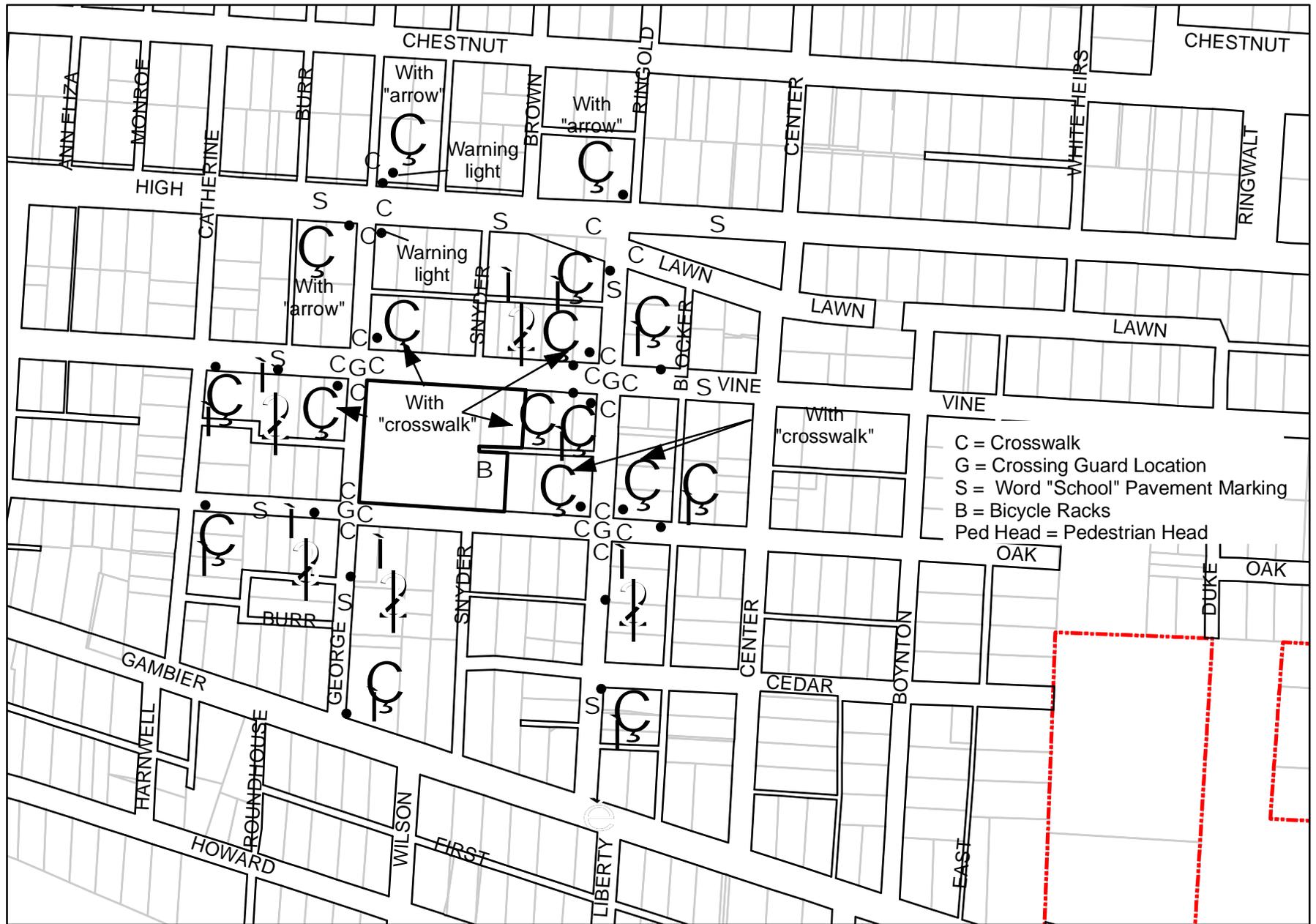
Dan Emmett Elementary School - Mount Vernon, Ohio

Existing Conditions



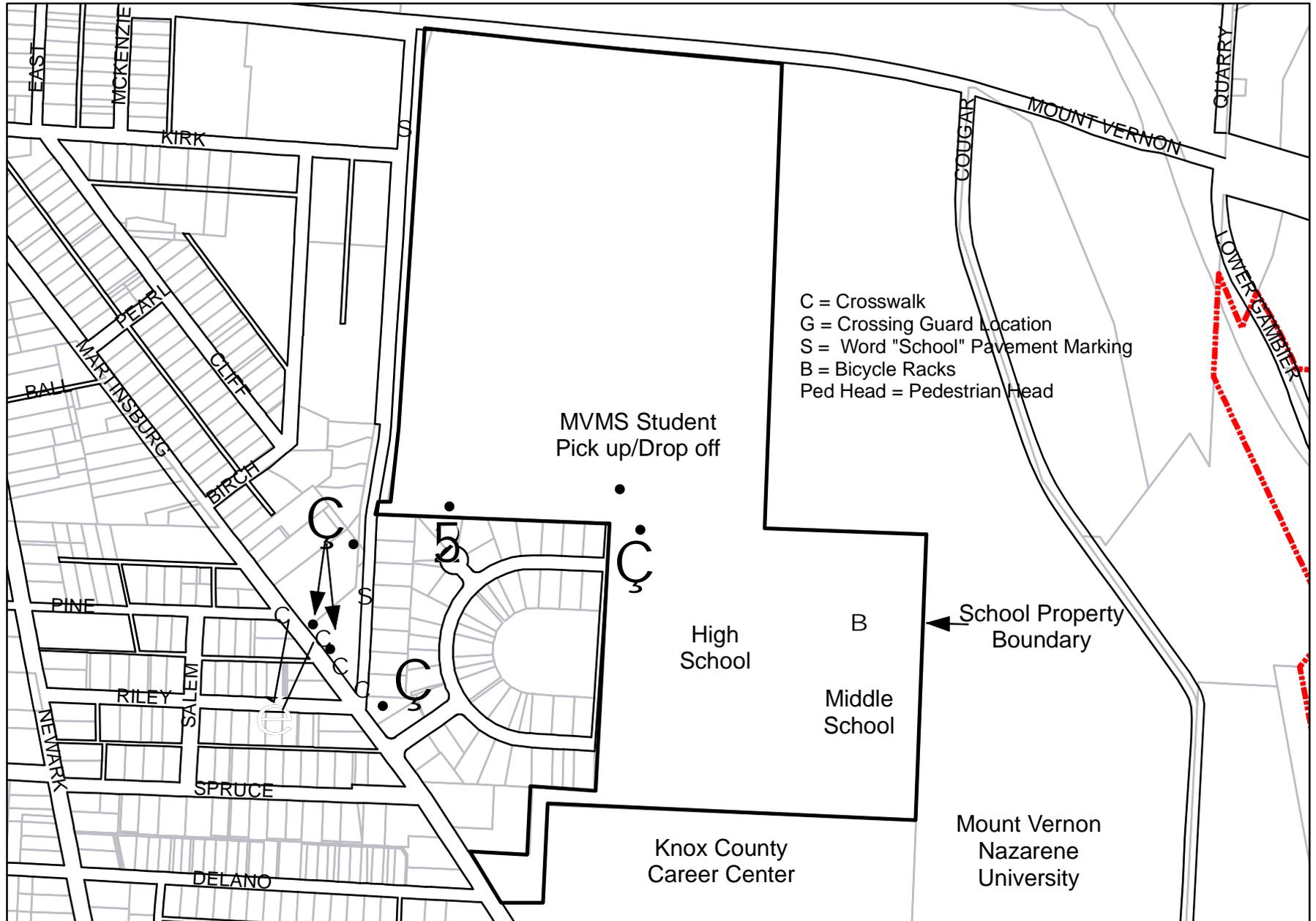
East Elementary School - Mount Vernon, Ohio

Existing Conditions



Mount Vernon Middle School - Mount Vernon, Ohio

Existing Conditions





Safe Routes to School Engineering Study

Mount Vernon City School District

Dan Emmett Elementary School

East Elementary School

Pleasant Street Elementary School

Mount Vernon Middle School

The City of Mount Vernon, Ohio

July 2010

Prepared for:
Ohio Department of
Transportation, District 5



Prepared by:
Stantec Consulting
Services, Inc.



Stantec

Executive Summary

The purpose of the City of Mount Vernon and Mount Vernon City School District’s Safe Routes to School Engineering Study is to improve the safety and ability of students to walk and bike to Dan Emmett, East, and Pleasant Street elementary schools, and Mount Vernon Middle School through the implementation of infrastructure improvements within a two-mile trip of each school.

In order to fulfill this purpose, effective solutions must address the following needs:

- Enhance connectivity for pedestrians and cyclists between neighborhoods and schools;
- Correct existing pedestrian and bike deficiencies along key routes;
- Promote a healthier lifestyle for students in Mount Vernon.

The existing conditions surrounding each school were first investigated in order to identify the primary barriers to safe walking and biking.

Dan Emmett Elementary School: Primary barriers include a lack of sidewalk near the school, and on-site safety concerns along Mansfield Avenue and Nuce Road, and in the school parking lot.

East Elementary School: Primary barriers include a lack of sidewalk on roads in the eastern half of the attendance area, as well as safety concerns where students cross E High, E Vine, and E Gambier streets.

Pleasant Street Elementary School: Primary barriers include the general lack of sidewalk along the north side of E Pleasant Street, missing segments of sidewalk along key routes, as well as the walking and biking environment immediately around the school.

Mount Vernon Middle School: Primary barriers include the lack of sidewalk or paths linking the school to homes north of the Kokosing River, and paths and safe crossing points across Martinsburg Road (SR 586).

Specific improvement suggestions were developed for each school with the goal of achieving the purpose and need of this planning project and addressing identified concerns. The recommendations are grouped according to the priorities identified by the SRTS team and correspond to the general time frame in which they can feasibly be completed. They are divided into short-term (0-12 months), medium-term (1-3 years) and long-term (3+ years) solutions. The short-term suggestions addressing issues at each of the schools are summarized as follows:

Dan Emmett Elementary School: Short-term recommendations include constructing sidewalk and curb on Mansfield Avenue and Nuce Road to provide safe routes and better define the roadway, install a new crosswalk with pedestrian signal heads and push buttons at Belmont and Mansfield avenues, construct sidewalk north of the school, and move a bike rack onto a gravel or concrete parking pad.

East Elementary School: Short-term recommendations include two intersection studies on E Vine Street near the school, enhancing pedestrian crossings across E High Street, improving the visibility and accessibility of crosswalks near the school, and constructing sidewalk along some streets near the school.

Pleasant Street Elementary School: Short-term recommendations include constructing sidewalk along the north side of Pleasant Street near the school, reconstructing the parking lot entrance to clarify appropriate pedestrian and vehicle paths, striping crosswalks at various intersections around the school, and adding pedestrian signal heads and push buttons to the signal at E Pleasant and N Main streets.

Mount Vernon Middle School: Short-term recommendations include constructing sidewalk to improve pedestrian paths between the school and Martinsburg Road, and constructing a multi-use path and a HAWK beacon to help students get to and cross Mount Vernon Avenue.

