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Memorandum

To: Village of Downers Grove, Community High School District 99
From: Sam Schwartz Consulting
Date: January 21, 2020
Re: High School Pedestrian Safety Study

EXECUTIVE SUMMARY

Sam Schwartz Consulting, LLC was retained by the Village of Downers Grove (Village) and Community High School District 99 (District) to conduct a safety study at Downers Grove North and Downers Grove South High Schools aimed at identifying and evaluating various alternatives and combinations of improvements to pedestrian and traffic safety. Initial enhancements were identified immediately and installed to coincide with the start of school in August 2019, including speed limit modifications, speed feedback signage, digital message boards, and a safety information campaign.

Goals and objectives were established to steer the direction of the project overall and the criteria by which potential recommendations were evaluated. The project was fueled by community input and steered by a Task Force made up of Village and District staff. The District hosted the first of two safety forums in September 2019 which was open to Downers Grove students, families, staff, and community members. An interactive online map was also available during that time and allowed respondents to comment on existing safety concerns surrounding the high schools. Comments from the event and the map were recorded, reviewed and grouped geographically with a key takeaway identified for each location. Best practice multimodal street design and traffic engineering analysis were used in the development of alternatives and recommendations, which were presented to the community for feedback at the second safety forum held in November 2019, as well as online. Input and refinement of the alternatives was followed by selection of preferred recommendations by the Task Force, as presented in the table.

GOALS

1. Improve pedestrian safety in the areas surrounding DGN and DGS campuses,
2. Engage with students, parents, residents and concerned stakeholders to understand specific pedestrian and traffic safety issues, and
3. Provide a platform for exchanging information about infrastructure between the Village, District 99, and the community.

DGN RECOMMENDATIONS

Main Street: Sherman Street to Lincoln Street

- Conversion of Main Street from four travel lanes to three lanes (a single travel lane in each direction and a center turn lane) would provide safety benefits to vehicles and pedestrians
- Enhanced street lighting, including at the pedestrian scale, would improve nighttime sight distance
- Pedestrian refuge islands at Sherman Street, Grant Street and Lincoln Street crosswalks would enhance uncontrolled crossing locations
- School zone speed limit with speed feedback signage would encourage safer travel speeds

Main Street: At Grant Street

- Three-lane conversion would allow for a curb extension on the west side of the intersection which shortens the crossing distance for pedestrians
- A left-turn lane and pedestrian refuge island at Grant Street would organize traffic at the intersection
- Painting the intersection would calm traffic and emphasize the location as a pedestrian crossing
- High-capacity covered bike parking and bus shelters would introduce a vertical presence at the intersection and help emphasize a strong sense of place where pedestrians are prioritized

Main Street: Prairie Street to Downtown

- Three-lane conversion would allow for separate left-turn lanes at the traffic signals in this transition area north of downtown
- Traffic signal phasing and equipment modifications would be needed to implement the lane conversion

Highland Avenue: Grant Street to Lincoln Street

- Curb extensions and chicanes would encourage low speeds and discourage non-local traffic

Saratoga Avenue: Ogden Avenue to Grant Street

- Sidewalks on both sides of Saratoga Avenue, Sherman Street, and Grant Street would provide a more complete pedestrian network
- Raising the intersection at Sherman Street and Price Street would slow traffic and bring attention to the crosswalk
- Additional marked crosswalks and associated signage would provide crossing locations for new sidewalk connections

Ogden Avenue: Main Street to Saratoga Avenue (IDOT)

- A Leading Pedestrian Interval (LPI) at the Saratoga Avenue traffic signal would improve pedestrian visibility
- Sidewalk connections on Ogden Avenue would improve pedestrian access to traffic signals
- No Turn On Red (NTOR) restrictions at the Main Street/Ogden Avenue traffic signal would decrease occurrence of vehicle and pedestrian conflicts

***Recommendations will require collaboration with IDOT*

DGS RECOMMENDATIONS

Main Street: Norfolk Street to Oxford Street (Du Page County)

- Working with DuPage County to reduce the posted speed limit and enforce it with speed feedback would help to slow high travel speeds
- Working with DuPage County to study the installation of a traffic signal and relocation of crosswalk markings to the Oxford Street intersection would create gaps in the Main Street traffic stream for pedestrians to cross

63rd Street: Dunham Road to Springside Avenue (DuPage County)

- Traffic signal will be installed by DuPage County on 63rd Street at Springside Avenue by 2021
- Working with DuPage County to reduce the posted speed limit and enforce it with speed feedback would help to slow high travel speeds
- Fencing and streetscape enhancements along the south side of 63rd Street would further help to calm traffic and channelize pedestrians to cross at signalized locations
- New school driveway on 63rd Street would better distribute vehicular traffic and relieve traffic demands on Dunham Road and on Norfolk Street
- Curb extensions, modified corner radius, and LPI at the 63rd Street/Dunham Road intersection would reduce crossing distances, slow turning traffic, and improve pedestrian visibility
- Sidewalk connections to the Christian Worship Center Church parking lot would help channelize pedestrians to cross at the signalized intersection

Dunham Road: 63rd Street to Norfolk Street

- New drop-off location is proposed by the District on campus west of Dunham Road and would increase on-site vehicle storage
- Eliminating redundant school driveways would improve sidewalk continuity
- Reduction of lanes and curb extensions at the Dunham Road/Norfolk Street intersection would decrease pedestrian crossing distances and improve driver compliance as overall circulation changes around the school

COMPLETED/IN-PROGRESS SAFETY ENHANCEMENTS

- Safety Education Campaign at both schools
- Main Street speed limit reduced to 25 mph from Ogden Avenue to south of DGN
- School Zone 20 mph established in front of DGN on Main Street
- Temporary Digital Message Boards
- Speed Feedback Signs
- Traffic signal and crosswalk at 63rd Street and Springside Avenue approved for installation

BACKGROUND

Sam Schwartz Consulting LLC, (Sam Schwartz) was retained by the Village of Downers Grove (Village) and Community High School District 99 (District) to conduct a pedestrian and traffic safety study at Downers Grove North (DGN) and Downers Grove South (DGS) High Schools, including identifying and evaluating various alternatives and combinations of improvements.

The purpose of this memorandum is to present the recommendations, as well as a summary of the process and methodology that led to final recommendations. The recommendations were shaped by an alternatives analysis which considered traffic and pedestrian patterns, community input, and the study's goal and objectives. Supplemental information, including presentations and other memoranda, are included in the Appendix. The memorandum is organized as followed:

- Goals & Objectives
- Task Force & Community Engagement
- Best Practices
- Initial Installation
- Alternatives Analysis
- Recommendations

GOALS & OBJECTIVES

Primary goals were established to steer the direction of the project and the criteria by which potential recommendations were evaluated:

1. Improve pedestrian safety in the areas surrounding DGN and DGS campuses.
2. Engage with students, parents, residents and concerned stakeholders to understand specific pedestrian and traffic safety issues.
3. Provide a platform for exchanging information about infrastructure between the Village, District 99, and the community.

