

Dakota County
Safe Routes to School

DAKOTA
31
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Safe Routes to School Comprehensive Plan

Sioux Trail Elementary School

**City of Burnsville
Dakota County, MN**

May 2010

Prepared by:



SHIP
Statewide Health Improvement Program

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DAKOTA
31
COUNTY



Project Background

The Statewide Health Improvement Program (SHIP) aims to help Minnesotans live longer, healthier lives by reducing the burden of chronic disease. The Dakota County Public Health Department received SHIP funding to work with community partners to develop and implement programs to improve nutrition, increase physical activity, and reduce tobacco use in schools, workplaces, community settings, and healthcare sites. As part of this effort, comprehensive Safe Routes to School (SRTS) plans have been developed for 10 schools in Dakota County that seek to increase walking and biking to school through the following means:

- **Education** – Teaching children to walk and bike safely.
- **Encouragement** – Developing programs that get children excited about walking or biking to school, such as walk/bike incentive programs or Walk to School Day. May also include methods that help parents and guardians feel comfortable letting their child walk or bike, such as walking school buses or adult crossing guards.
- **Enforcement** – Having law enforcement support, such as speed zone enforcement or increased patrols, along the designated routes to school.
- **Engineering** – Identifying infrastructure barriers to walking and biking, such as sidewalk/trail gaps, hazardous crossings, or the need for secure bicycle parking.
- **Evaluation** – Measuring the effectiveness of the various components of the SRTS project.

The following sections describe the development of a Safe Routes to School Plan for Sioux Trail Elementary in the City of Burnsville, Dakota County, Minnesota.

Existing Conditions

Sioux Trail Elementary School is part of Independent School District 191 serving the Burnsville, Eagan, and Savage communities in the Twin Cities suburbs. Sioux Trail Elementary School is located on Trunk Highway (TH) 13, between County Road 30 (Diffley Road) and County Road 32 (Cliff Road), in the City of Burnsville. The surrounding area is primarily residential.

Student Data

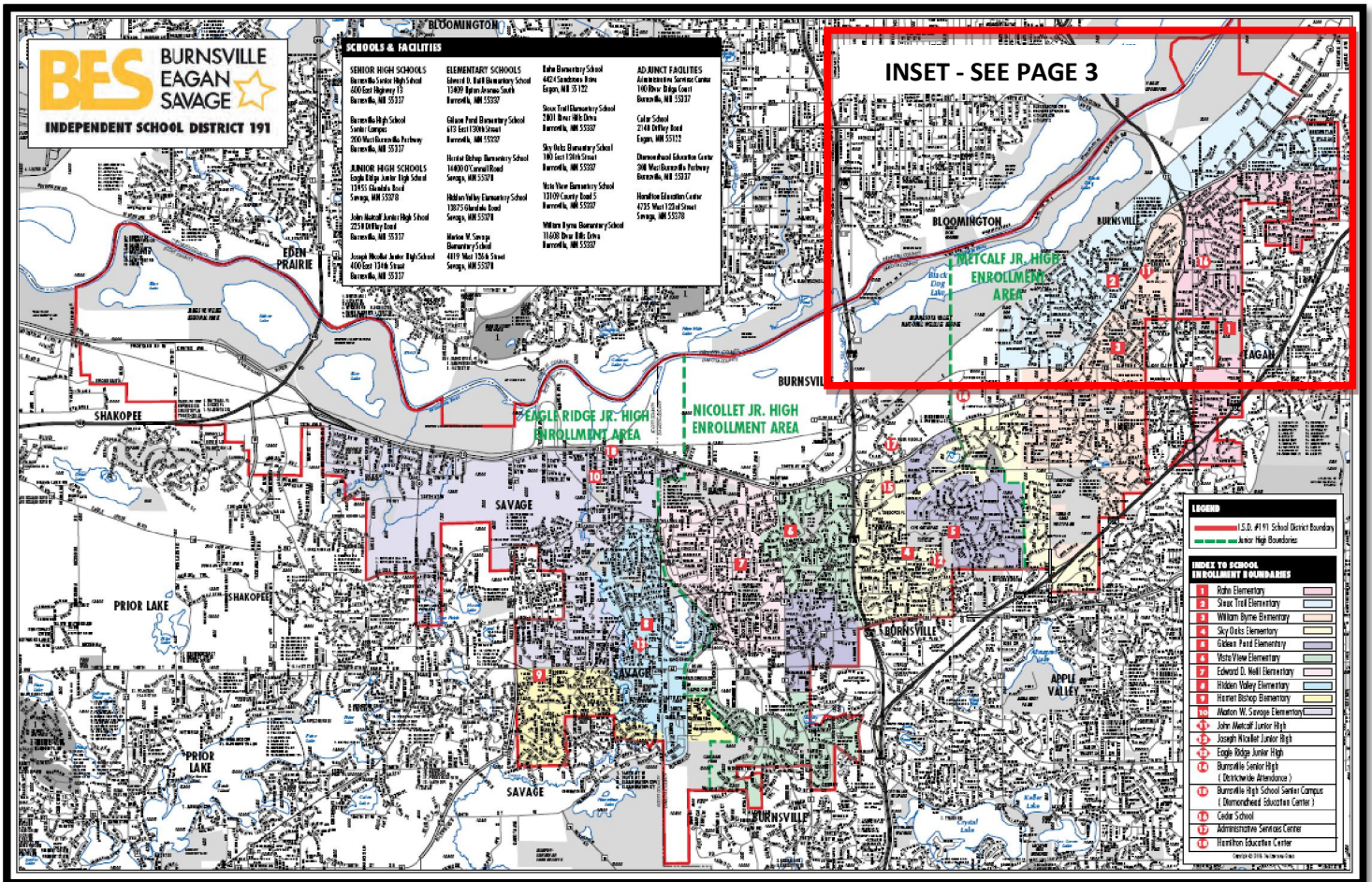
Currently, there are approximately 415 students in kindergarten through 6th grade at Sioux Trail Elementary (2009-2010 school year) and the school day is from 8:30 am to 2:55 pm. The school