Table of Contents

EXISTING CONDITIONS.....	1
GENERAL OBSERVATIONS	1
DAN EMMETT ELEMENTARY SCHOOL	2
EAST ELEMENTARY SCHOOL.....	4
PLEASANT STREET ELEMENTARY SCHOOL	6
MOUNT VERNON MIDDLE SCHOOL	8
ASSESSMENT OF CRASH DATA	10
IMPROVEMENT SUGGESTIONS.....	11
DAN EMMETT ELEMENTARY SCHOOL	13
EAST ELEMENTARY SCHOOL.....	17
PLEASANT STREET ELEMENTARY SCHOOL	19
MOUNT VERNON MIDDLE SCHOOL	21
REFERENCES.....	24
APPENDICES	
WALKING ROUTES MAPPING	
RECOMMENDED IMPROVEMENTS MAPPING	
PROPOSED PEDESTRIAN SAFETY ENHANCEMENTS -- S MAIN STREET BRIDGE CORRIDOR	

Existing Conditions

In order to successfully identify, assess, and improve walking and biking routes to school, it is important to first “take stock” of the existing infrastructure and other factors that affect the safety, comfort, and accessibility of those routes. Within the attendance boundaries of the schools in this study, current pedestrian and bicycle conditions were documented utilizing available mapping, windshield surveys, and walking audits of the school premises and key routes to and from the schools. On May 28th, 2010, the Safe Routes to School (SRTS) team members and representatives from Stantec Consulting Services, Inc. met to discuss and observe the existing walking and biking conditions around each school.

This study evaluated walking and biking conditions within a two-mile trip of Dan Emmett, East, and Pleasant Street elementary schools, and Mount Vernon Middle School. Departures were observed at all four schools on the afternoon of the 28th. In addition to the observation, a short meeting was held at each school with the SRTS team to identify specific safety concerns and barriers to walking and biking to the school. Following each meeting, the team and representatives from Stantec conducted a walk audit of the area surrounding the school.

In addition to discussing barriers, the group also discussed upcoming infrastructure projects to help coordinate recommendations with other improvements being pursued by the City of Mount Vernon. One project was identified. Set for construction this summer (2010), the City is utilizing Community Development Block Grant (CDBG) funds to construct several improvements including new sidewalk along Wooster Road (SR 3), and along E Pleasant Street and Sychar Road. This project will improve pedestrian safety and access near Pleasant Street Elementary School. Recommendations for this area build on this improvement.

General Observations

The Mount Vernon City School District serves students who reside within and around the City of Mount Vernon, county seat of Knox County. Generally comprised of short, dense residential blocks, most of the historic city core is fairly walkable. The vast majority of the city’s dwellings are located within a mile of their elementary school. Dan Emmett and Pleasant Street elementary schools serve students from both local neighborhoods, as well as those who live in rural areas outside the city. East Elementary School has a significantly smaller attendance boundary, comprised mostly of city neighborhoods. Despite the close proximity of these schools to a majority of the students they serve, there are barriers to students walking and biking to school.

Located at the extreme southeastern edge of town, Mount Vernon Middle School is located outside of a two-mile walk of most of the city and the 146 square-mile school district it serves. Even though the school was built significantly outside of the historic core, there are still many residences nearby and there are still opportunities to enhance connections with the historic core of the city. Improvements near the middle school could dramatically improve the walking and biking environment for those who attend the school.

In evaluating the barriers to students walking or biking to all schools studied, several issues were identified which affect all of the schools. A common problem included the lack of sidewalk as well as gaps in the sidewalk along some minor arterials, collector, and local roads students would use to get to school. Another common problem at all schools studied included the need for students to cross roads where volumes, traffic control, and/or site challenges create safety concerns for students.



Figure 1: Above, a sidewalk in disrepair near Pleasant Street Elementary School. The sidewalk is overgrown, may be missing sections, and is sunken in proportion to the street and surrounding grass. Though removing the overgrown grass may expose the sidewalk, if it is sunken, grading and other repair work may be required to make this a suitable and safe route for students to walk or ride on.

Sidewalk condition was yet another significant problem observed throughout the city. Sunken sidewalks, overgrown sidewalks (Figure 1), heaved sidewalks, missing segments, missing slabs, and slab deterioration were all observed in various places around the city. Though some of these recommendations specifically address problems along key routes, a block by block survey of the city's sidewalks was not conducted as a part of this study. Such problems are typical in older communities and it is believed that these problems extend beyond the places where they were observed.

The three elementary schools studied do not have overlapping attendance zones and the walking and biking environment for each have been evaluated individually. The evaluation of the Middle School's walking and biking environment (within a two mile trip) generally does not overlap with the elementary schools studied and has been evaluated individually as well. Barriers specific to pedestrian and bicycle travel for each school are presented in sections below.

Dan Emmett Elementary School

Dan Emmett Elementary School serves students from the central northern portion of the city, as well as some students who reside in more rural, unincorporated areas of the school district. The school is located just southeast of the corner of Mansfield Avenue and Nuce Road, surrounded by neighborhoods to the south, west, and north, as well as a park and Mound View Cemetery to the east and southeast. Focusing on those dwellings that lie within a two-mile trip of the school, there are significant areas of residential development to the southwest, west, northwest, and east. Though some of these neighborhoods have sidewalks, many do not. In addition, the provision of sidewalk is inconsistent along minor arterial and collector roads such as Mansfield Avenue and N Sandusky Street (SR 13). The lack of sidewalk along these roads prevents whole subdivisions from having safe access to the school. This lack of sidewalk is a significant barrier to students walking or biking to school.

Furthermore, N Sandusky Street traverses the western portion of the attendance boundary and several team members expressed concern about students crossing this busy road. Of particular concern to the team was whether or not students could safely cross N Sandusky Street between Clarence Court and Belmont Avenue. Through this stretch, they expressed concerns of vehicles traveling south at excessive speeds down a long, gradual hill into town. The lack of a safe crossing point across this road may be discouraging students who may live at one of several mobile home parks and area homes from walking to school. Students in this area generally live within a half mile of the school.

Team members also identified their concern that a large number commuters using N Mulberry Street (north of Belmont Avenue) as a cut through to avoid the school zone during morning arrival. N Mulberry Street, one block west of Mansfield Avenue, is a key street that most students would need to cross in order to make their way to school (Figure 2). Beyond traffic volumes, members were also concerned about traffic speed on the street. Given that there are no sidewalks and few intersections where N Mulberry Street is stop or signal-controlled, walking along and crossing N Mulberry Street may be a significant barrier for many students.



Figure 2: Students rollerblade and bike on N Mulberry Street just north of Nash Street.

On the school grounds, there are safety concerns for students walking along Mansfield Avenue and Nuce Road. There is sidewalk along Mansfield Avenue in front of the school; however, most of these sections are at shoulder level and as a result, many parents park on the sidewalk. During rain events, these sidewalks flood and in the winter, they may be covered with snow. With these kinds of obstructions,

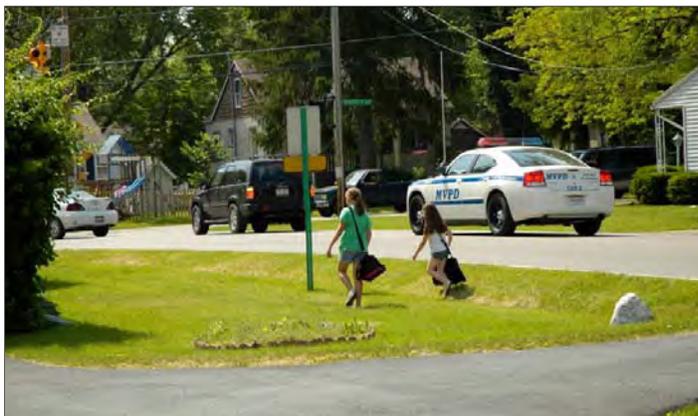


Figure 3: Two elementary school students walk in the ditch along Nuce Road, just east of the Dan Emmett Elementary School.

students generally have to walk through the grass or around parents picking up or dropping off their students. The abundance of parents waiting to pick up their children particularly causes problems along the bus drive off Mansfield Avenue where parents drive through grass to get around each other's parked vehicles and block buses from entering or leaving the drive.

Along Nuce Road, students have to walk in a ditch (Figure 3) to make their way from the school's parking lot to the nearby intersection with Mansfield Avenue. Of further concern, a lack of control in the school's parking lot was observed with parents parking, standing, and obstructing traffic while waiting for students to exit the building. Students who live north of the parking lot generally walk through the

maze of cars (some in motion) to a crosswalk and several student safety patrol members to help students cross Nuce Road. These conditions are yet another barrier to students safely walking or biking to Dan Emmett Elementary School.

East Elementary School

East Elementary School has the smallest, most urbanized attendance area of the four schools studied. As a result, many students live within a one mile walking or biking trip of the school. Despite this, the lack of sidewalk in the eastern half of the attendance area inhibits more students from walking or biking from these areas. Beyond the lack of sidewalk, other primary barriers include concerns of student safety where students cross E High, E Vine, and E Gambier streets.

The lack of sidewalk along local roads is a particular problem east of Center Run, a stream that bisects the attendance zone and constricts pedestrian activity to just a few bridges. A sidewalk traverses the stream along E Vine Street, providing access for students who live due east of the stream and the school.

Concerning those who live southeast of the intersection of E Gambier Street and S Edgewood Road, several barriers inhibit their path to the elementary school. A narrow sidewalk across E Gambier Street's bridge over Center Run, as well as the lack of sidewalk along E Gambier Street (between Quarry Street and S Edgewood Road) and S Edgewood Road and adjoining local streets to the south are all barriers inhibiting safe access to the school. Most of these residences have roughly a one mile trip to the elementary school.

Beyond the neighborhoods east of Center Run, a few local streets near the school are missing sidewalk including Greer and Ringold streets (between E High and E Chestnut streets), and Brown Street (between E High Street and Coshocton Avenue). Most of these roads have narrow rights of way, particularly between E High and E Chestnut streets (as narrow as 20 feet), and improvement options may be limited. Other local streets lacking sidewalks include sections of George Street (between E Gambier and E High streets), Wilson Street (between E Gambier Street and Pennsylvania Avenue), and Pennsylvania Avenue (between Wilson and Liberty streets).

In addition to these locations, there were concerns about the condition of existing walks throughout the attendance area which need to be maintained to remain a safe and attractive option for students who are trying to walk or bike to school.



Figure 4: A vehicle parked on a gravel off-street parking bay partially obstructs the sidewalk because of a lack of curb separating the parking lane from the sidewalk. This was a common problem around East Elementary School.

Similarly, a common sight was gravel off-street parking bays constructed in the tree lawn space between sidewalks and the roadway. Though this is typically not a problem, many of these gravel bays are flush with the adjacent sidewalk allowing vehicles to park on and obstruct the sidewalk (Figure 4).