Several objectives were also developed to provide safe pedestrian crossing locations for students, slow vehicular traffic speeds, and maximize the predictability and orderliness of traffic and pedestrian movements.

TASK FORCE & COMMUNITY ENGAGEMENT

SCHOOL BOARD & VILLAGE TASK FORCE

The project Task Force was made up of Village and District staff. The Task Force provided oversight and direction for key milestones throughout the project and formed consensus on critical decisions to advance the project to the next stage. Additionally, the Task Force organized, publicized, and staffed community Safety Forums.

DUPAGE COUNTY COLLABORATION

DuPage County has jurisdiction over some of the roadway segments of interest in this study including 63rd Street, Main Street in the vicinity of Norfolk and Oxford Streets, and Main Street north of Ogden Avenue. The Village, the District, and Sam Schwartz met with officials from the DuPage County Division of Transportation to discuss issues, opportunities, and community input along these roadways and at intersections, and the Village will continue to coordinate with the County for approvals as improvements are designed.

SAFETY FORUMS

Sam Schwartz, along with the District and Village, conducted two safety forums open to Downers Grove students, families, staff, and community members. The first forum was held on September 5th, 2019, and was held at two locations: DGN and DGS. The forums covered an overview of the initial steps taken to improve safety, potential opportunities at each school, and collected feedback through a series of activities. The District created a video about the initial traffic safety changes surrounding the high schools and next steps. Following the presentation, attendees participated in a series of activities. Following the safety forum, all activities were replicated with the DGS and DGN students during school hours.

The second safety forum was held November 14th, 2019 at DGN. Community feedback from the interactive map along with corridor recommendations were presented. The forum provided activities for attendees to add comments on corridor recommendations. The presentation was posted online and available for feedback.

See the Appendix for forum presentations and activities.

FIGURE 1. SAFETY FORUM 09/05/19 - COMMUNITY IN ACTION



Images provided by Village of Downers Grove

ONLINE INTERACTIVE MAP

Sam Schwartz developed an interactive map using Wikimapping which was available through the District and Village websites. The interactive map allowed respondents to comment on an opportunity or existing barrier surrounding the high schools. Respondents were able to agree/disagree with other comments. A total of 463 comments were entered, with many congregating around specific locations.

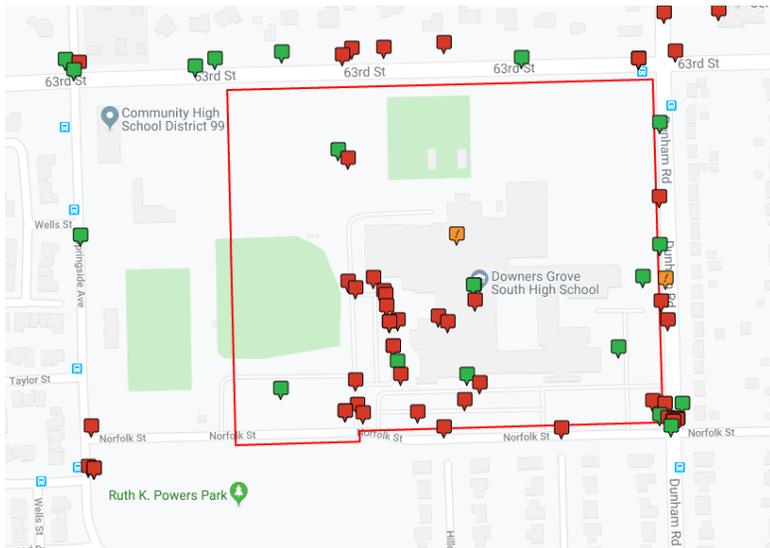


FIGURE 2. DGN COMMENTS

295 comments in the vicinity of DGN were entered. Many comments centered around the intersection of Main Street and Grant Street and the DGN parking lot east of the main entrance.

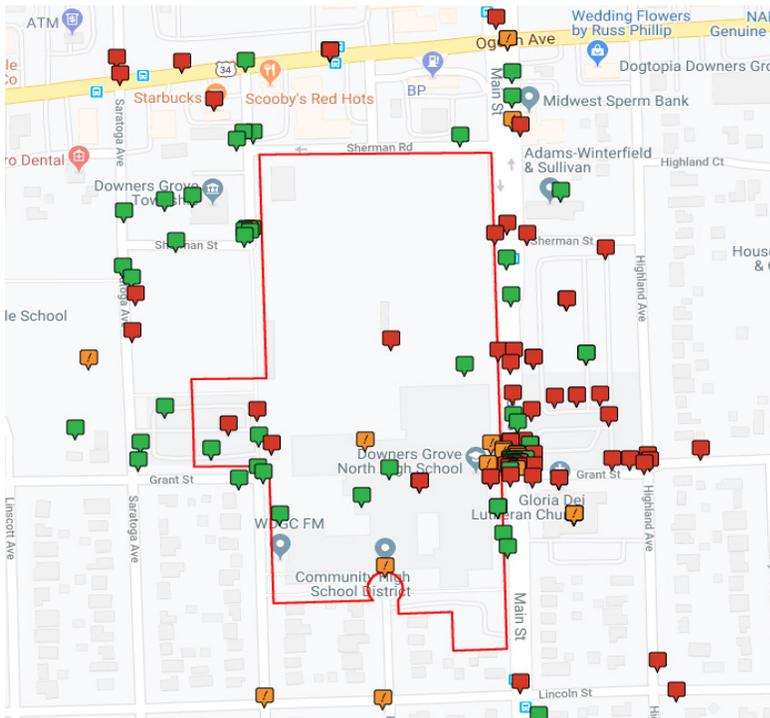


FIGURE 3. DGS COMMENTS

168 comments were entered in the vicinity of DGS. Several of the comments pertained to the DGS parking lot, Main Street and Norfolk Street, and 63rd Street and Springside Avenue.

Screenshots of Downers Grove HS Safety Study interactive map on Wikimapping

INITIAL SAFETY IMPROVEMENTS

Upon beginning the study, Sam Schwartz led the Task Force through a discussion of enhancements that could be implemented immediately, before the start of the school year. Several strategies were identified at each school, in addition to a traffic signal which had previously been identified to improve crossings at 63rd Street and Springside Avenue at DGS.

IMMEDIATE DGN CHANGES:

- Main Street speed limit reduced to 25 mph from Ogden Avenue to south of DGN
- School Zone 20 mph established in front of DGN on Main Street
- Safety Education Campaign
- Digital Message Boards
- Speed Feedback Signs

IMMEDIATE DGS CHANGES:

- Traffic signal and crosswalk at 63rd Street and Springside Avenue approved for installation
- Safety Education Campaign
- Digital Message Boards
- Speed Feedback Signs

FIGURES 4 & 5. DIGITAL MESSAGE BOARD AND SPEED FEEDBACK



Images provided by Village of Downers Grove

BEST PRACTICES

Streets play an omnipresent role in our daily lives. Not only do students use streets to get to school, we all use them to commute to work, to access healthcare and other critical destinations, and as spaces to interact with our neighbors and community. At their most basic level, streets need to be passable for everyone — people walking, biking, driving, and accessing transit. The following Best Practices provides descriptions on the many street design tools that were used in the development of final alternatives and recommendations.