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



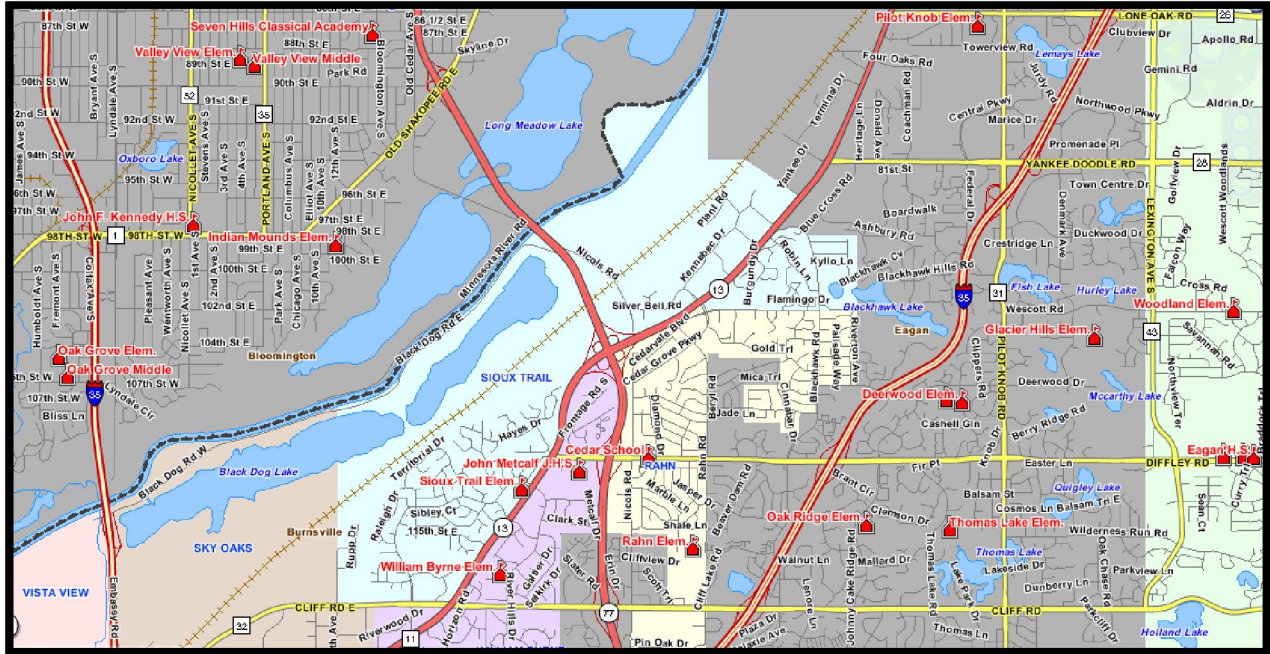
boundary map for District 191 shows that the attendance area for Sioux Trail Elementary is concentrated to the neighborhoods near the school, within the City of Burnsville.



Source: www.isd191.org

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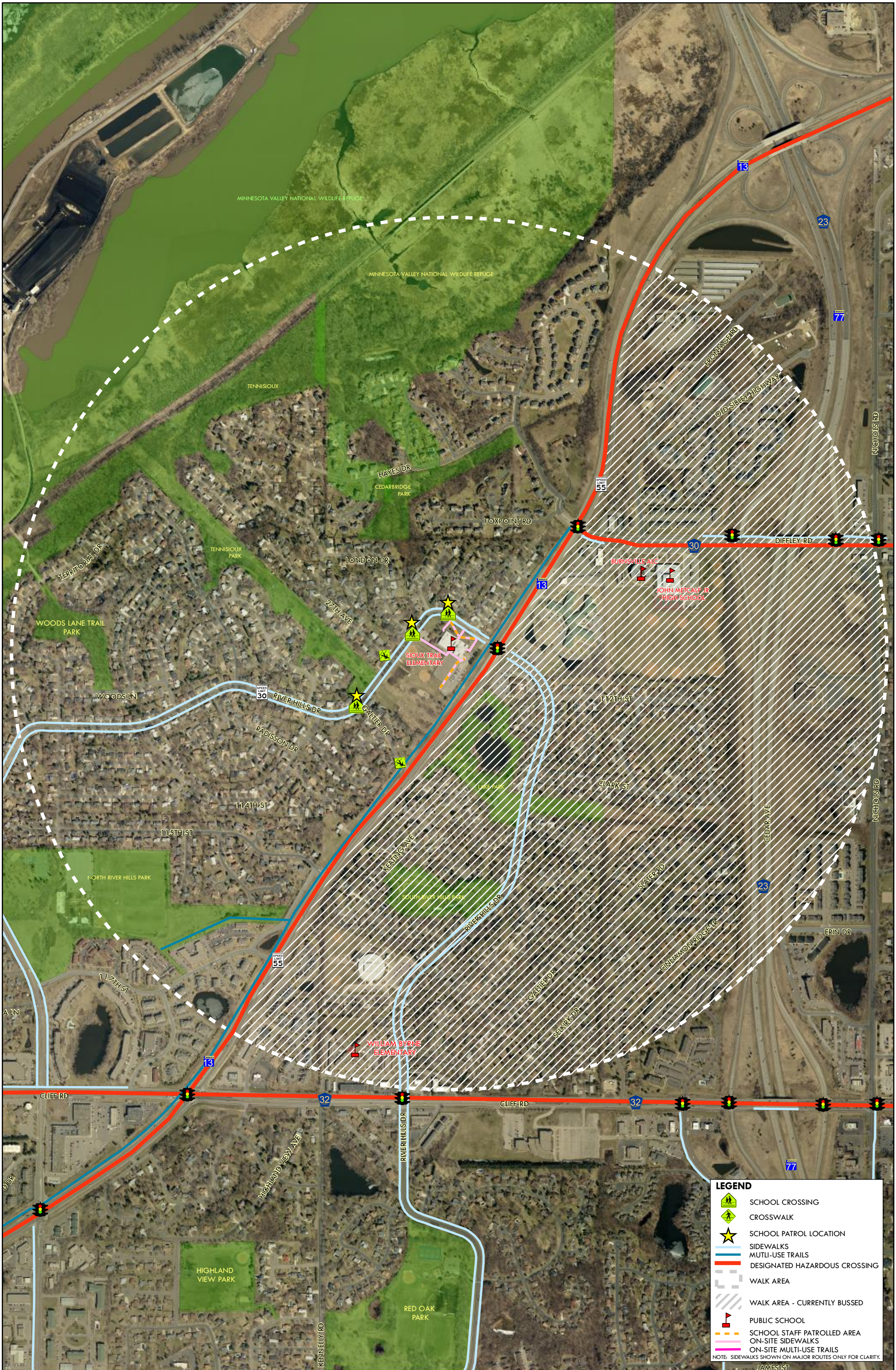
DAKOTA
31
COUNTY



Sioux Trail Elementary attendance area.