Besides sidewalk concerns, other primary barriers included safety problems where students cross E High, E Vine, and E Gambier streets. Perhaps the most significant concern to parents and team members is the safety of students crossing E High Street. Though the City had recently installed a flashing beacon to help alert drivers to a crosswalk at the intersection of E High and George/Greer



Figure 5: A pedestrian crosses at the pedestrian-activated flashing beacon at E High and George/Greer streets. The beacons appear to do little to improve safety at the intersection.

streets (Figure 5), team member comments and our observations indicated the devices do little to affect driver behavior when pedestrian were in the crosswalk. One reasons for this may be that the flashing yellow lights are not equipped with any signage to indicate what they are for or what drivers should do when they flash. Though there are crosswalk signs near the flashing beacons, these signs were not close enough to indicate this is what the flashing beacon is for and they do not indicate that drivers should “watch for pedestrians when flashing” or “yield to pedestrians in crosswalk.” A second reason yielding compliance may be low may be that they are placed behind the curb line on a very wide (roughly 46 feet wide) two lane street, and may be out of the field of view for most drivers. Even without the beacon the width makes a pedestrian standing at the curb less visible to drivers and drivers less visible to pedestrians, particularly when cars are parked along the curb.

Student safety is a problem where students cross E Vine Street at George Street, and E Vine Street at S Rogers Street. During our site visit, student safety patrol was observed attempting to control (stop) traffic on E Vine Street. Though no problems or incidents were mentioned, it is unadvisable to entrust traffic control duties to 5th and 6th graders. Legally, the task of controlling traffic is reserved for public safety officials, and trained and certified crossing guards. The role of a safety patrol is assist students, not to control traffic. Though student safety patrol plays an important role toward improving safety at crosswalks near schools, they cannot be relied upon to control traffic or enforce traffic regulations. The lack of traffic control on the E Vine Street approaches through the school corridor makes it more difficult for the safety patrol and other students to cross the street with safety.

Crossing E Gambier Street, particularly at its skewed, signalized intersection with S Rogers/Liberty streets, is another concern for student safety in the attendance area. Though equipped with pedestrian signal heads and push buttons, skewed geometry and the resulting signal timing make it a difficult place for pedestrians to cross. Currently, the signal operates on three phases, one for Liberty, S Rogers, and E Gambier streets. Pedestrians can cross the E Gambier Street during the S Rogers Street phase (left-turning motorists yield to pedestrians), and cross the minor approaches during the E Gambier Street phase. The current signal timing may require long delays for pedestrians crossing E Gambier Street, particularly if a pedestrian recently crossed this road.

Concerning crosswalks throughout the attendance area, many may be inaccessible and prove to be difficult for those walking or biking through them. This is particularly challenging on E Vine Street and others where brick roads intersect streets that have been paved. In this area, it is typical for the pavement to end in an abrupt fashion in the middle of the crosswalk leaving a two inch lip that is inaccessible and may cause injury to pedestrians or cyclists (Figure 6). In addition, crosswalk markings throughout the area appeared to be very worn.



Figure 6: Above, an example of the transition point between brick and paved streets in the middle of a crosswalk. Such transitions render the crosswalk inaccessible and create hazards for pedestrians and cyclists.

Despite many of these problems, most of the attendance area is fairly walkable and many students walk to school. Observations from the immediate vicinity of the school included seeing parents parking in the “no parking” zone north of the school to pick up their children. This did not appear to endanger anyone and it is unclear why the restriction is needed. Regarding bike parking, the school currently has two ladder style racks placed on the east and west ends of the building. It does not appear as if there is a shortage of bike parking at this time.

Pleasant Street Elementary School

Like Dan Emmett Elementary School, Pleasant Street educates students from within the city as well as the surrounding unincorporated rural area. Despite the size of its attendance area, the majority of the area’s homes are located within a mile’s walk or bike trip. There is an excellent opportunity for most students to walk or bike to Pleasant Street Elementary School. Significant barriers to students walking or biking to school include the lack of sidewalk along several key routes, and the design deficiencies in the walking and biking environment immediately around the school.

Key gaps in the local network include missing sidewalk on the north side of E Pleasant Street from just west of the school to N McKenzie Street, and missing and substandard sections of sidewalk along E Pleasant Street east of the school, Sychar Road, and Wooster Avenue. A summer of 2010 sidewalk construction project will seek to correct sidewalk problems along E Pleasant Street from

the school to Sychar Road, north along Sychar Road to Beech Street, as well as along Wooster Avenue roughly between N McKenzie Street and McGibney Road. This project will greatly improve pedestrian safety and access in the area. As mentioned as a problem affecting all schools, it should be mentioned that missing, unmaintained, and deteriorating sections of sidewalk on local streets are particularly a problem in the area.



Figure 7: The crosswalk in front of Pleasant Street Elementary School experiences heavy use as virtually all students walking or biking to school have to cross at the crosswalk.

safely make their way home. Where sidewalks would go to the west, there is an open ditch and fence that prevents pedestrians from safely walking west. Where students would travel to the east, students must first cross the 35 foot wide entrance to the school parking lot and walk between a line of bollards and the street (Figure 8). Not only an unattractive route for students, it has the potential to be unsafe for lack of curb and a buffer between the sidewalk and the edge of pavement.

Other barriers throughout the attendance boundary include a missing ramp on the south end of the signalized crosswalk in front of the school, sidewalks of insufficient width for influxes in pedestrians near crosswalks at the school, and a general lack of sidewalk on local streets and along key routes east of Sychar Road.

Further evaluation of the areas missing sidewalk east of Sychar Road shows

multiple opportunities to improve connectivity. The lack of sidewalk along local streets that intersect Sychar Road (including N Rogers, N Center, Denison, Kenyon, Oberlin, Ash, Sycamore, and Hickory streets) is a barrier to students who live along those streets. Similarly, students who live on Hilltop, Parkview, or Eastgate drives do not have a sidewalk to walk on either. Further from the

Pleasant Street Elementary School has a fair amount of congestion during arrivals and dismissal. This is attributable to increased traffic from parents picking up and dropping off their children, as well as heavy use of the pedestrian signal in front of the school (Figure 7). Though the use of the signal indicates that students are walking and biking to school, almost all students have to cross at this point because of the lack of pedestrian facilities on the north side of E Pleasant Street west of the school and insufficient facilities to the east of the school. Because of the lack of sidewalk and insufficient facilities, many students who would be traveling to the northwest or northeast must cross E Pleasant Street (south) in order to



Figure 8: Above, a sidewalk travels between bollards and the westbound travel lane of E Pleasant Street. Narrow, prone to flooding and parked cars, and unprotected by curb and gutter, this is a very unattractive route for students walking or biking to school.

school and east of Center Run, these students would need to cross the creek along Coshocton Avenue, a busy road that is missing sidewalk east of stream. Students who live in the apartment buildings off Shalimar Drive also lack a safe path to school given the lack of sidewalk on the north side of Coshocton Avenue east of Center Run. The lack of sidewalk along Coshocton Avenue, and to a lesser degree on local roadways, is a significant barrier to those students who would try to walk or bike to school from the identified areas.

Mount Vernon Middle School

The most significant barriers to Mount Vernon Middle School are the lack of path and the lack of safe crossings across major roads that separate the middle school from neighborhoods where students live. These barriers impact the vast majority of all students who would walk or bike to the school.



Figure 10: Above, a “goat path” runs through a break in the fence at the southwest corner of the parcel on the southwest corner of the intersection of Mount Vernon Avenue and Cougar Drive.

facility connection to neighborhoods on the east side of town. Those who choose to cross the S Main Street bridge into downtown must currently walk along Martinsburg Road, through several large and busy intersections (equipped with pedestrian signal heads and push buttons), and cross the Kokosing River on an unprotected narrow sidewalk. At the northern terminus of the sidewalk, students wishing to walk north on S Main Street must cross two lanes of continuously flowing right turning vehicles. This type of crossing is particularly dangerous for pedestrians of any age because of the risk of a multiple threat crash (Figure 10).

During the observation, several students were seen walking from the school to the intersection of S Division Street and Mount Vernon Avenue, walking across the school district’s athletic fields. This route would allow students to make their way toward the S Main Street (SR 13) bridge and downtown Mount Vernon. A “goat path” of dead grass (Figure 9) was observed near a break in the fence to a farm field that would allow a more direct route for students walking toward the Mount Vernon Avenue bridge allowing students access to the eastern half of town. Both routes lack path or sidewalk forcing students to trek across the fields. Upon crossing those fields, students must then cross Mount Vernon Avenue, a road that can be quite busy during certain times of the day.

For those students who travel across the Mount Vernon Avenue bridge, there is a protected sidewalk/multi-use path for students to cross the river. This path leads to a multi-use path that leads to Phillips Park and provides a pedestrian

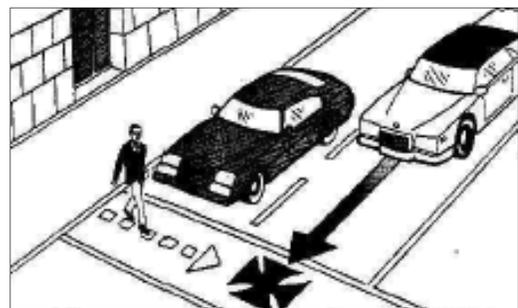


Figure 9: A multiple threat crash occurs when a pedestrian attempts to cross multiple lanes of traffic moving in the same direction. The vehicle closest to the curb sees the pedestrian entering the crosswalk and stops. This car screens the pedestrian from the view of cars in adjacent lanes and vice versa, resulting in the pedestrian being hit by a car in one of the adjacent lanes.

Focusing on the those students who live west of the school, there are several routes one could take including: walking on the sidewalk on the north side of Jacket Drive, trekking through high school parking lot and then through a small subdivision (Concord Boulevard), or one could make their way through the busy and congested school entrance near the Knox County Career Center. Each of these routes have barriers such as a lack of sidewalk at the western terminus of the sidewalk along Jacket Drive (at S Division Street), as well as a lack of sidewalk in the Concord Boulevard subdivision and along the career center drive. Generally students taking these routes would be doing so in order to cross congested Martinsburg Road (SR 586), a significant barrier to students.

There is one signalized crosswalk across the road (Pine Street) in the vicinity of the school. This crosswalk lies at the north end of the intersection of Pine Street, S Division Street, and Martinsburg Road – a 300 foot long signalized intersection of two off-set roads. Design deficiencies at this intersection reduce student safety. Needed for students who live due west of the school, it is out of the way for students who live southwest of the school. Though students could cross at any one of a half dozen other intersections, the lack of traffic controlled crossings in what is described as “stop and go” traffic does little to help students cross the barrier. Even with safer crossings, a lack of sidewalks between the school and local streets west of Martinsburg Road serves to inhibit students walking or biking to the school.

Given that Mount Vernon Nazarene University forms the south and east boundary of the middle school (high school and Career Center), pedestrian activity to this edge of the campus is assumed to be none. Some students may live to the extreme south (1.5-2 mile trip from the school); however most of these roads do not have sidewalks and most of the homes are outside of the city.

Assessment of Crash Data

A review of ODOT crash data for the latest available three year period (2005 to 2007) shows that 17 crashes involving pedestrians and bicyclists were reported in the City of Mount Vernon within a two-mile radius of the four schools studied. These 17 crashes resulted in no fatalities and 18 injuries (three crashes with two injuries, 12 with one injury, and two without an injury). Eleven of the crashes involved pedestrians and produced 13 injuries. The six remaining crashes involved cyclists, producing five injuries.