THREE LANE CONVERSION

A four-to-three lane conversion reduces space allocated to motor vehicles on a street by eliminating a travel lane. Benefits include: a reduction in crashes, fewer lanes for people walking to cross, simplifies left turns, fewer conflicts due to lane switching, and provides space for bus stops, curb extensions, or other uses.

FIGURE 6.



CURB EXTENSION

A curb extension, or bump-out, is an area of sidewalk that is widened into the street right-of-way to reduce crossing distances, slow turning vehicles, and improve pedestrian visibility.

FIGURE 7.



PAINTED INTERSECTION

A painted intersection brings attention to the intersection while encouraging slow traffic and community identity. It also offers an opportunity for community place-making.

FIGURE 8.



RAISED INTERSECTION

Raised intersections create a safe, slow-speed crossing. They reinforce slow speeds and encourage motorists to yield to pedestrians at the crosswalk.

FIGURE 9.



PAINTED MEDIAN/TURN LANE

A painted median separates opposing travel lanes. Painted medians can be intermixed with left-turn lanes. During a three lane conversion, painted medians or turn lanes can be used when reducing the number of lanes.

FIGURE 10.



PEDESTRIAN REFUGE ISLAND

A refuge island is a segment of roadway median that is used as a refuge for pedestrians to cross the road in two phases.

FIGURE 11.



MID-BLOCK CROSSWALK

Mid-block crossings are often installed in areas with heavy pedestrian traffic to provide more frequent crossing opportunities.

FIGURE 12.



CROSSWALK

Crosswalks are used to clearly identify where pedestrians should cross the road. Crosswalks are differentiated from other areas of the roadway by a change in the surface to designate the pedestrian right-of-way.

FIGURE 13.



SIDEWALK

Sidewalks should be installed to provide a complete pedestrian network. Sidewalks provide safe and accessible pedestrian circulation throughout the town. Proper sidewalk widths vary depending on the roadway type, usage, location, and land use, among other factors.

FIGURE 14.



CHICANE

Chicanes are modifications made to the curb line and lanes intended to slow vehicular traffic. They are useful tools for deterring speeding and cut-through traffic, particularly on local residential streets.

FIGURE 15.



SCHOOL ZONE & SPEED LIMIT

School speed limit signs alert people driving that they are entering a school zone and they need to slow down for school children. In Illinois, the school zone speed limit is 20 mph on school days when children are present.

FIGURE 16.



SIGNAL TIMING

Signal timing such as leading pedestrian intervals (LPI) and protected turning phases are used to give pedestrians priority at intersections and temporarily separate pedestrian and vehicles at crossings. Pedestrian crossing speeds should also be considered when retiming traffic signals. Leading pedestrian intervals give pedestrians a 3 to 7 second head start to enter the intersection before vehicles.

FIGURE 17.



NO TURN ON RED RESTRICTIONS

No Turn on Red restrictions reduce the opportunity for conflict between people walking and driving. Restrictions may be illuminated when pedestrians are present.

FIGURE 18.



SIGNALIZED INTERSECTION

A signalized intersection will indicate motor vehicles to stop and allow pedestrians to cross Main Street. This will need to be based on an engineering study.

FIGURE 19.



SPEED FEEDBACK

Speed Feedback Signs (SFS) can be an effective method for reducing speeds at a specific location. However, SFS have limited effectiveness at reducing speeds downstream from the sign.

FIGURE 20.



STREETSCAPE

Streetscape elements may include planters, bicycle racks, landscaping, street lighting, paving, or decorative fencing. Decorative fencing along a sidewalk may help guide pedestrians and give a sense of place.

FIGURE 21.



IMPROVED STREET LIGHTING

Lighting is a key element of the visual environment that allows pedestrians to move about safely and feel more secure. Well-lit sidewalks and roadways allow drivers to see pedestrians entering the roadway and allow pedestrians to avoid tripping hazards or other sidewalk elements.

FIGURE 22.



HIGH CAPACITY BIKE PARKING

High capacity bike parking provides a large number of spaces for people to park bicycles. A covered area provides some protection from the weather.

FIGURE 23.



BUS SHELTER

Transit shelters are located in the streets' furniture zone and provide a protected place for people to sit and wait for the bus.

FIGURE 24.



ALTERNATIVES ANALYSIS

COMMUNITY FEEDBACK

Prior to the study, the District and Village collected comments and suggestions from the school community about traffic safety conditions and improvements surrounding DGN and DGS. The compiled comments were categorized and presented in the first two safety forums. Attendees indicated their preferred safety enhancements. ‘Painted Intersection’ was the top voted idea. The below table ranks the ideas (with 1 as the most popular) based on attendee and student feedback.

The interactive map was available over two months and allowed people to anonymously comment on locations at and surrounding Downers Grove High Schools. After the interactive map was closed for public comment, responses were categorized by topics and general locations, later to be organized into corridors. Main Street and Grant Street was the most commented location (see Table 3). The most frequent comments related to dangerous crosswalks and speeding.

TABLE 2. COMMUNITY AND TASK-FORCE PROPOSED STREET DESIGN TOOLS

1. Painted Intersection	7. Raised Intersection	13. Curb Bumpouts
2. Speed Hump	8. Painted Crosswalks	14. Right Turn on Red Restrictions
3. Crossing Guards and/or Police Enforcement	9. Bike Parking Canopy	15. Banners
4. Leading Pedestrian Interval	10. In-Street Pedestrian Sign	16. Red Light/ Speed Camera
5. Concrete Planters	11. Rapid Flashing Beacon	17. Flexible Delineators
6. Street Lighting	12. Road Diet	