Source: <http://schools.ncompasstech.com/schools2/burnsville/viewer.asp>

The walk area for Sioux Trail Elementary is established as a one-mile radius by District 191 Transportation. However, approximately half the walk area is east of TH 77 (Cedar Avenue) or south of TH 13, which are designated as hazardous roadways by the district. Students that would have to cross either of these roadways are provided bus transportation, even if they live within the walk area. With the school located adjacent to TH 13, this means that students that live across the street are provided bus transportation across the highway. The walk area for Sioux Trail Elementary is shown on the map on page 4.



LEGEND

- SCHOOL CROSSING
- CROSSWALK
- SCHOOL PATROL LOCATION
- SIDEWALKS
- MULTI-USE TRAILS
- DESIGNATED HAZARDOUS CROSSING
- WALK AREA
- WALK AREA - CURRENTLY BUSSED
- PUBLIC SCHOOL
- SCHOOL STAFF PATROLLED AREA
- ON-SITE SIDEWALKS
- ON-SITE MULTI-USE TRAILS

NOTE: SIDEWALKS SHOWN ON MAJOR ROUTES ONLY FOR CLARITY.

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DAKOTA
31
COUNTY



Safe Routes to School Activities

Sioux Trail Elementary has not held any Walk/Bike to School events and does not have a specific Safe Routes to School program, but has an active school patrol of 8 students and approximately 150 students currently live in the walk area.

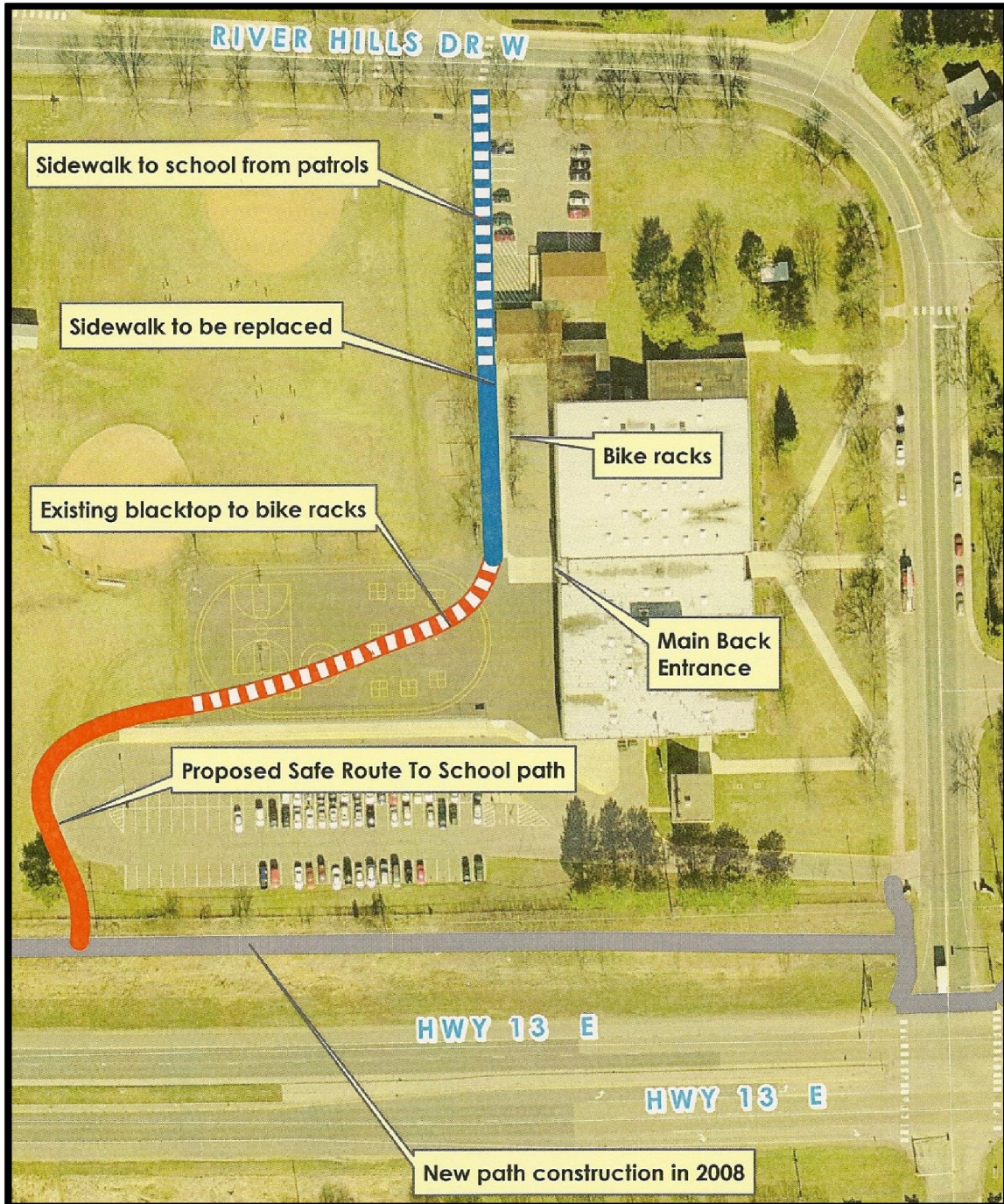
Sioux Trail, in coordination with the City of Burnsville, submitted applications to Mn/DOT in the fall of 2007 and fall of 2008 for federal Safe Routes to School funding for a number of infrastructure and non-infrastructure projects totaling approximately \$100,000:

- Replace 150 feet of sidewalk on the school site that has poor drainage and is adjacent to the bike parking area.
- Construct 300 feet of trail from the school site to the existing trail on TH 13 to fill an existing gap in the sidewalk/trail network.
- Install 8 new bike racks.
- Create walk/bike safety videos to teach students about walking and biking safety.
- Conduct bike operation safety training clinics to teach K-3 students safe bike operating procedures.
- Hold bike safety information clinics taught by Burnsville Police for students in K-3.
- Conduct a bike care/repair clinic to teach and demonstrate general care and repair of their bikes to students in grades 4-6.
- Provide bike helmets for students in grades K-3.
- Hold a bike day to celebrate the successful completion of all the safety clinics and seminars.