Of the 17 crashes reported, nine occurred downtown or near downtown Mount Vernon. Three occurred at or near intersections on N Sandusky Street (W Hamtramck, W Chestnut, and W High streets). The remaining six crashes occurred within a block of Main Street. Two crashes were reported at or near the intersection of Public Square and N Main Street, one each at or near the intersections of Vine Street and S Main, S Gay, and S Mulberry streets, and one at the intersection of S Mulberry and W Gambier streets. The two crashes reported at Public Square and N Main Street may require further study; however, there is insufficient data to indicate that this is the beginning of a trend for the intersection. The fact that the remaining crashes were reported at different intersections in and around downtown may indicate higher volumes of pedestrians and cyclists in the area, and/or that something about the environment in that area may be impacting pedestrian and cyclist safety.

Though it is concerning that these nine reported crashes occurred in and around downtown, most of these accident locations were near the attendance boundary of the elementary schools studied and generally these students would not be walking in this area. Team members indicated that students from Mount Vernon Middle School travel through this area when walking or biking to or from school.

In regards to the remaining nine crashes that occurred outside of the downtown area, several crashes occurred in locations scattered throughout the studied elementary school attendance boundaries. Reported crashes included one south of Dan Emmett Elementary School (near the intersection of Cottage and Calhoun streets), one northeast of Pleasant Street Elementary School (near the intersection of Sychar Road and Beech Street), and two crashes near East Elementary School (one near the intersection of E Gambier and S Rogers streets, and a second near the intersection of E High and N Center streets). Two crashes were reported within a two-mile trip of the middle school, one near the intersection of S McKenzie Street and Mount Vernon Avenue, and a second crash near the intersection of S Main Street and Columbus Road. The locations of these crashes, generally scattered throughout the city, tend to suggest that these are isolated incidents.

Improvement Suggestions

Safety and Encouragement Programs

Perceived or real safety issues may be minimized by instituting education, enforcement and encouragement programs along identified SRTS routes and around the school property. Drop-off and pick-up policies should continually be monitored for safety and effectiveness and enforced with a reasonable level of effort. When possible, these activities should be monitored by school staff to give drivers the sense that they need to respect procedures. Encouragement programs can include a Walk/Bike to School Day or a walking school bus and should be implemented in conjunction with infrastructure improvements. Such programs would ideally be organized by members of the SRTS team, involved parents, and school staff.

The following non-infrastructure recommendations are offered to the school district to help improve the safety of students walking or biking to school.

- **Conduct Crossing Guard training and certification for teacher and parent volunteers** – It is recommended that the City of Mount Vernon and Mount Vernon City School District recruit volunteers, train and certify citizens to serve as crossing guards where the school board deems they are necessary. These adults would be delegated authority (as allowed by state and local regulations) from the City to direct or control traffic in the vicinity of schools they are scheduled to volunteer at. Until all crossing enhancements are completed, such volunteers may be helpful especially at East Elementary School and in the vicinity of Mount Vernon Middle School.

New Facility Design Guidelines

The following recommendations are provided to the City of Mount Vernon to assist them in their efforts to improve the pedestrian realm for all users, especially students:

- **Codify or adopt minimum sidewalk and multi-use path design standards** – The City of Mount Vernon should codify or adopt specifications for sidewalk and multi-use path design including minimum widths, standards for tree lawns (where applicable), and a requirement for all public and private improvements to meet ADA accessibility guidelines. Minimum pavement widths should be no less than five feet for sidewalks, and 10 feet for multi-use paths. Planted tree lawns with a minimum width of five feet should be incorporated in all projects (as practical). Where impractical or undesirable, a sidewalk adjacent to a curb should be wider than five feet to allow pedestrians more distance between the walking path and lanes of traffic. Such a code or policy should apply to all public and private improvements within Mount Vernon.
- **Adoption of a Complete Streets policy** – It is recommended that the City of Mount Vernon adopt a Complete Streets policy to be applied to future City transportation projects. This policy will help ensure that all users of the transportation network are appropriately considered and safely accommodated in future improvements. Such a policy would address the need to include sidewalks and bike facilities in future capital road improvement projects,

bridging gaps in the infrastructure network and increasing opportunities for students to walk and ride to school. This includes the need to ensure sidewalk/multi-use path connections within and between new development and surrounding land uses. The Mid-Ohio Regional Planning Commission (MORPC) has published a Complete Streets policy, which would serve as a good starting point toward developing a workable policy for the City.

Beyond these changes in policy, it is recommended that sidewalks would be constructed as a part of all roadway improvement projects, and that new sidewalks would be physically separated from the roadway by a tree lawn of at least five feet. Where new traffic or pedestrian signals are erected, it is recommended that they be equipped with pedestrian push buttons and pedestrian signal heads that include a countdown feature informing pedestrians how much time they have left before they should complete crossing the street. Though optional, the pedestrian signal head with the countdown feature is recommended as studies indicate they reduce the likelihood of both ped/bike-vehicle and vehicle-vehicle crashes at intersections.

Engineering Improvements

The engineering improvement suggestions provided to the SRTS team members aim to reduce vehicle speeds, establish safer crossings, and improve pedestrian and bike facilities within a two-mile trip of Dan Emmett, East, and Pleasant Street elementary schools, and Mount Vernon Middle School. Specific improvement suggestions were developed with the goal of achieving the project Purpose and Need. The recommendations are grouped according to a general time frame in which treatments should be completed. They are defined as follows:

- Short-Term 0-12 Months
- Medium-Term 1-3 Years
- Long-Term 3+ Years

The following improvement suggestions provide the Mount Vernon City School District and the City of Mount Vernon with a range of possible improvements so that projects may be prioritized and budgeted accordingly. Cost estimates are for planning purposes only and should not be considered detailed engineering cost estimates. The estimates provided assume the recommendation would be implemented with others of a similar scope, allowing for economies of scale when contracting a firm to design and construct (or stripe) an improvement.

Recommendations for All Schools

- **Upgrade and add new and improved bike racks as needed** – As current racks reach the end of their useful life and are replaced, or as additional capacity is required, it is recommended that the School District install bike racks that are designed to support students' bicycles from at least two points on the bike's frame. Two examples of racks that meet this requirement are provided in Figures 13 and 14. In Figure 13 (left), inverted-U style bike racks are shown, which provide parking for two bikes per loop and cost about \$300 each to purchase and install. In Figure 14, the campus or city style rack is shown, which are available in a variety of sizes to accommodate three to 11 bikes per rack, costing from \$600 to \$1,200 to purchase and install. All bike racks should be placed on well-drained concrete or gravel pads to keep student cyclists and their bikes out of standing water and mud.



Figure 13: Three inverted-U bicycle racks (left). The racks, supporting two bikes a piece, provide at least two points of support to parked bikes and allow racks to be spaced for easy access. **Figure 14:** Several campus or city racks, which include a loop of metal that helps support each parked bike in two places, as well as provides something to lock the bike to.

- **Improve pedestrian connectivity throughout the city** – The City of Mount Vernon should strive to build sidewalk on both sides of every street along which students walk or bike to school. Such projects should be incorporated into street reconstruction projects. Beyond this recommendation, this report calls out specific sections of sidewalk that are a priority and should be eligible for SRTS funding. These sidewalks were prioritized because these routes would serve as collector sidewalks that help funnel students to their local school.
- **Improve the quality and accessibility of sidewalks throughout the city** – Walking audits conducted around the schools noted that sidewalk conditions ranged from acceptable to impassible for those with mobility impairments. The City should conduct an inspection of all city sidewalks within the next five years to remedy these maintenance issues according to State and City code. The cost of the inspection and the repairs would not be eligible for Safe Routes to Schools funding.
- **Upgrade pedestrian signal heads as they require replacement** – It is recommended that pedestrian signal heads be upgraded to those with a countdown feature as they require replacement. These devices have been shown to reduce pedestrian crashes as well as vehicular crashes at intersections. When new pedestrian signal heads are called for in a recommendation, they should be of the countdown variety. While new signal heads installed where there were none before should be eligible for funding, the replacement of existing heads generally would not be.

Dan Emmett Elementary School

Short-Term (0-12 Months)

- **Improve the pedestrian and biking environment immediately around the school** – The following recommendations are offered to improve the pedestrian and biking environment around Dan Emmett Elementary School

- Reconstruct 272 LF of sidewalks and curb, and two curb ramps along Mansfield Avenue from the south edge of the school parcel to the intersection of Mansfield Avenue and Nash Street/Nuce Road. This improvement should prevent run-off from over running the sidewalk and prevent parents from parking on the sidewalk. The curb ramps should be placed on both sides of the crosswalk on the south leg of the intersection. New sidewalk should be at least six feet in width. Cost estimate: \$28,000 (may require some drainage work).
- Construct 1,770 LF of sidewalk and 15 curb ramps along Nuce Road. The project involves building sidewalk adjacent to a ditch and may require the ditch to be enclosed and drainage structures to be installed. The project should also narrow the entrances to the school's parking lot to two 24 foot wide access drives, utilizing curb and grass to buffer the new sidewalk from the street and the parking lot. Curb ramps should be used where the sidewalk intersects each drive opening, one set for each road intersecting Nuce Road (Decatur, Emmett, and Marma drives), and another set for those crossing each intersecting road on the north side. This project should include a new sidewalk along the west end of the parking lot to provide a more attractive path than crossing the busy parking lot during arrival and dismissal times. Cost estimate: \$107,000
- Construct 590 LF of sidewalk and two curb ramps on the west side of Mansfield Avenue between Nash Street and Belmont Avenue. Cost estimate: \$40,000 (may require some drainage work).
- Construct curb within and around the intersection of Mansfield Avenue and Nuce Road/Nash Street up to 100 feet in all directions. The curb and curb ramps constructed as a part of the sidewalk construction project above will better protect pedestrians from traffic at the intersection, improving safety and making the intersection more comfortable for pedestrians. Pedestrian signal heads and pedestrian push buttons should be included across the west and north legs of the intersection. Cost estimate: \$45,000 (may require some drainage work).
- **Address safety concerns at the intersection of Belmont and Mansfield avenues –** Construct curb within and around the intersection of Mansfield and Belmont avenues up to 100 feet north and south on Mansfield Avenue. The curb and new curb ramps should be constructed to better protect pedestrians from traffic at the intersection. This project should include the addition of a crosswalk across the northern leg of the intersection, two pedestrian signal heads and two pedestrian push buttons for the new crosswalk. These improvements will make it safer for students to cross at the intersection. Cost estimate: \$35,000 (may require some drainage work)
- **Relocate bike parking at the school –** Relocate the bike rack on the north side of the building from under a tree (where it was observed that bird droppings were accumulating in the area of the rack) to a location near the north exit of the building. The bike rack should be

placed on a concrete or gravel pad to ensure the parking area is free of standing water or mud. Cost estimate (for the gravel or concrete pad): \$1,500.