FIGURE 25. DGN SAFETY FORUM COMPLETED IDEA BOARD

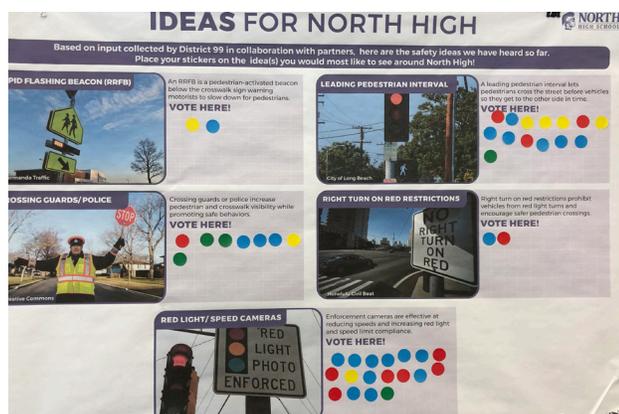


TABLE 3. INTERACTIVE MAP LOCATION FINDINGS

DGN INTERACTIVE MAP COMMENTS	
Top Comments	Takeaway
Main Street Corridor <ol style="list-style-type: none"> 1. Dangerous pedestrian crossing 2. Turning at Main Street and Sherman Street 3. Speeding on Main Street 	Calm traffic and emphasize pedestrian crossing location
Highland Avenue Corridor <ol style="list-style-type: none"> 1. Suggested stop signs 2. Dangerous crosswalks 3. Speeding 	Discourage dangerous driving and walking behaviors
Saratoga Avenue Corridor <ol style="list-style-type: none"> 1. Crosswalk visibility 2. Missing sidewalk 3. Relocate parking 	Better define and maintain pedestrian space
Ogden Avenue Corridor <ol style="list-style-type: none"> 1. Dangerous pedestrian crossing 2. Missing sidewalk 3. Crosswalk visibility 	Improve signalized crossings and reduce vehicle turning conflicts
DGS INTERACTIVE MAP COMMENTS	
Top Comments	Takeaway
63rd Street Corridor <ol style="list-style-type: none"> 1. Speeding 2. Springside traffic signal 3. School zone and speed limit 	Calm traffic and direct pedestrians to signalized crossings
63rd Street at Dunham Road <ol style="list-style-type: none"> 1. Jaywalking 2. Distracted students 3. Turning (left onto Dunham) 	Channelize pedestrians to signalized crossing and reduce turning conflicts
Norfolk Street & DGS Circulation <ol style="list-style-type: none"> 1. Pick-up/drop-off 2. Jaywalking 3. Suggested traffic signal (Norfolk) 	Disperse vehicular circulation, increase pick-up storage, and give pedestrians priority
Main Street & Norfolk Street <ol style="list-style-type: none"> 1. Suggested traffic signal 2. Dangerous pedestrian crossing 3. Speeding 	Speed and crossing distance on Main require that pedestrians should cross at signalized location

ALTERNATIVES OPTIONS

For many of the study area locations, improvements could be determined following industry guidance on Complete Street design. However, Main Street—both in front of DGN and further south at Norfolk Street—required an analysis of alternative improvement options. A summary is provided below; a detailed technical analysis is included in the appendix.

MAIN STREET CORRIDOR.

Main Street from Ogden Avenue to Franklin Street connects DGN and the Village's downtown. The street is under Village jurisdiction in this segment. In order to improve the pedestrian safety of the Main Street corridor, several traffic calming strategies were considered including but not limited to:

- 4 to 3 Lane Conversion
- Grade Separated Crossing at Grant Street
- Raised and/or Painted Intersection at Grant Street

4 to 3 Lane Conversion. A capacity analysis was performed to analyze the corridor's intersections for the weekday peak hours using Synchro 10 capacity analysis software. In comparing the results of the analysis, it was determined a conversion of Main Street (which carries just under 15,000 vehicles per day) to three travel lanes, including one lane in each direction plus a left-turn lane, will not be detrimental to traffic flow on Main Street and may even improve intersection operations where the provision of a new left-turn lane eliminates the interruption of turning traffic in the through lanes. Moreover, 3-lane conversions have significant safety benefits to vehicles and pedestrians. The other alternatives were evaluated and determined to be less beneficial than the conversion or a second layer to further enhance it.

Grade Separated Crossing. A grade-separated pedestrian crossing is only effective at providing a safe crossing for those who use it. A pedestrian bridge in this constrained location would require a ramp up at least 400 feet away from the direct intersection crossing only to ramp down another 400 feet, making the path highly inconvenient and compliance less likely. A separated crossing also does not adequately address the safety at any other crossing location along the corridor where students and community members are crossing.

Raised and/or Painted Intersection. Raised intersections calm traffic by creating a vertical element to the roadway which reinforces slow speeds and encourage motorists to yield to pedestrians in the crosswalk. A painted intersection brings attention to the intersection but without the vertical. The intersection of Main Street with Grant Street is an appropriate location for both of these types of treatments, which are not mutually exclusive.

MAIN STREET AT NORFOLK STREET.

This section of Main Street falls under DuPage County jurisdiction. The road has a 40 MPH speed limit and currently has an uncontrolled crosswalk at Norfolk Street that many community members highlighted as a precarious pedestrian crossing. Many students cross Main Street at this location to travel to/from DGS and Kingsley Elementary School. Several strategies to improve pedestrian safety were considered including:

- Pedestrian Hybrid Beacon
- 4 to 3-Lane Conversion
- Traffic Signal at Oxford Street

Pedestrian Hybrid Beacon. Main Street carries approximately 13,400 vehicles per day based on counts available from the Illinois Department of Transportation. The uncontrolled pedestrian crosswalk on Main Street at Norfolk is approximately 50 feet long. According to the Manual of Uniform Traffic Control Devices, or MUTCD, if at least 20 pedestrians per hour cross under these conditions, a Pedestrian Hybrid Beacon may be appropriate. However, traffic counts provided by DuPage County show well under 20 pedestrians cross there currently. The signal would also need to be located at least 100 feet from an intersection which would place it immediately adjacent to residential driveways which does not make it a preferred intervention.

4 to 3 Lane Conversion. With an Average Daily Traffic (ADT) under 15,000 vehicles, Main Street may be a strong candidate for a conversion from four travel lanes to three with little impact to intersection capacity, similar to the proposed configuration of Main Street from Sherman Street to Franklin Street. This option was not deemed preferable at this time since the extent of improvements need to be corridor-wide and those impacts were not studied. A conversion should be considered in the future in coordination with the County and in combination with a roadway resurfacing project.

Traffic Signal at Oxford Street. Per DuPage County standard, the installation of a traditional traffic signal requires the satisfaction of one or more warrants from the MUTCD which generally sets traffic and pedestrian volume thresholds as criteria for signalization. Traffic and pedestrian volumes on Norfolk Street do not meet traffic signal warrants at Main Street. Volumes on Oxford Street at Main Street were not readily available so a warrant analysis was not conducted. However, observations indicate that traffic volumes at Oxford Street are higher and would, thus, be more likely to meet volume warrants than traffic on Norfolk Street. Signalization of Main Street at Oxford is preferred from the County's perspective for that reason, as well as the higher benefit it would afford the overall street network.

RECOMMENDATIONS

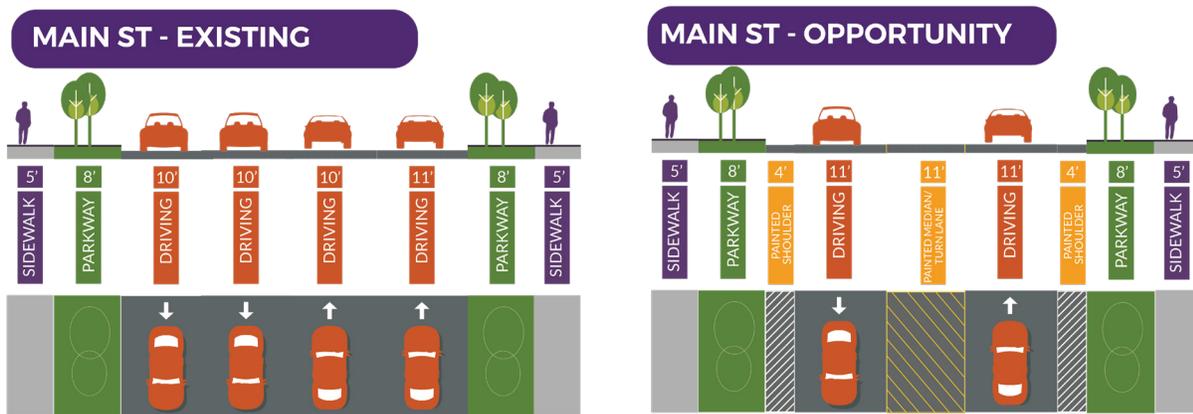
After careful evaluation and discussion, the following recommendations were made for the corridors surrounding DGN and DGS. The recommendations apply the Best Practices street design tools and are tailored to each corridor. For each school, the corridors are organized in order of priority.