Neither of the grant applications was selected for funding, so the projects and needs identified in the applications have not been implemented.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



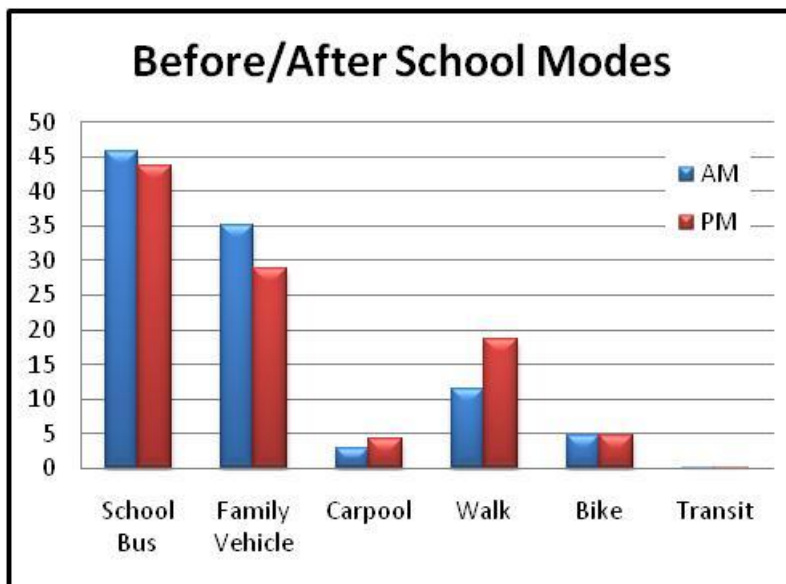
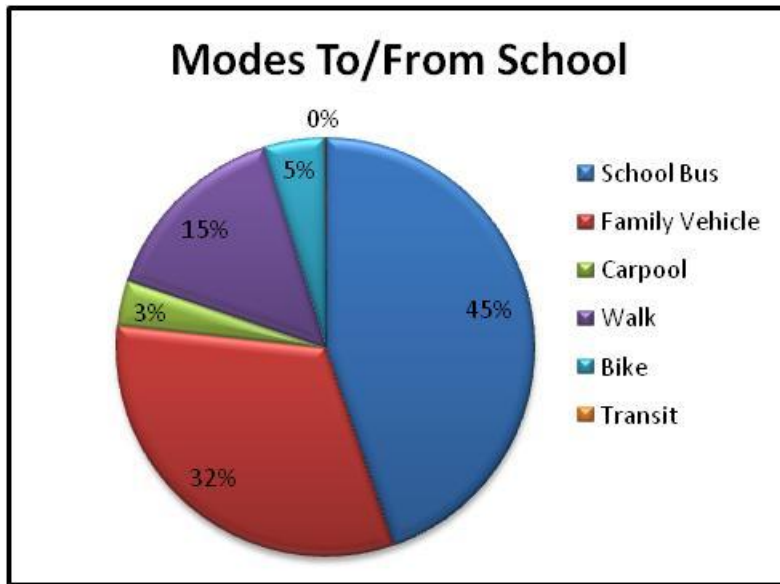
Improvement plan from the Sioux Trail application for Mn/DOT Safe Routes to School funding.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



In-classroom tallies of students' arrival and departure modes were conducted at Sioux Trail Elementary during April 2010. As shown in the chart below, an average of 15 percent of students currently walk to school and an average of 5 percent of students currently bike to school. The most predominant mode to and from school is school bus, however 32 percent of students are driven to school, resulting in an estimated 90 to 130 parent vehicles during pick-up and drop-off. The tallies also showed that significantly more students walked home from school in the afternoon, compared to the morning.

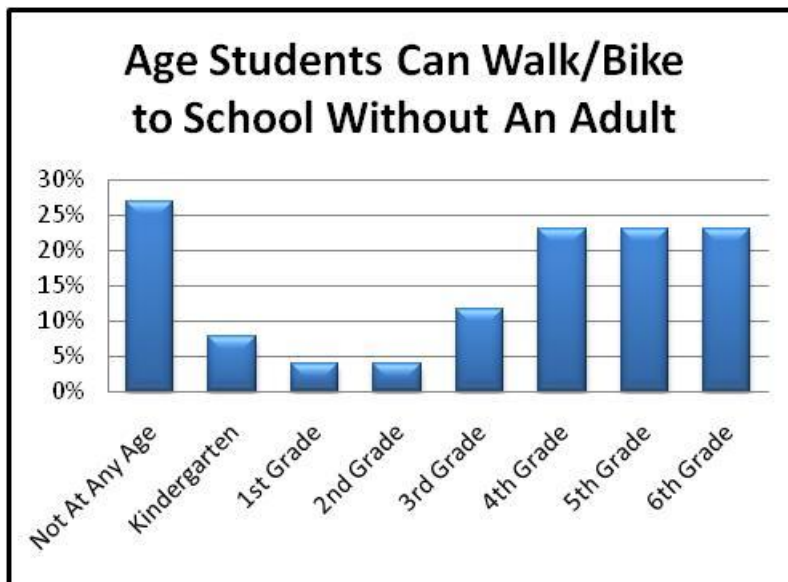
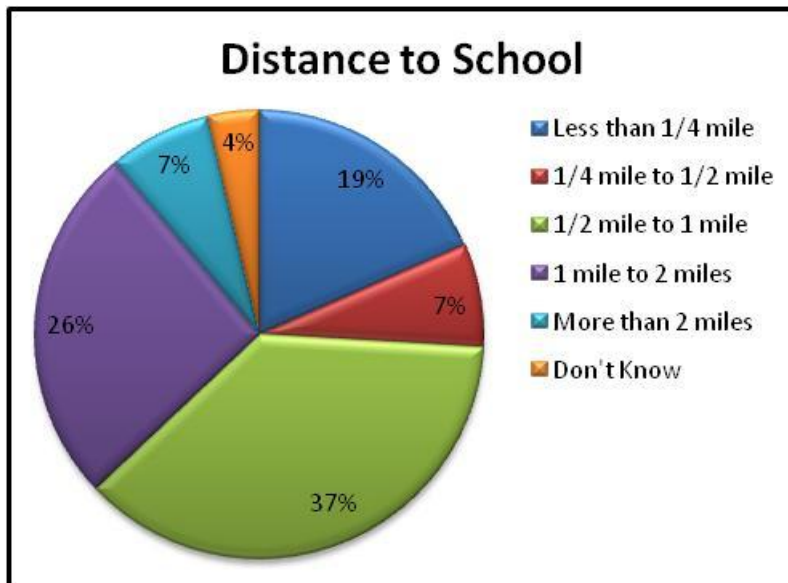


Dakota County Safe Routes to School

DAKOTA
31
COUNTY



A parent survey of concerns and attitudes related to walking and biking was also conducted in April 2010, with 28 responses. Distance and traffic safety were the two most common reasons for not walking or biking, and sidewalk/trail construction and lowering traffic speeds were the improvements that would be most likely to influence parents to starting letting their students walk or bike. The charts on the following pages show some of the other key results from the survey.