Medium-Term (1-3 Years)

- **Increase safety for students walking across and along N Sandusky Street** – The following recommendations are offered to improve the pedestrian and biking environment on N Sandusky Street between Tilden Avenue and Upper Fredericktown Road. This project crosses jurisdictional boundaries and cooperation with Clinton Township will be necessary for successful implementation.
 - Construct 3,100 LF of sidewalk and 15 curb ramps along N Sandusky Street. Cost estimate: \$173,000
 - Construct a High-intensity Activated Walk (HAWK) beacon (Figure 11) at the intersection of James and N Sandusky streets. This device should greatly improve the safety of students walking or biking across N Sandusky Street. Cost estimate: \$60,000



Figure 11: Originating in Arizona, the HAWK beacon has grown in popularity and acceptance as an effective and safe device to permit safer pedestrian crossings of busy roadways. Activated by pedestrians, the signal starts to blink yellow and then has a steady yellow phase before turning red and providing a walk signal to pedestrians. Drivers are to stop during the red phase. After the walk interval, the pedestrian signal flashes the red hand (don't walk) and a "wig-wag" red phase starts indicating to drivers that they are now allowed to proceed if no pedestrians are present. At the conclusion of the pedestrian clearance phase (flashing red hand), the "wig-wag" phase stops and the signal heads go dark until another pedestrian activates the beacon.

- **Address safety concerns along N Mulberry Street north of Belmont Avenue** – The following recommendations are designed to help calm traffic and provide facilities for students to walk along N Mulberry Street.
 - Build 5,805 LF of sidewalk and 30 curb ramps along N Mulberry Street between Belmont Avenue and Northridge Drive. These improvements will provide a facility for students to walk out of the street. Cost estimate: \$326,000.
 - Construct traffic calming devices on N Mulberry Street to address concerns about speeding vehicles. A mini-circle should be constructed at the intersections of N Mulberry Street with Crestview Drive, and James and Sunset streets. These devices should help slow/calm southbound traffic and may require the road to be slightly

widened at these intersections to accommodate the circles. Cost estimate per circle (assuming minor street widening and constructing curb in the immediate intersection): \$25,000 (\$75,000 total).

- **Construct sidewalk along Mansfield Avenue north of the school** by constructing 3,470 LF of sidewalk and eight curb ramps along Mansfield Avenue between its intersection with Nuce Road/Nash Street and Northridge Drive. Cost estimate: \$182,000.
- **Improve sidewalks along Belmont Avenue** – As the existing sidewalks are heavily worn, narrow, and immediately adjacent to the curb and travel lanes, it is recommended that 3,108 LF of sidewalk and four curb ramps be reconstructed along Belmont Avenue to be at least six feet wide, and to carry through driveways along the road without significant cross slopes. Cost estimate: \$200,000.

Long-Term (3+ Years)

- **Provide pedestrian facilities along N Mulberry Street south of Belmont Avenue** by constructing 1,525 LF of sidewalk and two curb ramps on the west side of the street between Belmont Avenue and Calhoun Street. Cost estimate: \$79,000.
- **Provide a sidewalk linking Yoakam Drive and Taylor Road** – Construct a sidewalk from the CDBG-funded sidewalk along Taylor Road along the west side of open culvert and crossing the culvert at the end of Yoakam Drive and following along the southwest side of the road to Wooster Road. Cost estimate: \$73,000.
- **Improve access along Mansfield Avenue north of the Northridge Drive**– Construct 3,330 LF of sidewalk and sixteen curb ramps along Mansfield Avenue between Northridge Drive and Grange Avenue. This project will connect the local residential streets of Longitude and Latitude drives; Fearn, Pearl, and Grange avenues; and Clinton and Fairgrounds roads with a sidewalk leading to the elementary school. Cost estimate: \$186,000.
- **Construct pedestrian facilities in the neighborhoods around the school:**
 - Sunset Street (between N Sandusky and N Mulberry streets), 2,275 LF of sidewalk and 14 curb ramps. Cost estimate: \$131,000
 - Calhoun Street (between N Sandusky Street and Mansfield Avenue): 2,462 LF of sidewalk and 16 curb ramps. Cost estimate: \$142,000
 - Construct approximately 13,300 LF of sidewalk and 34 curb ramps on local streets in the neighborhood west of the school. These streets include Northridge, Oakway, Clearview, and Crestview drives, and Shirley, Rose, Miller, and Kimberly avenues. Cost estimate: approximately \$705,000.
 - Construct approximately 7,600 LF of sidewalk and four curb ramps on local streets north of the school, including Decatur, Margia, Emmett, Marma, and Northgate drives. Cost estimate: \$385,000.

East Elementary School

Short-Term (0-12 Months)

- **Improve intersection safety on E Vine Street near the elementary school** by changing the traffic control from side road stop controlled to multi-way stop controlled at the intersections of E Vine and George streets, and E Vine and S Rogers. This would improve pedestrian safety at these intersections. An engineering study would be required to verify that the multi-way stop is warranted at both intersections where high volumes of students cross during arrival and dismissal hours. Cost estimate: \$8,000.
- **Improve intersection safety where students cross E High Street near the elementary school** – by constructing the following modifications to the intersections of E High and George/Greer streets, and E High and S Rogers/Ringold streets:
 - Construct curb extensions on all four corners of both intersections to improve pedestrian and driver visibility of the crosswalk. The curb extension should define a nine foot parking lane leaving two 14 foot travel lanes, and should incorporate new curb ramps for the crosswalks across E High Street. Cost estimate: \$5,000 per curb extension (including one curb ramp). Total cost estimate: \$40,000.
 - The existing crosswalk beacons at the intersection of E High and George/Greer streets should be relocated onto the curb extension to make the beacons more visible to drivers, and crosswalk signage should be attached to the poles to communicate to drivers the intended message. An In-Street Pedestrian Crossing Sign should be installed on the centerline on the crosswalk between the beacons. Cost estimate: \$1,000 when completed as a part of the curb extension project.
 - Restripe all four crosswalks at each intersection with ladder style pavement markings. Cost estimate per intersection: \$5,000. Total cost for both intersections: \$10,000.
- **Evaluate and improve crosswalks throughout the attendance area** – Identify locations where asphalt pavement stops in the middle of a crosswalk and correct these crosswalks by carrying the asphalt through the crosswalk. Restripe crosswalks as warranted. Cost estimate varies based on the number of intersections; however, the cost per approaches corrected about \$2,000. Total amount: unknown.
- **Restripe crosswalks and rebuild curb ramps near the school** – Crosswalks on all four approaches at the following four intersections should be restriped as ladder-style crosswalks and their curb ramps replaced: E Vine and George streets, E Vine and S Rogers streets, S Rogers and Oak streets, Oak and George streets. Cost estimate for crosswalks: \$3,200 per intersection, roughly \$13,000 for all four intersections. Cost estimate for ramps: \$1,400 per ramp (includes removal of old sidewalk or non-compliant ramp), total cost for four intersections with eight ramps each: \$45,000.

Medium-Term (1-3 years)

- **Build sidewalk along streets leading to the school** – The following sidewalk projects have been identified to help improve the safety of both collector walking routes and roads in close proximity to the school. These projects include:
 - Construct 1,250 LF of sidewalk on George Street between E High and E Gambier streets. Cost estimate: \$62,000.

- Construct 536 LF of sidewalk and two curb ramps on S Rogers Street between E High and Oak streets. Cost estimate: \$29,000.
- Construct 1,560 LF of sidewalk and 22 curb ramps on E Vine Street between N Center Street and S Edgewood Road. Cost estimate: \$104,000.
- **Improve connectivity along streets north of E High Street** – The following sidewalk projects have been identified to help improve the safety of both collector and local walking routes north of E High Street. In particular, the lack of sidewalk on Greer, Brown, and Ringold streets between E High and E Chestnut streets creates a barrier that should be removed. These projects include:
 - Construct 276 LF of sidewalk and 10 curb ramps on Greer Street between E High and E Chestnut streets. Limited right of way (20 feet) may require the conversion of Greer Street to one way traffic between these two streets. Cost estimate: \$26,000.
 - Construct 1,730 LF of sidewalk on Brown Street between E High Street and Coshocton Avenue. Limited right of way (20 feet) on Brown Street between E High and E Chestnut streets may require one-way conversion traffic to accommodate the sidewalk. Cost estimate: \$96,000.
 - Construct 280 LF of sidewalk and 10 curb ramps on Ringold Street between E High and E Chestnut streets. Limited right of way (20 feet) may require the conversion of Ringold Street to one way traffic between these two streets. Cost estimate: \$26,000.
 - Construct 1,350 LF of sidewalk and eight curb ramps on N Center Street between E High Street and Coshocton Avenue. Limited right of way along the entire corridor will necessitate sidewalk to be constructed on one side of the street, most likely the east side of N Center Street. Cost estimate: \$77,000.

- **Construct traffic calming improvements on E High Street** to improve pedestrian and cyclist comfort along and across E High Street (Figure 12).

- Construct a mini-circle (Figure 13) and four path-defining curb extensions (on the E High Street legs) at the intersections of E High and Catherine streets, and E High and Division streets. Cost estimate: \$25,000 per intersection, \$50,000 total.
- Construct vegetated median islands (Figure 14) between Park and Division streets, and Clinton and Potwin streets. Cost estimate: \$10,000 per median, \$20,000 total.
- Stripe the travel lane to 11 feet between Center and Park streets, defining an edge between the travel and parking lanes. In sections with a median island or



Figure 12: E High Street has a very wide section with approximately 46 feet of pavement. The 35 mph speed limit, lack of traffic controls or geographic features make this a difficult road for elementary school students to cross. Though designed to be a major arterial through Mount Vernon, development patterns and highway projects have moved through-traffic to other routes. Today, the road functions as a collector through a local neighborhood and as such, traffic calming and a lower speed limit is recommended to improve safety.

intersections with a mini-circle, the lines should define the travel path. Cost estimate: \$4,000

- Reduce the speed limit of E High Street in quiet, residential areas east of Park Street to 25 mph to improve the safety of pedestrians crossing E High Street for students. Cost estimate: \$1,000.



Figure 13: Left, a vegetated median island helps to calm traffic simply by occupying space drivers would otherwise not be driving in. **Figure 14:** Right, a mini-circle calms through traffic on a residential collector street.

Long-Term (3-10 years)

- **Improve access and safety between the school and the neighborhood east and south of the intersection of Gambier and S Edgewood roads.**
 - Construct 4,387 LF of sidewalk on the south side of E Gambier Street/Gambier Road between Quarry Street and S Edgewood Road, and on the east side of S Edgewood Road from Gambier Road south to the intersection of Mount Vernon Avenue and S Edgewood Road. Cost estimate: \$231,000.
 - Add pedestrian signal heads and push buttons, and curb ramps at the signalized intersection of Gambier and S Edgewood roads. Cost estimate: \$50,000.
 - Construct sidewalks on the following streets to improve access in these neighborhoods: Park Road, Orchard Drive, and Gambier Road, 5,540 LF of sidewalk and 14 curb ramps. Cost estimate: 294,000.
- **Complete gaps in the sidewalk network south of the school** by completing the following projects:
 - Complete missing segments of sidewalk along Wilson, Howard, and Compromise streets, and Pennsylvania Avenue: 3,894 LF of sidewalk and 40 curb ramps. Cost estimate: \$243,000.
 - Quarry Street: 1,406 LF of sidewalk and four curb ramps. Cost estimate: \$75,000.
- **Improve sidewalk connectivity to neighborhoods east of Center Run** – Construct the following sidewalk projects to improve access to residences northeast of the school.
 - Construct 3,890 LF of sidewalk and 20 curb ramps on E High Street between Ringold Street and S Edgewood Road. Cost estimate: \$219,000.
 - Construct 3,306 LF of sidewalk and 18 curb ramps on Edgewood Street between Marita Drive and E Vine Street. Cost estimate: \$187,000.