NORTH HIGH

MAIN STREET: SHERMAN STREET TO FRANKLIN STREET.

Main Street has four travel lanes until Franklin Street where it becomes two travel lanes with parallel parking on either side. The conversion will include one travel lane in each direction with a left-turn lane between the travel lanes. In fact, the turn lane improves intersection operations in some cases as it eliminates the interruption of turning traffic in the through lane. Intersections will continue to operate at the same Levels of Service or better under the proposed configuration. A conversion should happen in conjunction with road resurfacing. The technical analysis results suggest a conversion of Main Street to three travel lanes from Sherman Street to Franklin Street will not be detrimental to traffic flow.

FIGURE 26. 4 TO 3 LANE CONVERSION



RECOMMENDATIONS

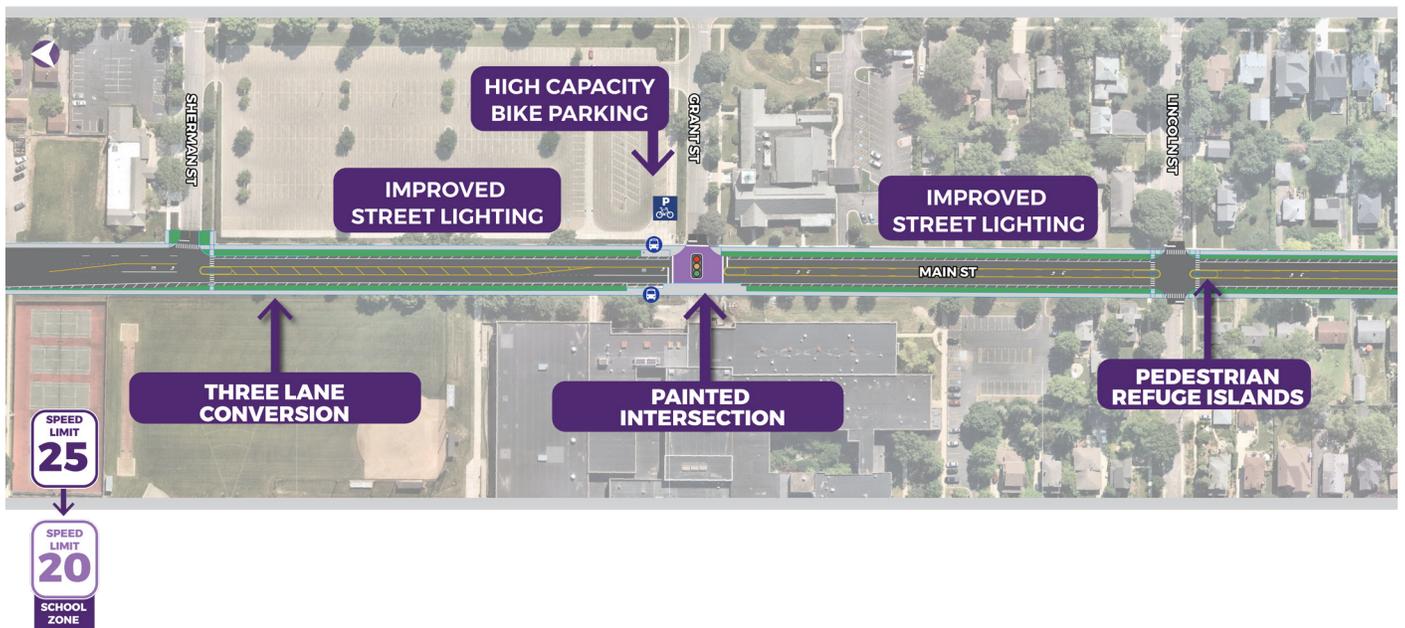
- Three-lane conversion with a single travel lane in each direction and a center turn lane

Main Street is an important thoroughfare connecting DGN to the Downtown. In order to capture the various needs of Main Street, the following recommendations are organized into the following categories from north to south:

- Main Street - Sherman Street to Lincoln Street
- Main Street - At Grant Street
- Main Street - Prairie Avenue to Downtown

MAIN STREET: SHERMAN STREET TO LINCOLN STREET. Main Street between Sherman Street and Lincoln Street is currently four lanes with a recent 25 mph school zone speed limit and signal modification. The four to three lane conversion will help calm traffic and foster a more pedestrian-friendly street.

FIGURE 27. MAIN STREET RECOMMENDATIONS: SHERMAN STREET TO LINCOLN STREET

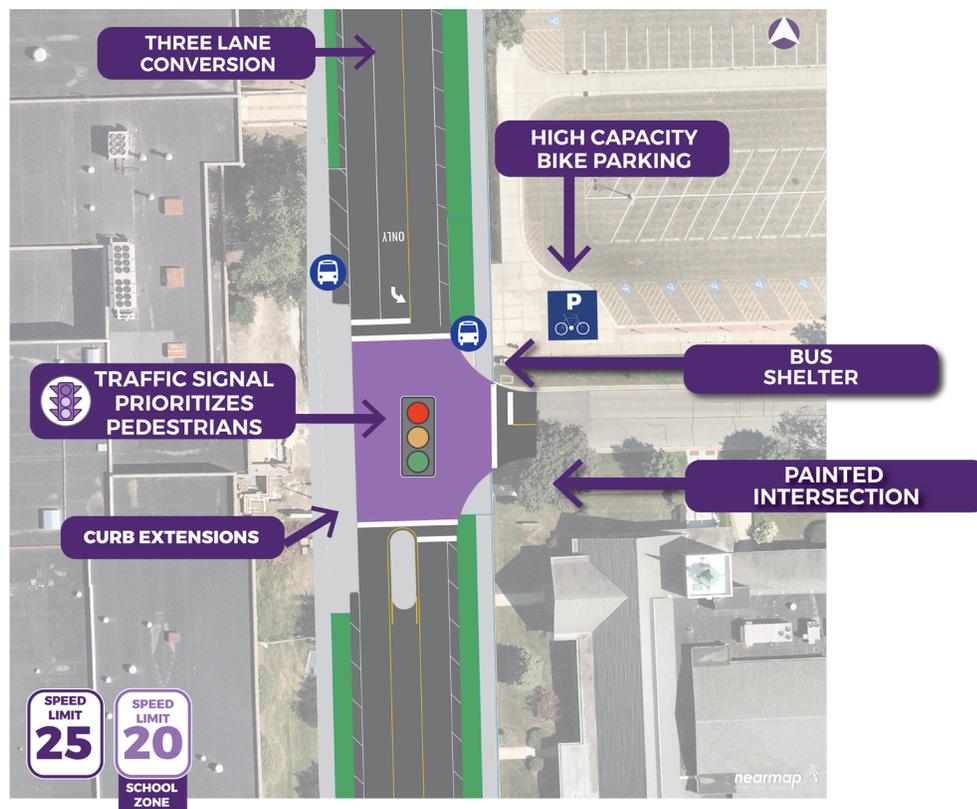


RECOMMENDATIONS

- Three-lane conversion with a single travel lane in each direction and a center turn lane
- Improved street lighting including at the pedestrian scale
- Pedestrian refuge island at Sherman Street, Grant Street and Lincoln Street crosswalks
- School zone speed limit with speed feedback signage