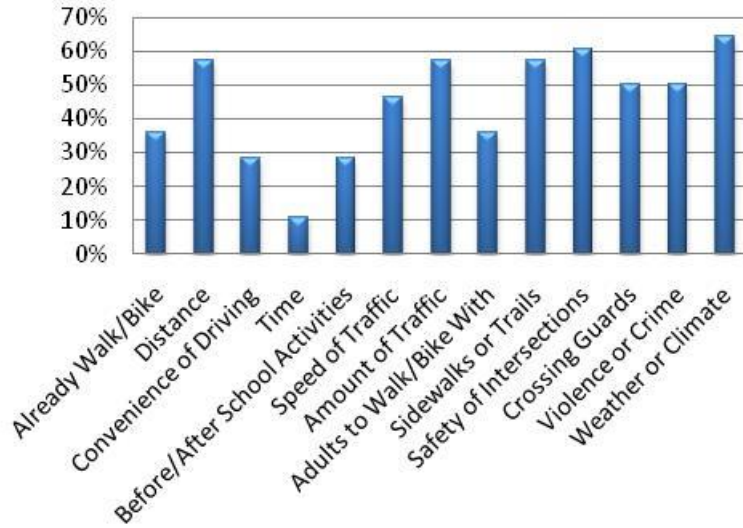


Dakota County Safe Routes to School

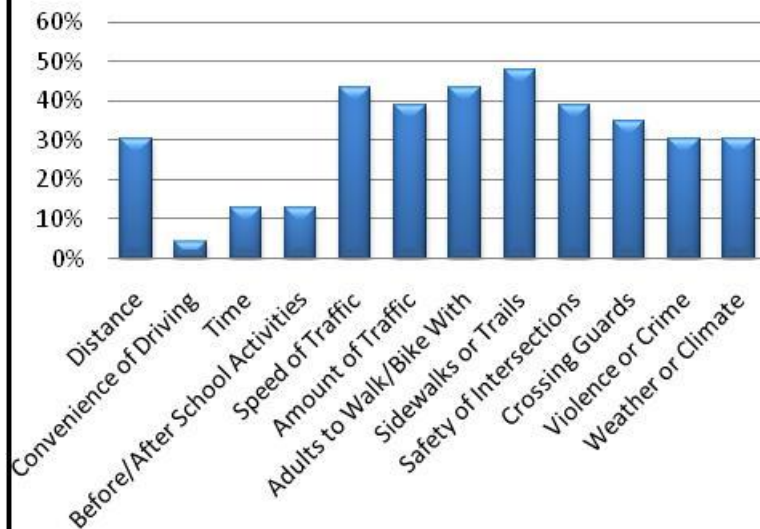
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31
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Factors Affecting Decision to Walk/Bike



Improvements That Would Increase Walking/Biking



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DAKOTA
31
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Infrastructure

The roadways surrounding the school generally have a well-connected system of sidewalks and trails. The trail on the west side of TH 13 was extended from 117th Street to Diffley Road in 2008, the segment of TH 13 adjacent to Sioux Trail Elementary. There is also sidewalk on both sides of River Hills Drive.



View of area for proposed trail connection from Sioux Trail Elementary to TH 13.

There are currently three designated school crossings around the school with 5th and 6th grade school patrols:

- River Hills Drive/Galtier Drive (2 student patrol)
- River Hills Drive/Pioneer Drive (2 student patrol + 1 adult)
- River Hills Drive/London Drive (4 student patrol)

The River Hills Drive/Pioneer Drive crossing typically has the greatest number of pedestrians, in part due to drop-off traffic occurring on Pioneer Drive.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



Existing school crossings on River Hills Drive at Pioneer Drive (top photo) and River Hills Drive at London Drive (bottom photo).

A review of the crash history for the past five years (2004-2008) showed there have been no crashes at any of the designated school crossing intersections and no pedestrian or bicycle crashes at the TH 13/River Hills Drive. Overall, there have been 15 vehicle crashes at the TH 13/River Hills Drive intersection, which results in a calculated average crash rate of 0.3 crashes per million entering vehicles compared to an expected rate of 0.7 crashes per million entering vehicles for similar intersections in the

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



Twin Cities metro area.¹ The most common crash types were rear-end crashes on TH 13 (47 percent) and right-angle crashes (20 percent).

Studies conducted on W River Hills Drive by the City of Burnsville in 2007-2008 showed that there are approximately 2,800 vehicles per day on River Hills Drive between TH 13 and Galtier Drive. Mn/DOT counts on TH 13 showed about 25,500 vehicles per day in the roadway segment adjacent to Sioux Trail.

In addition to the off-site infrastructure, Sioux Trail has five bike racks at the back of the school that are used by 10-20 students in the spring and fall. However, some of the racks are in poor condition and located such that it would be difficult to actually park and lock a bike.



Bike racks located at the back of the school building.

¹Source: Average crash rate for high volume, high speed signalized intersections in Mn/DOT Metro District, Minnesota Department of Transportation, 2004-2006.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



Site Evaluation

A site evaluation was completed at Sioux Trail Elementary on March 23, 2010 that included walking around the site and observing the dismissal process on a typical day. All vehicles enter and exit the Sioux Trail using the same driveway on River Hills Drive, which is very close to the TH 13/River Hills Drive intersection. The parking lot south of the school is designated for one-way counter-clockwise traffic and is used for staff, parent, and visitor parking. Vehicles frequently drive the wrong way in the parking lot, likely because the aisles are large enough for two-way traffic and the one-way signing is not very prominent.



South parking lot on the Sioux Trail site, just before afternoon dismissal.

The TH 13/River Hills Drive intersection becomes congested during both the morning arrival and afternoon dismissal, primarily due to the heavy traffic volumes on TH 13. This results in queues on River Hills Drive and in the Sioux Trail driveway because vehicles and buses are blocked from turning out onto River Hills Drive.

In the morning, buses drop off curbside in front of the school and parents drop off in the parking lot. Door 6, the school entrance nearest to the parking lot, is open during morning arrival and afternoon dismissal, but otherwise is locked during the school day. There is no sidewalk on the east side of the school that connects the parking lot to the main entrance of the school. In addition, the grades on the site would make it difficult to pave a sidewalk in this area.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



View of the afternoon bus loading area. The grass area in the forefront of the photo is the most likely area for a sidewalk connection from the parking lot to the front of the school.