- Construct 1,243 LF of sidewalk and four curb ramps on White Heirs Street between E High Street and its terminus south of Coshocton Avenue. Cost estimate: \$67,000.
- Construct 3,002 LF of sidewalk and 14 curb ramps on E Chestnut Street between N Edgewood Road and Teryl Drive. Cost estimate: \$167,000.

Pleasant Street Elementary School

Short-Term (0-12 Months)

- **Improve pedestrian infrastructure on E Pleasant Street west of the school** by constructing a 766 LF sidewalk and 14 curb ramps on the north side of E Pleasant Street between the elementary school and N McKenzie Street. Curb ramps should include all crosswalks at the intersections of E Pleasant and N Park streets, and E Pleasant and N McKenzie streets. Cost estimate: \$75,000 (estimate includes an allowance to culvert a ditch and build the sidewalk atop it).
- **Improve the safety of the pedestrian environment immediately around the school** by constructing the following projects around the school grounds:

- Reconstruct the drive into the school's east parking lot into a relatively narrow (i.e. 24 feet wide) driveway with the crossing consisting of a concrete sidewalk constructed to travel through the drive with priority (Figure 15). Two curb ramps should be included where the existing sidewalks meet the driveway. Remove 10 feet of the parking lot behind the new sidewalk just east of the reconstructed driveway, curb the end of the parking lot, and replace removed surface with grass. Cost estimate: \$25,000
- Stripe or restripe the following crosswalks near the school. Cost estimate for all: \$27,000

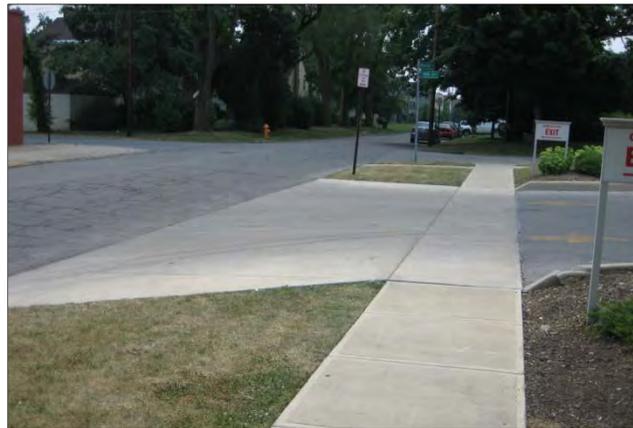


Figure 15: Above, a sidewalk crosses a driveway with priority – that is the sidewalk does not dip down into the drive and those traveling through the driveway must travel slowly as a natural speed bump is created where sidewalks sit higher than the pavement.

- High visibility ladder-style striping at the following intersections: N Division and E Pleasant Streets, south leg; N McKenzie and E Pleasant streets, four legs; Sychar Road and E Pleasant Street, four legs; and N Gay and E Pleasant streets, four legs. Cost estimate per leg: about \$800. Total cost estimate: \$10,000.
- Standard crosswalk markings at the following intersections: N Division and E Hamtramck streets, four legs; N Division and E Burgess streets, four legs; N McKenzie and E Hamtramck streets, four legs; and E Pleasant and N Catherine streets, four legs. Cost estimate per leg: about \$300. Total cost estimate: \$5,000.

- **Improve pedestrian safety at the signalized intersection of E Pleasant and N Main streets** – Add pedestrian signal heads and pedestrian push buttons to the existing traffic signal. Cost estimate: \$40,000.

Medium-term (1-3 years)

- **Improve sidewalk connectivity along pedestrian collector routes** – Construct the following sidewalks to help improve walking routes along common routes that students would travel along to get to the elementary school:
 - Construct 2,398 LF of sidewalk and 24 curb ramps along N McKenzie Street between E Pleasant Street and Wooster Avenue. Curb ramps would be placed at the southern terminus and new ramps at every intersection on N McKenzie between E Pleasant Street and Wooster Avenue. Cost estimate: \$149,000
 - Construct 2,145 LF of sidewalk and 16 curb ramps along the east side of Sychar Road between E Pleasant and Beech streets. Cost estimate: \$126,000.
 - Construct 1,167 LF of sidewalk and four curb ramps along the south side of Beech Street between Sychar Road and the continuation of sidewalk just east of Hilltop Drive. Cost estimate: \$63,000.
 - Construct 1,812 LF of sidewalk and five curb ramps along the north side of Coshocton Avenue between the eastern terminus of sidewalk between N Center and White Heirs streets to the intersection of Shalimar Drive and Coshocton Avenue. Cost estimate: \$97,000.
- **Inspect and remedy problems with sidewalks throughout the neighborhood around the school.** Repair, replace, and complete gaps as necessary to improve walks in the neighborhood, addressing problems with deteriorating walks and ramps as necessary. Though the cost of the survey may not be eligible for funding, repair and replacement projects should be. Cost estimates will vary based on type of repair, number of repairs required, and any quantity discounts for those doing the work.

Long-term (3-10 years)

- **Construct sidewalk in neighborhoods near the school** – the following sidewalk projects are provided to help improve safety and the attractiveness of walking or biking to school for students who live on streets without sidewalks near the school.
 - Construct 7,696 LF of sidewalk and 34 curb ramps on E Pleasant Street (east of Sychar Road), N Center (between E Pleasant and Denison streets), E Lamartine (between Sychar Road and N Center Street), Denison, Kenyon, Oberlin, and Miami streets. Cost estimate: \$426,000.
 - Construct 5,853 LF of sidewalk and 16 curb ramps on Ash, Sycamore, Hickory, and Poplar streets. Cost estimate: \$312,000.
 - Construct 8,383 LF of sidewalk and 18 curb ramps on East Gate, Parkview, and Hilltop drives, and Bradwack Street. Cost estimate: \$441,000.

Mount Vernon Middle School*Short-Term (0-12 Months)*

- **Construct improvements to enhance connectivity west of the school:**
 - Construct 944 LF of sidewalk and two curb ramps along Jacket Drive from Martinsburg Road to the path that connects the high school to the career center. Cost estimate: \$50,000.
 - Construct 2,106 LF of sidewalk and 11 curb ramps along the west side of Martinsburg Road between Ames and Pine Streets. Cost estimate: \$118,000.
 - Construct 1,284 LF of sidewalk and eight curb ramps along S Division Street between Jacket Drive and Martinsburg Road. Cost estimate: \$74,000.
 - Construct 2948 LF of sidewalk and two curb ramps along Pine Street between Martinsburg Road and S Main Street. Cost estimate: \$150,000.
 - Construct 2,822 LF of sidewalk and six curb ramps along Delano Street between Martinsburg Road and Newark Road. Cost estimate: \$148,000.
 - Construct a HAWK beacon at the intersections of Martinsburg Road and Delano Street. Cost estimate: \$60,000.
- **Improve connectivity between the middle school and neighborhoods north of the Kokosing River.** These projects will focus on improving connectivity to neighborhoods due north of the school and the Kokosing River.
 - Construct 2,553 LF of multi-use path and two curb ramps from Jacket Drive, across Mount Vernon Avenue, and to the bike path along the river. This path leads to a bridge students could use to cross the river. The path would travel through the school's athletic field complex. Cost estimate: \$131,000 (may require some earth work to elevate the path to prevent path flooding).
 - Construct a HAWK beacon to control the crossing of the above multi-use path at its intersection with Mount Vernon Avenue. Cost estimate: \$60,000.

Medium-Term (1-3 Years)

- **Construct sidewalk to improve pedestrian safety along Mount Vernon Avenue** by constructing 2,744 LF of sidewalk and four curb ramps along Mount Vernon Avenue between Newark Road and the multi-use path and HAWK beacon called for above. Cost estimate: \$144,000.
- **Address safety concerns at the intersection of Martinsburg Road and S Division and Pine streets** by adding two traffic signal heads (ball and left arrow) and a stop bar on Martinsburg Road on the south leg of its intersection with Pine Street. These signal heads should direct motorists to stop should pedestrians be crossing Martinsburg Road on the north leg of the intersection. Cost estimate: \$40,000.
- **Improve connectivity between the middle school and neighborhoods north of the Kokosing River** – The following recommendations seek to improve existing pedestrian facilities in the vicinity of the S Main Street bridge, and Columbus Road and S Main Street signalized intersection. A conceptual drawing of the proposed improvements is provided as an appendix to this plan.

- Widening the sidewalk on the east side of the S Main Street bridge to accommodate a 10 foot wide multi-use path and barriers on either side to protect cyclists crossing the bridge. This can be accomplished by eliminating the southbound curb/right turn lane across the bridge and shifting all travel lanes to the west, providing space for the sidewalk to be expanded. At the north end of the bridge, intersection enhancements including curb extensions, a new refuge island, and a HAWK beacon should be constructed to improve the definition of travel paths and protect pedestrians who cross at this potentially difficult intersection. The total cost estimate of this project is \$130,000.
- Consolidate the size of the Columbus Road and S Main Street signalized intersection by constructing a large curb extension on the west side of the intersection, defining a corner with a larger turning radius, moving the north stop bar and signal mast arm south, and adjusting crosswalks and striping as needed to reduce crossing distances and better direct vehicle movements. Tightening up the intersection will reduce vehicle speeds, improve pedestrian safety, and reduce crossing distances at the intersection. This project should also include the provision of pedestrian signal heads and push buttons. Unacceptable losses in intersection capacity are not expected as a result of these improvements. Cost estimate for design and construction would be approximately \$100,000.

Long-Term (3-10 Years)

- **Improve connectivity between the middle school and neighborhoods north of the Kokosing River** by completing the following projects:
 - Construct a 1,560 LF sidewalk and four curb ramps on the south side of Mount Vernon Avenue from the Kokosing River east to sidewalk along S Edgewood Road. Cost estimate: \$83,000. A crossing enhancement (beacon) should be added to the western terminus of the sidewalk, where the Kokosing Trail multi-use path crosses Mount Vernon Avenue. Cost estimate for a beacon would vary from \$20,000 for a pedestrian-activated Rapid Flasher to \$50,000 for a second HAWK beacon across Mount Vernon Avenue.
 - Construct a 3,963 LF multi-use path between the HAWK beacon on Mount Vernon Avenue and S Main Street just south of its bridge over the Kokosing River. The path will travel through a city park, across the top of the levee, and across an abandon railroad spur bridge across Dry Creek. Cost estimate: \$225,000.