MAIN STREET: AT GRANT STREET. Pedestrian movements at the signalized intersection of Main Street with Grant Street will benefit from slower speeds along Main Street, a shorter crossing distance, and a strong sense of place where pedestrians are prioritized.

FIGURE 28. MAIN STREET AT GRANT STREET RECOMMENDATIONS

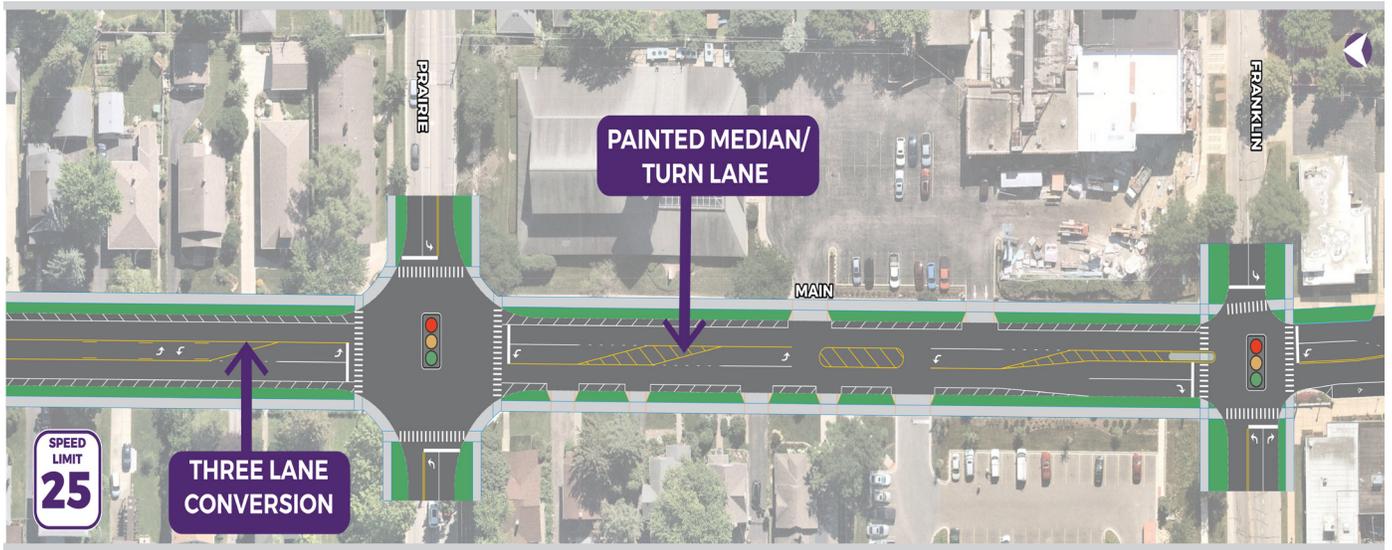


RECOMMENDATIONS

- Three-lane conversion allows for a left-turn lane at Grant Street
- Curb extension on west side of intersection
- High capacity covered bike parking
- Bus shelters
- Painted intersection

MAIN STREET: PRAIRIE STREET TO DOWNTOWN. The four-to-three conversion on Main Street will continue from Sherman Street south to the downtown. This exhibit shows how the conversion will connect to the existing three-lane portion of Main Street in the downtown.

FIGURE 29. MAIN STREET FROM PRAIRIE STREET TO DOWNTOWN RECOMMENDATIONS

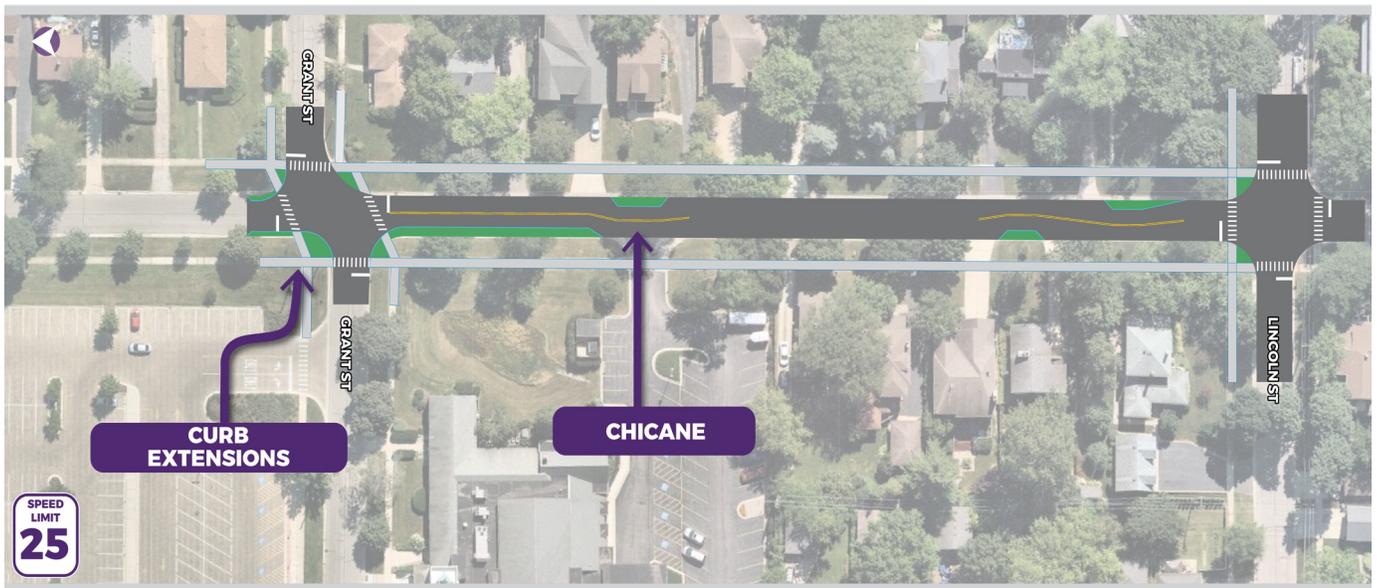


RECOMMENDATIONS

- Three-lane conversion allows for a left-turn lane at Prairie Street and Franklin Street signalized intersections, and at access drives
- Signal phasing and equipment modifications