In the afternoon the buses load in the parking lot because there is not enough curb space on River Hills Drive to accommodate all the buses. During afternoon dismissal, parents load along the curb space on River Hills Drive. However, many vehicles were observed parking in No Stopping zones and double parking. The volume of parked vehicles, pedestrians crossing between parked vehicles, vehicles parked too close to the crosswalks, the number of students getting in and out of vehicles and the number of vehicles pulling in and out all contribute to a safety issue, even though there have not been any vehicle/pedestrian collisions to date.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



Vehicles double parked on River Hills Drive waiting for Sioux Trail dismissal (top photo). Many pedestrian and vehicle conflicts occur as vehicles attempt to pull away from the curb while students are still getting into vehicles and buses are leaving the parking lot (bottom photo).

The curve on River Hills Drive just west of Pioneer Drive limits visibility of the intersection and the school crossing, and compliance with the all-way stop control at the River Hills Drive/Pioneer Drive intersection was also raised as a significant concern of Sioux Trail staff and parents since this is the busiest school crossing.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



Curve on River Hills Drive approaching the all-way stop intersection at Pioneer Drive.



The school crossing at River Hills Drive/Galtier Drive does not currently have a marked crosswalk.

One other issue raised during the site evaluation was the need for a designated fire lane on or in front of the school site. The City of Burnsville determined that the fire lane would be designated on River Hills Drive in front of the school for a distance of approximately 200 feet at the southeast end of the parking lane. Parking would continue to be allowed in the other half of the parking cut-out in front of the school.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



However, due to the designation of the fire lane, starting in the 2010-2011 school year all school bus loading and unloading (with the exception of special education buses) will occur on River Hills Drive and all parent pick-up/drop-off will occur in the parking lot. The buses were originally moved to the south parking lot when there were 8 buses at the school and all the buses could not load along the curb in front of the school. Currently, there are only 4 buses (excluding special education), which can be accommodated on River Hills Drive between the end of the fire lane and the end of the parking lane. The change in pick-up/drop-off operations will require adjustment and retraining of parents, but will also provide an opportunity to promote walking and biking as a safe and convenient alternative to driving to and from school.

Existing Issues and Challenges

In addition to the data collection and site evaluation completed as part of this project, a Safe Routes Working Group was established for Sioux Trail Elementary that included the school principal, teachers, and the City of Burnsville. The role of this group was to identify and discuss barriers to walking and biking to school as well as potential ways to overcome the barriers.

The existing challenges to walking and biking to Sioux Trail Elementary are summarized in the following bullets, as well as the map on the following page:

- Parking lot and entrance congestion due to parent pick-up and drop-off – buses have challenges entering or leaving the school at times since there is only one way in and one way out.
- Parking maneuvers and parking violations on River Hills Drive create many vehicle/pedestrian and vehicle/vehicle conflicts.
- The volume of traffic on the school site and the resulting congestion contributes to the perception that it is not safe to walk or bike.
- District budgets may increase walk radius in the future – opportunity for more walking and biking, but could also mean even more parents driving.
- There is no connection from the school site to the trail on TH 13. Students ride across the grass because this is the most convenient route to reach the school and the bike racks.
- The school's existing bike racks are in poor condition.
- Curve on River Hills Drive creates sight distance challenges to pedestrians at the Pioneer Drive school crossing.
- Vehicle roll through the all-way stop control at the River Hills Drive/Pioneer Drive intersection.

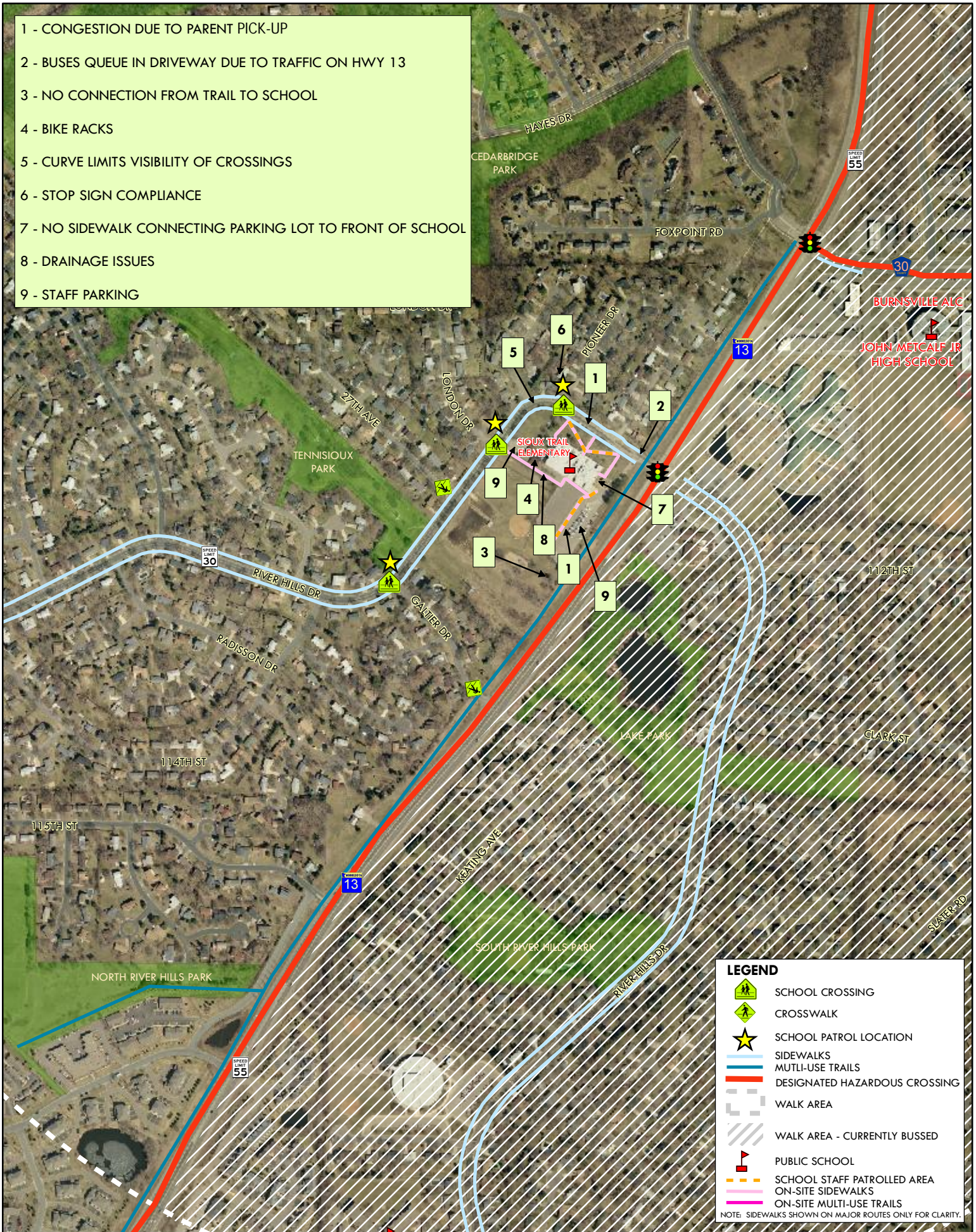
Dakota County Safe Routes to School

DAKOTA
31
COUNTY



- Poor drainage results in flooding of the sidewalk adjacent to the bike racks.
- Parents would be more willing to let students walk or bike if they knew they would be supervised.