References

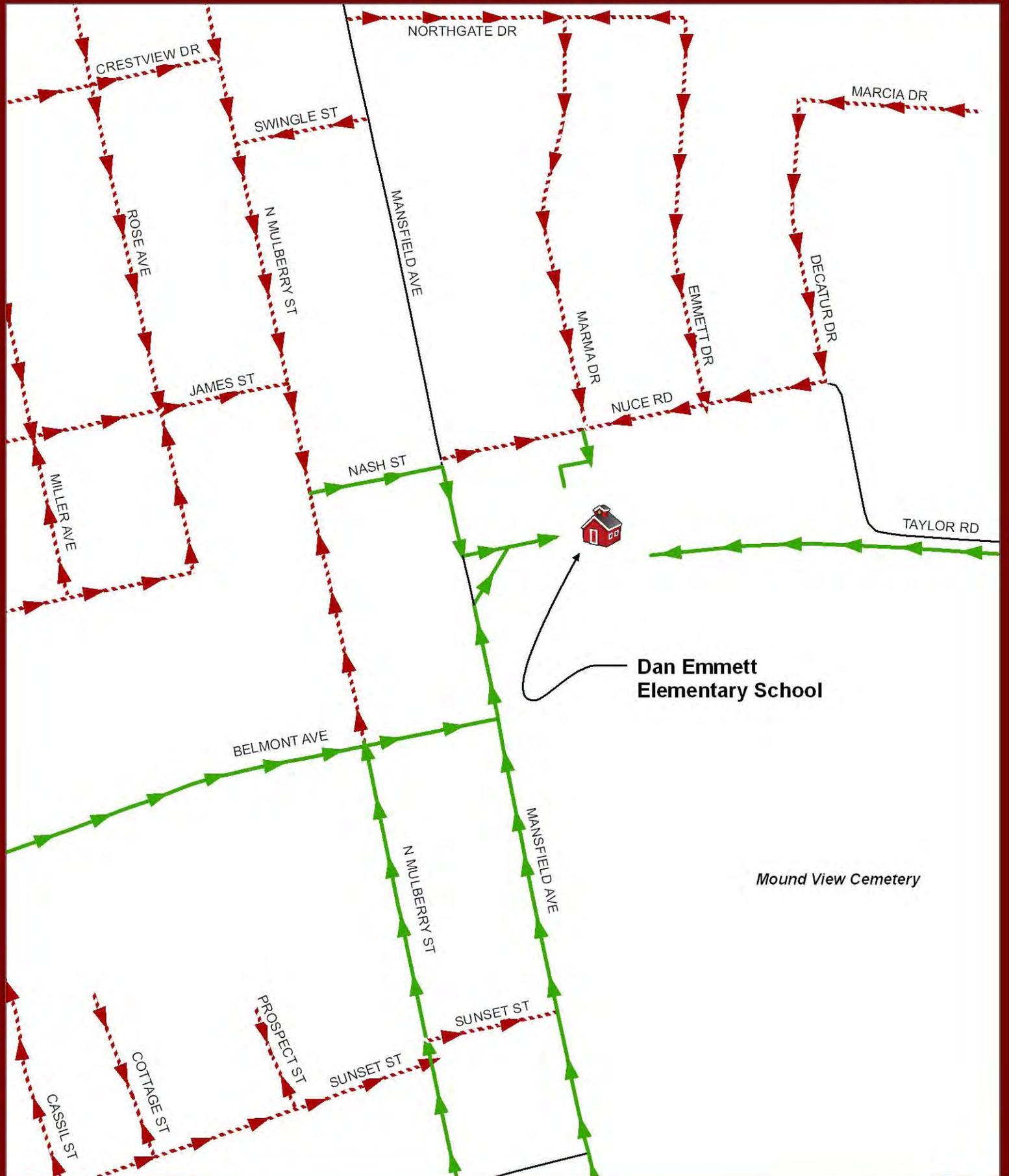
<http://www.pedbikeimages.org>

<http://saferoutesinfo.org>

2004, Guide for the Planning, Design, and Operation of Pedestrian Facilities, AASHTO

1999, Guide for the Development of Bicycle Facilities, AASHTO

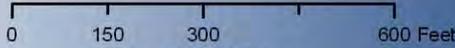
2010, Location and Design Manual, Volume One, Roadway Design, ODOT



Dan Emmett Elementary School

Mound View Cemetery

 Route with sidewalk
  Route without sidewalk



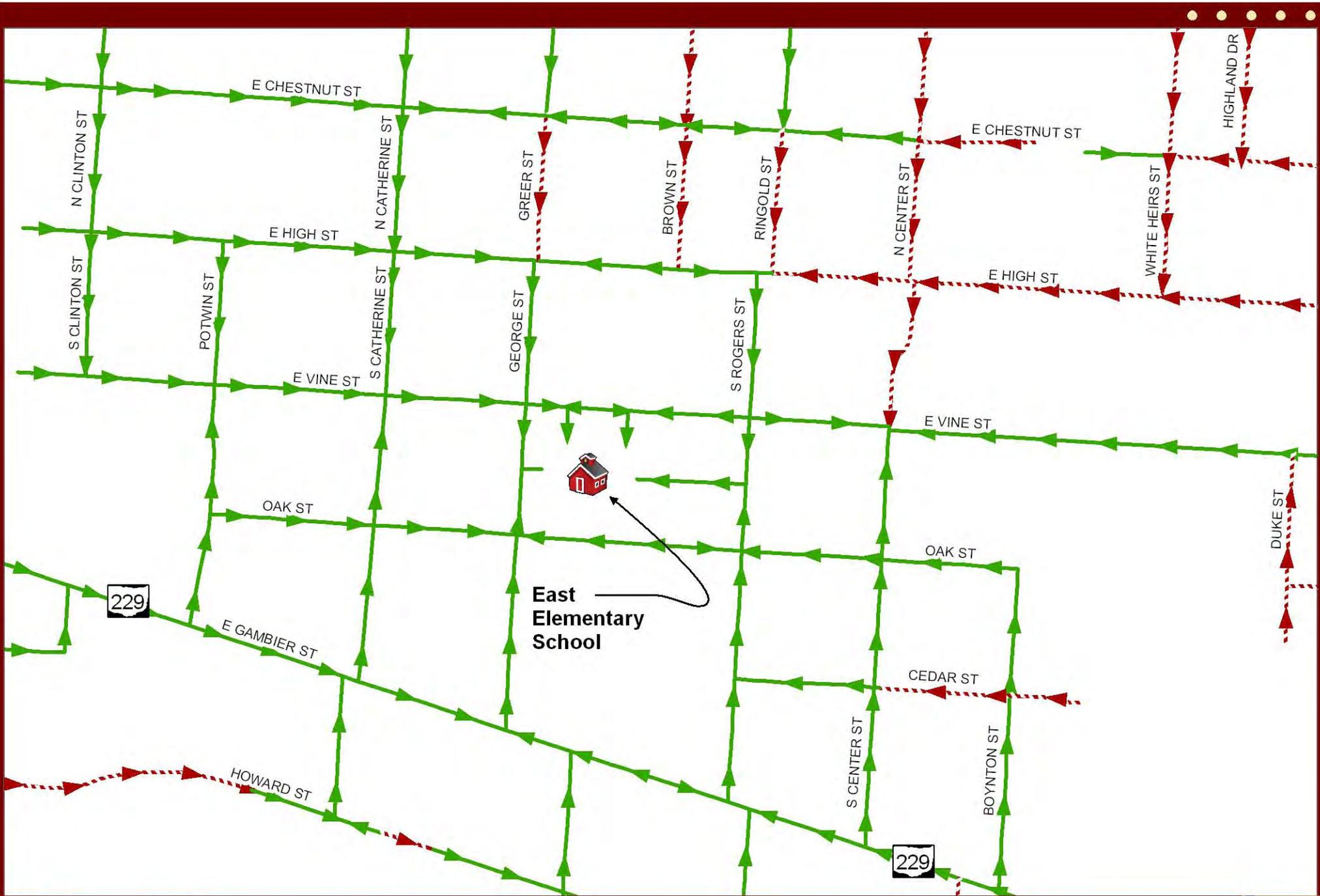
1 inch = 300 feet



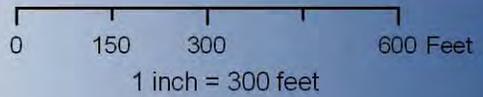
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**Dan Emmett Elem. School
Safe Routes to School
Walking Routes Map**



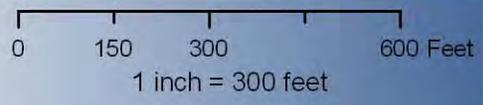
- Route with sidewalk
- Route without sidewalk



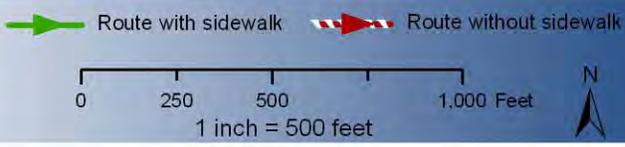
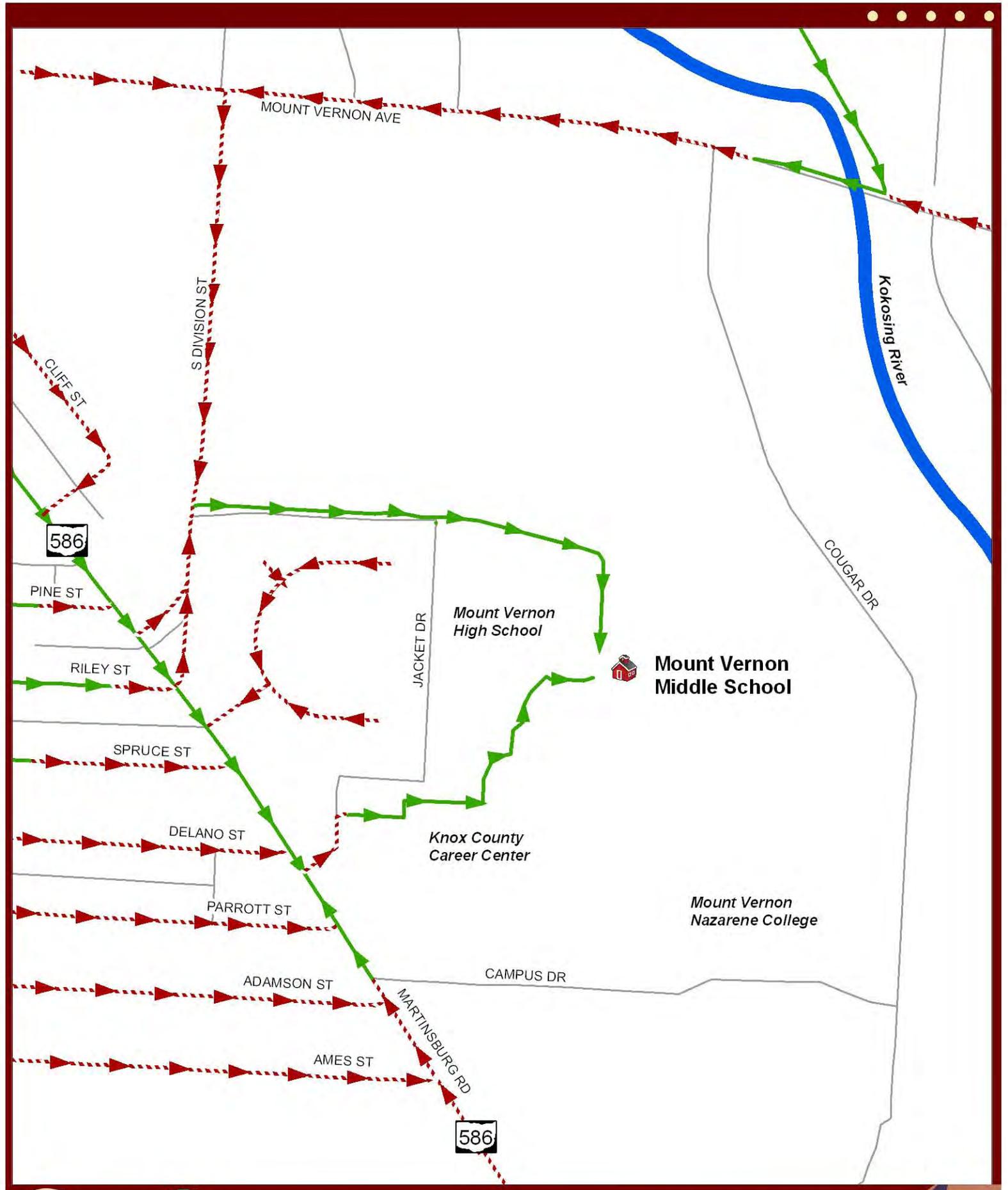
**East Elementary School
Safe Routes to School
Walking Routes Map**