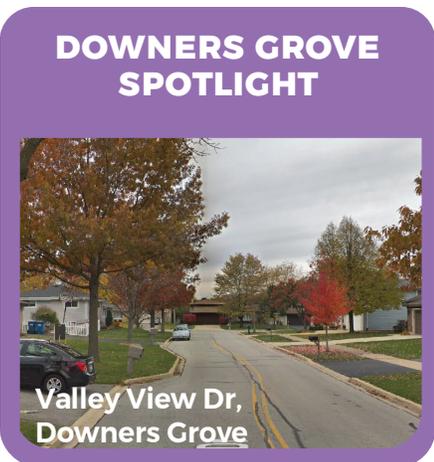
HIGHLAND AVENUE. Highland Avenue sits one block east of Main Street and is used by people traveling from DGN’s parking lot. Traffic calming features are recommended to prevent speeding along the corridor and discourage cut-through traffic from Main Street.

FIGURE 30. HIGHLAND AVENUE RECOMMENDATIONS



- RECOMMENDATIONS**
- Chicane/curb line modifications
 - Curb extensions

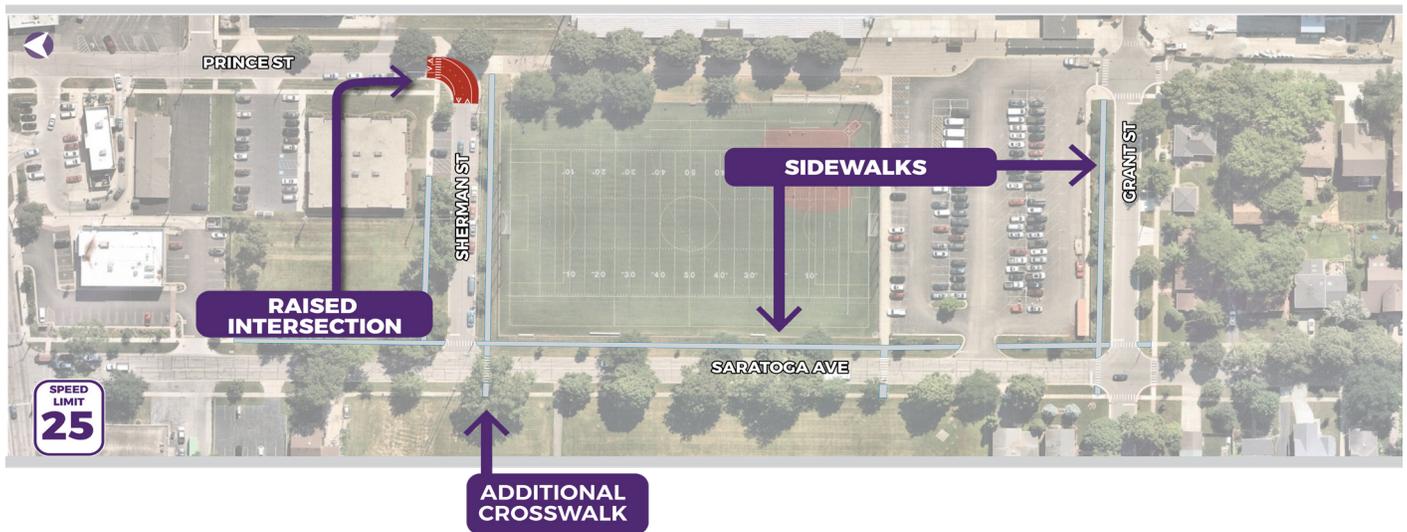
FIGURE 31. VALLEY VIEW DR



Traffic calming improvements, including narrowed lanes and curb extensions have been applied in Downers Grove!

SARATOGA AVENUE. Saratoga Avenue, just west of DGN, is used to access the school's west parking lots and for a lot of pick-up and drop-off activity. To create a more pedestrian friendly environment, it is recommended to add sidewalks along Saratoga Avenue and Grant Street. In addition, it is recommended to create a raised intersection at Prince Street and Sherman Street to help bring attention to the crosswalk. The east side of Saratoga Avenue and the north side of Grant Street do not currently have sidewalks. Sidewalks should be installed to provide a complete pedestrian network.

FIGURE 32. SARATOGA AVENUE RECOMMENDATIONS



RECOMMENDATIONS

- Raised intersection at Prince Street bend
- Sidewalk connections along Saratoga Avenue, Sherman Street and Grant Street
- Additional crosswalk markings and signage

OGDEN AVENUE. Ogden Avenue is a State road north of DGN. Recommendations look to improve signalized crossings and reduce vehicle turning conflicts. Recommendations will require communication and collaboration with the Illinois Department of Transportation as well as property owners.

FIGURE 33. OGDEN AVENUE RECOMMENDATIONS



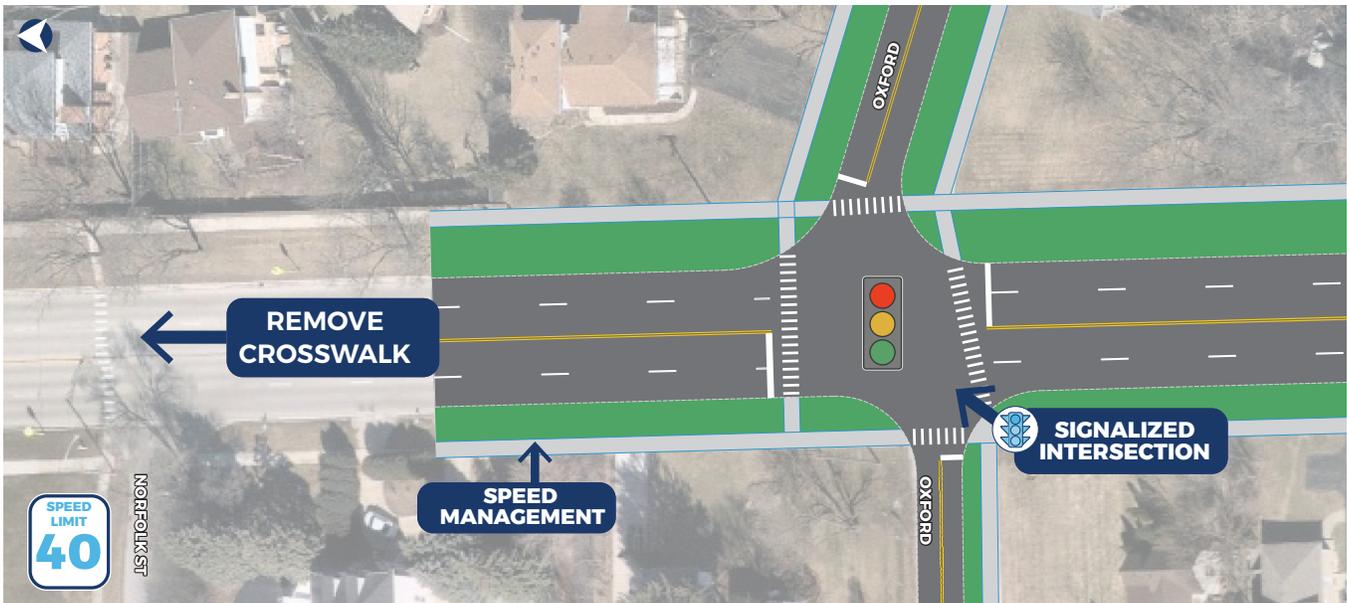
RECOMMENDATIONS

- Leading Pedestrian Interval (LPI): Work with IDOT to study LPI for pedestrians crossing Ogden Avenue
- Sidewalk connection
- No Turn On Red (NTOR) restrictions