- 1 - CONGESTION DUE TO PARENT PICK-UP
- 2 - BUSES QUEUE IN DRIVEWAY DUE TO TRAFFIC ON HWY 13
- 3 - NO CONNECTION FROM TRAIL TO SCHOOL
- 4 - BIKE RACKS
- 5 - CURVE LIMITS VISIBILITY OF CROSSINGS
- 6 - STOP SIGN COMPLIANCE
- 7 - NO SIDEWALK CONNECTING PARKING LOT TO FRONT OF SCHOOL
- 8 - DRAINAGE ISSUES
- 9 - STAFF PARKING



LEGEND

- SCHOOL CROSSING
- CROSSWALK
- SCHOOL PATROL LOCATION
- SIDEWALKS
- MULTI-USE TRAILS
- DESIGNATED HAZARDOUS CROSSING
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NOTE: SIDEWALKS SHOWN ON MAJOR ROUTES ONLY FOR CLARITY.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



Recommendations

Despite some of the current challenges to walking and biking to Sioux Trail Elementary, the school's location in the neighborhoods it draws students from, the existing sidewalk/trail infrastructure, and the commitment of school staff provide tremendous opportunities to significantly increase the numbers of students regularly walking and biking to school. The following recommendations have been developed specifically for Sioux Trail Elementary to address the identified challenges to walking and biking. The short-term recommendations are actions that could be implemented prior to or during the 2010-2011 school year, while the long-term recommendations may require policy changes, additional discussion and coordination, or significant funding sources. In addition to the recommendations, the group that should take the lead in implementing the recommendation has also been identified.

Short-Term Recommendations

The short-term recommendations included in this section primarily consist of low-cost improvements that can be implemented in the six months, although some are dependent on funding availability. The recommendations are generally prioritized in terms of actions that are easiest or most necessary to complete first. The infrastructure recommendations are also summarized on the map included at the end of this report.

1. Create information for parents that communicates the benefits of walking or biking to school, as well as the parking regulations and safety procedures during pick-up/drop-off. Implementation lead – Sioux Trail, with assistance from Dakota County Public Health.
2. Provide periodic enforcement of the all-way stop intersection at River Hills Drive/Pioneer Drive. Implementation lead – City of Burnsville.
3. Maintain the current school patrol program and locations. Provide the patrol students with appropriate weather gear so that the patrols can be outdoors in dark, cold or rainy weather. Implementation lead – Sioux Trail.²
4. Mark the crosswalk at the school crossing of River Hills Drive/Galtier Drive. Implementation lead – City of Burnsville.

² Sioux Trail has already taken steps to implement this recommendation using a \$1,000 Safe Routes mini-grant from Dakota County Public Health to purchase heavy duty reflective ponchos for the school patrol and mobile in-street school crossing signs.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



5. Enhance visibility of the school crossings on River Hills Drive using in-street crossing signs. Implementation lead – Sioux Trail.²



Example of an in-street sign at a school crossing.

6. Install new bike racks in prominent locations at the front and rear of the school. Implementation lead – Sioux Trail.³
7. Investigate the feasibility of a remote pick-up/drop-off site on River Hills Drive between London Drive and 27th Avenue to reduce the vehicle conflicts and congestion on the school site. This would require increased adult supervision between River Hills Drive and the rear entrance of the school and may require additional snow removal in the boulevard along River Hills Drive. Implementation lead – Sioux Trail.
8. Add additional arrow striping and one-way signing to the south parking lot to reinforce the one-way operations. Implementation lead – Sioux Trail/District 191.⁴

³ Sioux Trail has already taken steps to implement this recommendation by applying for a \$1,000 Safe Routes mini-grant from Dakota County Public Health for fall 2010 to purchase new bike racks and helmets for students.

⁴ Sioux Trail has submitted a request for parking lot restriping to School District 191 for summer 2010.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



9. Install arrow plaques (W17-6p) under the school crossing signs on River Hills Drive at London Drive and Pioneer Drive to reinforce the location of the crossing and according to the standard in the Minnesota Manual of Uniform Traffic Control Devices (MnMUTCD). Implementation lead – City of Burnsville.



Existing school crossing signing at River Hills Drive/London Drive intersection.



Example of school crossing sign with arrow plaque.

10. Enforce fire lane and corner clearance parking restrictions on River Hills Drive in front of the school. Implementation lead – City of Burnsville.
11. Establish a permanent Safe Routes committee at Sioux Trail to provide on-going support and organization for Safe Routes activities, including regular Walk to School days, adult crossing guard volunteers, and special events. Implementation lead – Sioux Trail.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



12. Start a weekly or monthly “Walk to School Day” with staff or parent volunteers along the major routes and at the school patrolled crossings on the designated walk and/or bike days. Implementation lead – Sioux Trail.
13. Organize a walking school bus⁵ or bike train for student to walk and bike together as a group to and from school. The best potential for this would be for students that live west or southwest of the school because there are no major roadways to cross. Implementation lead – Sioux Trail.

Long-Term Recommendations

The long-term recommendations included in this section primarily consist of higher cost improvements or actions that would require a significant policy change, either of which would be expected to take longer than six months to occur. These recommendations are generally prioritized in order of importance, however funding availability may mean that the highest priority recommendations are not the first to be implemented. The infrastructure recommendations are also summarized on the map included at the end of this report.

1. Construct a trail connection from the Sioux Trail site to the trail on TH 13. Implementation lead – Sioux Trail, with assistance from City of Burnsville.
2. Reconstruct sidewalk near the existing bike parking location to eliminate the drainage and flooding issues. Implementation lead – Sioux Trail.
3. Develop a Safe Routes website for Sioux Trail Elementary that provides walking/biking route information, remote pick-up/drop-off locations, as well as other information, such as a schedule for Walk/Bike to School days. Implementation lead – Sioux Trail.
4. Construct a sidewalk connection from the parking lot to the front of the school. Implementation lead – District 191.