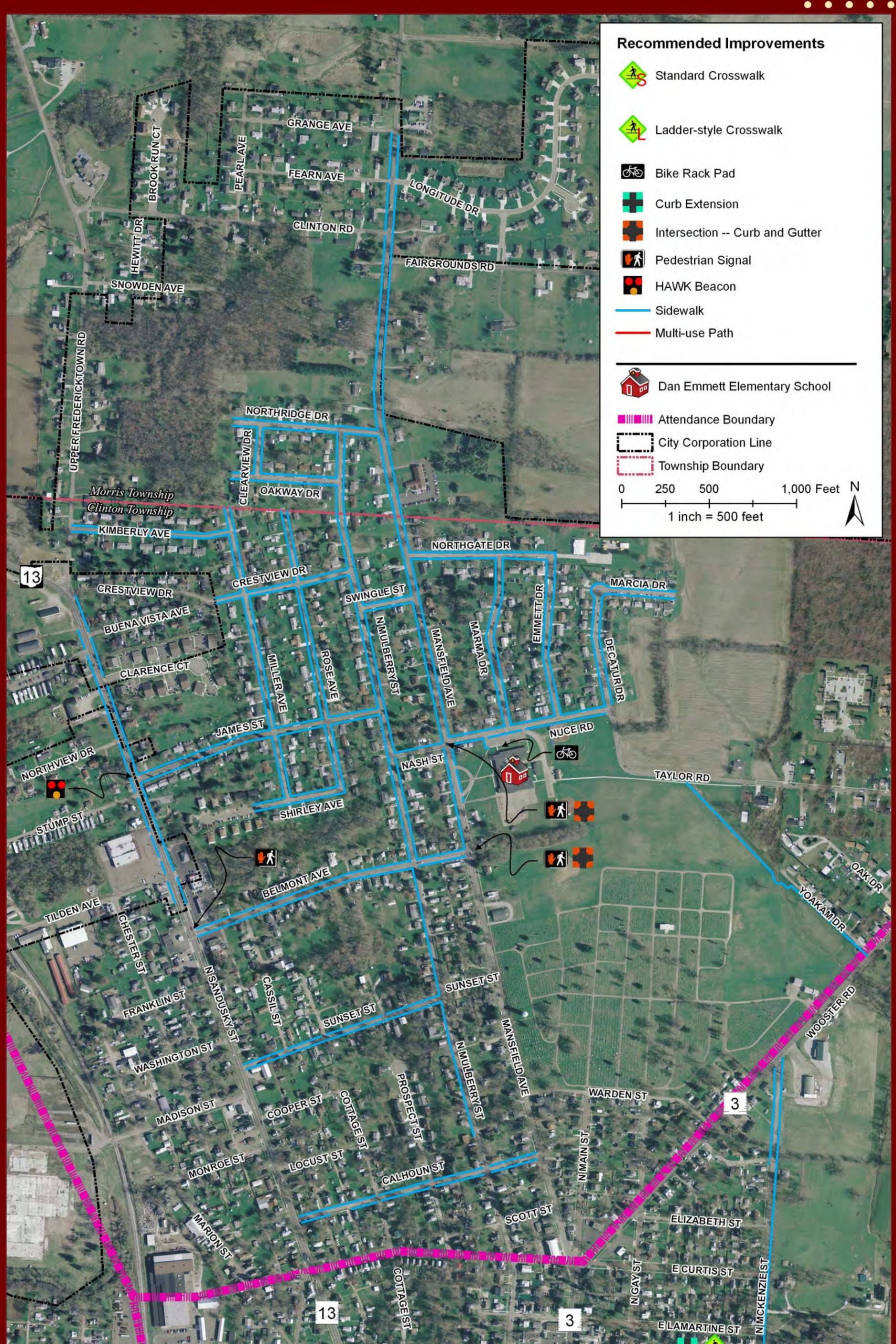
- Route with sidewalk
- Route without sidewalk
- Attendance Boundary



**Pleasant Street Elementary
Safe Routes to School
Walking Routes Map**

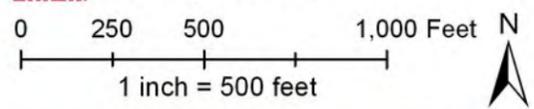


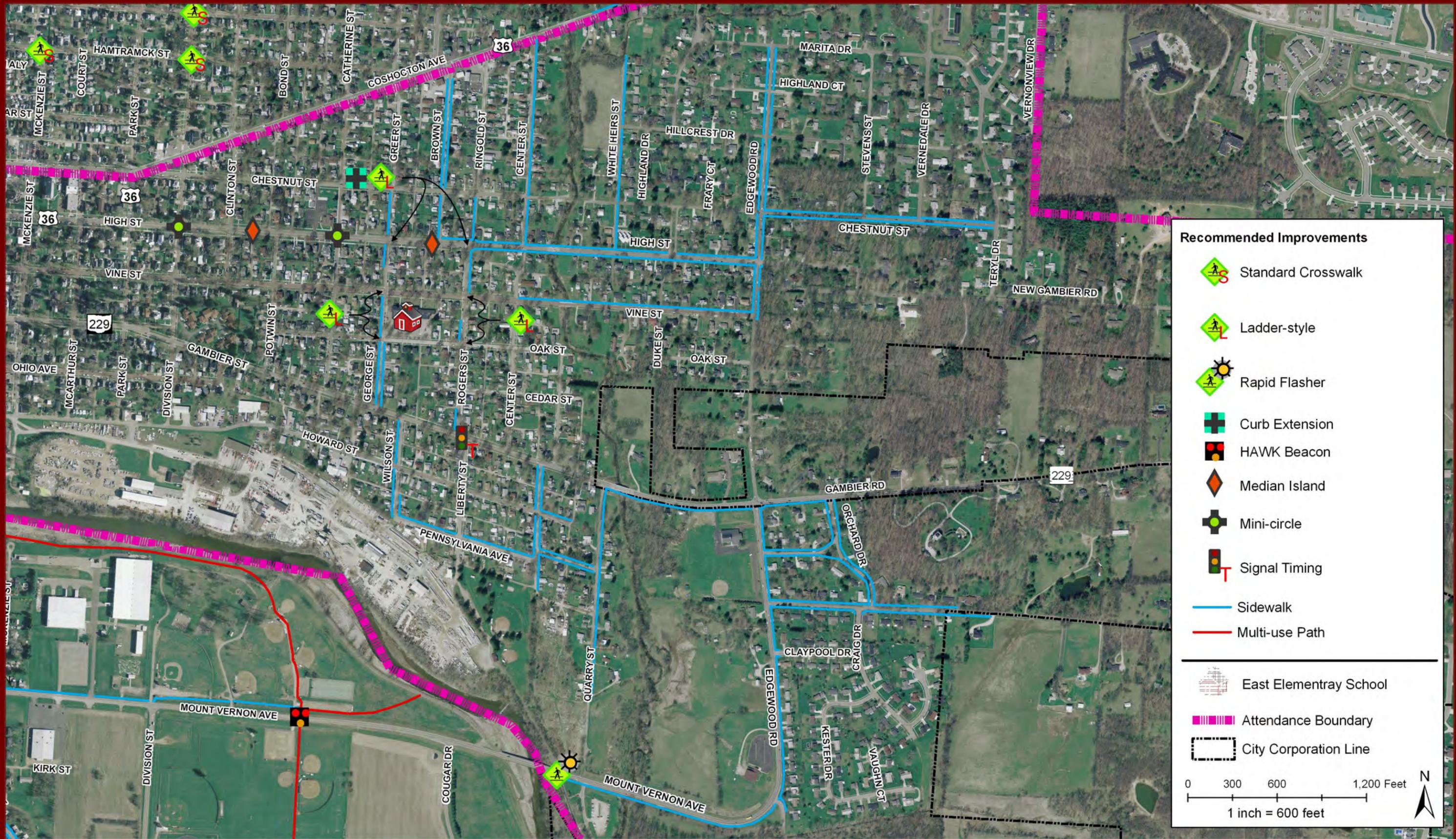
Mount Vernon Middle School
Safe Routes to School
Walking Routes Map



Recommended Improvements

-  Standard Crosswalk
 -  Ladder-style Crosswalk
 -  Bike Rack Pad
 -  Curb Extension
 -  Intersection -- Curb and Gutter
 -  Pedestrian Signal
 -  HAWK Beacon
 -  Sidewalk
 -  Multi-use Path
-
-  Dan Emmett Elementary School
 -  Attendance Boundary
 -  City Corporation Line
 -  Township Boundary







Recommended Improvements

- Ladder-style Crosswalk
- Rapid Flasher
- Signal Timing
- Reconstruct Intersection
- Curb Extension
- HAWK Beacon
- Signal Enhancement
- Sidewalk
- Multi-use Path

Mt. Vernon Middle School

City Corporation Line

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1 inch = 600 feet

N



Long-term multi-use path to the middle school

Median refuge island to protect pedestrians crossing at intersection, and to slow and physically define traffic paths.

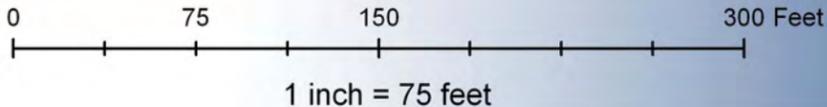
Stop bar for HAWK beacon or Ped Signal

Protected multi-use path across bridge

Reconfigured, smaller intersection with crosswalks

Stop Control (existing)

Curb extension to slow turning traffic and provide a shorter crossing distance for pedestrians



Proposed Pedestrian Safety Enhancements
S Main Street Bridge -- S Main Street/Columbus Road Corridor
Safe Routes to School