⁵ A walking school bus is a group of children walking to school with one or more adults. It can be as informal as two families taking turns walking their children to school to as structured as a route with meeting points, a timetable and a regularly rotated schedule of trained volunteers.

Dakota County Safe Routes to School

DAKOTA
31
COUNTY



5. Designate a Safe Routes coordinator at the district level and each of the individual elementary and middle schools in the district. The district-level coordinator would share information and coordinate Safe Routes activities and best practices among all the District 191 schools. The school SRTS coordinator would be responsible for scheduling meetings of the SRTS committee, training adult volunteers, and working with parents and students to address issues or concerns related to walking and biking. Implementation lead – District 191.

Funding and Implementation

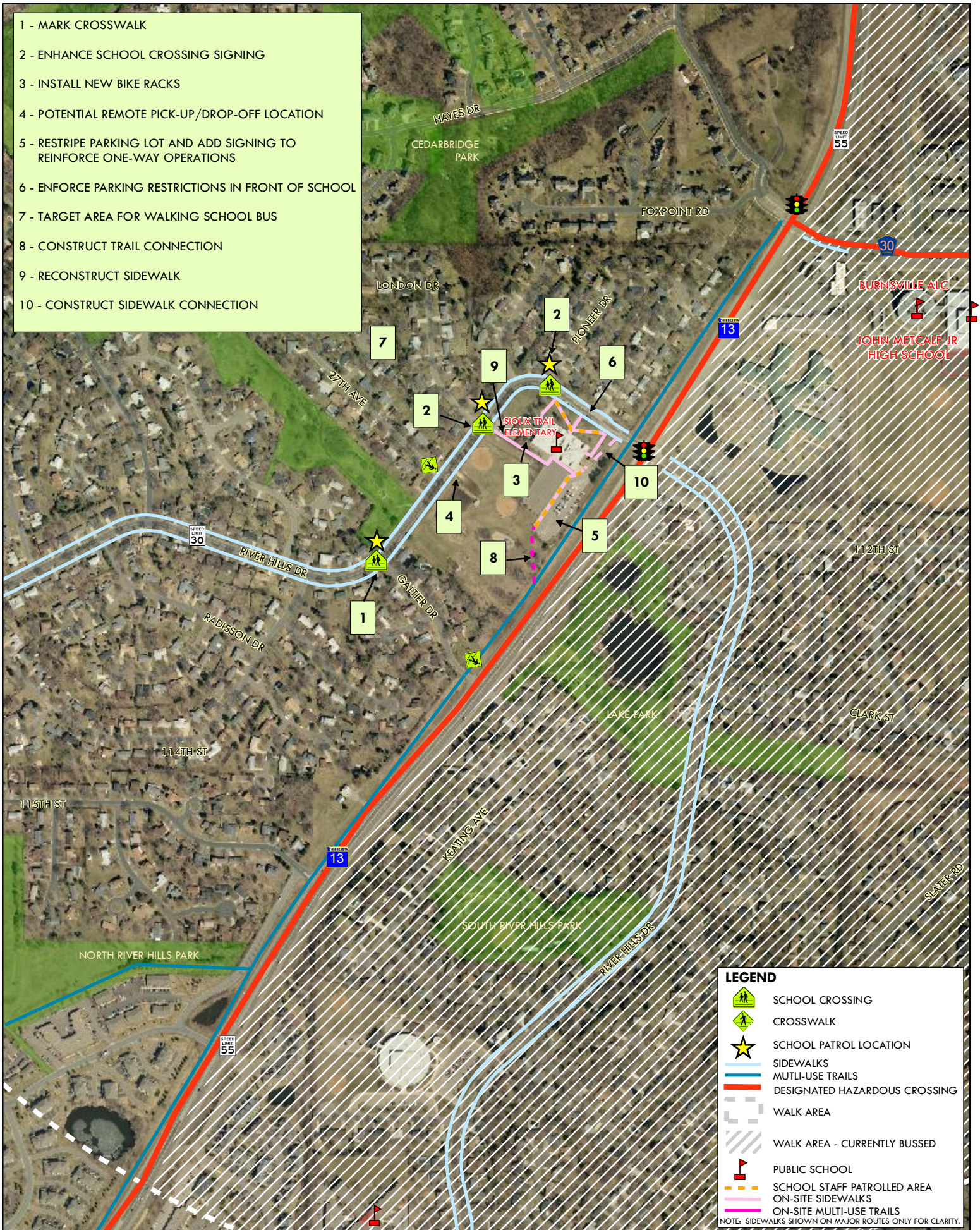
Funding for the various recommended projects may come from a variety of sources depending on the type of project and who is implementing it. Some potential funding opportunities that currently exist and may be used to fund these recommendations include, but are not limited to:

- Statewide Health Improvement Program funds, which are available through several programs administered by Dakota County Public Health:
 - Safe Routes to School mini-grants
 - Active Living grants, which are available to cities in Dakota County, but may be used to fund improvements on school sites
 - Assistance with preparation of infrastructure grant applications. Cities in Dakota County can submit infrastructure projects and the County's consultant will assist in identifying potential funding sources and preparing applications.
- Blue Cross Blue Shield of Minnesota
- Federal Transportation Enhancement (TE) funds through the Metropolitan Council
- Federal Safe Routes to School funds through the Minnesota Department of Transportation⁶

No one of the E's of Safe Routes to School will by itself increase walking and biking, which emphasizes the need for cooperation among school, city, county and other agencies to implement change.

⁶ The federal Safe Routes to School program was funded through fiscal year 2009. Future funding will be dependent on passage of the Federal Surface Transportation Reauthorization Bill, which is currently being discussed in the United States Congress.

- 1 - MARK CROSSWALK
- 2 - ENHANCE SCHOOL CROSSING SIGNING
- 3 - INSTALL NEW BIKE RACKS
- 4 - POTENTIAL REMOTE PICK-UP/DROP-OFF LOCATION
- 5 - RESTRIPE PARKING LOT AND ADD SIGNING TO REINFORCE ONE-WAY OPERATIONS
- 6 - ENFORCE PARKING RESTRICTIONS IN FRONT OF SCHOOL
- 7 - TARGET AREA FOR WALKING SCHOOL BUS
- 8 - CONSTRUCT TRAIL CONNECTION
- 9 - RECONSTRUCT SIDEWALK
- 10 - CONSTRUCT SIDEWALK CONNECTION



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