SOUTH HIGH

MAIN STREET: NORFOLK STREET TO OXFORD STREET. The existing crosswalk on Main Street at Norfolk Street is not a safe uncontrolled crossing. To improve safety, it is recommended to relocate the crossing to Oxford Street, where a full traffic signal is also recommended. A traffic signal installation will need to be based on an engineering study.

FIGURE 34. MAIN STREET FROM NORFOLK STREET TO OXFORD STREET RECOMMENDATIONS



RECOMMENDATIONS

- Work with DuPage County to reduce posted speed and install speed feedback signs
- Crosswalk markings at Oxford Street
- Remove uncontrolled crosswalk markings at Norfolk Street
- Work with DuPage County to study and install a traffic signal at the intersection of Main Street with Oxford Street

63RD STREET. Bordering the high school to the north, 63rd Street is a County arterial with high travel speeds. Students park in the church lot at 63rd Street and Dunham Road. Traffic should be slowed with streetscape elements and speed feedback signage. Pedestrians should be encouraged to cross at signalized locations.

FIGURE 35. 63RD STREET RECOMMENDATIONS

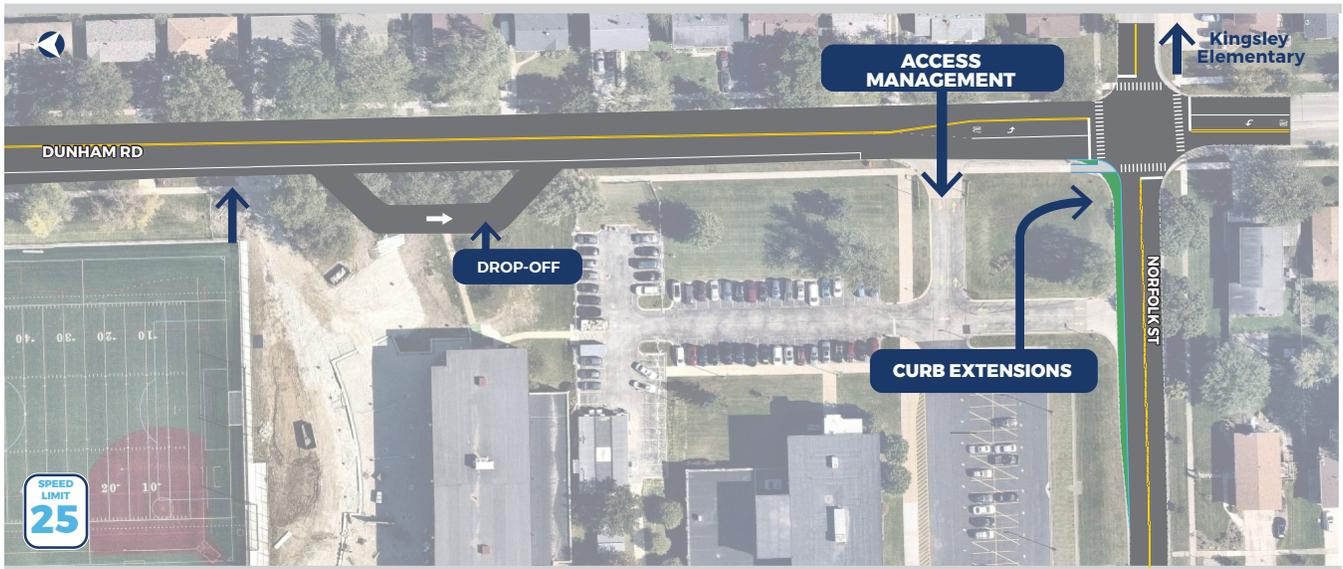


RECOMMENDATIONS

- A traffic signal will be installed at Springside by 2021
- Work with DuPage County to reduce posted speed and install speed feedback signs
- A new driveway on 63rd Street is intended to relieve traffic on Dunham Road and Norfolk Street
- Fencing and streetscape along the south side of 63rd Street
- Curb extensions on Dunham Road
- Leading Pedestrian Interval (LPI): Work with DuPage County to study LPI for pedestrians crossing 63rd Street
- Sidewalk connection to Christian Worship Center Church
- District should consider relocating the existing off-site student parking at the church as campus planning allows

DUNHAM ROAD. Dunham Road extends along the east side of DGS. Drop-off/pick-up activity is disorganized and in conflict with pedestrian crossings. New access locations are proposed to relieve traffic congestion on Dunham Road and Norfolk Street.

FIGURE 36. DUNHAM ROAD RECOMMENDATIONS



RECOMMENDATIONS

- Study a reduction of lanes/curb extensions at the Dunham Road/Norfolk Street intersection as traffic circulation changes
- A new drop-off location is proposed by the District
- Eliminate redundant driveway

The following tables outline a planning-level cost estimate and construction timeline for each corridor. The estimated construction cost and timeline for each corridor are provided using the following categories. A detailed estimate can be found in the Appendix.

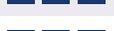
TABLE 4. ESTIMATED COST CATEGORIES

\$	Under \$50,000
\$\$	\$50,000 - \$150,000
\$\$\$	\$150,000 - \$500,00
\$\$\$\$	Over \$500,000

TABLE 5. ESTIMATED TIMELINE CATEGORIES

	Less than 1 Year
	1 - 2 Years
	Over 2 Years

TABLE 6. ESTIMATED CONSTRUCTION TIMELINE & COSTS

Corridor	Cost	Timeline	Description
Main St - Ogden to Franklin	\$\$\$\$		Resurfacing, Refuge Islands, Street Lighting, Painted Intersection, Signal Timing, Bump Out, Bike Parking, & Bus Stop Improvements
Highland	\$		Curb Extensions & Pavement Markings
Saratoga	\$\$		Raised Intersections, Crosswalks, & Sidewalks
Ogden	\$		Signal Timing, Signage, Crosswalks, & Sidewalks
Main St - Norfolk to Oxford	\$\$\$		Signalized Intersection, Resurfacing, Restriping, ADA Curb Ramps
63rd	\$\$\$\$		Signal Timing, Curb Extensions, Fencing, & Streetscape
Dunham	\$\$		Drop-Off Lane & Curb Extensions

Appendix A:

Technical Analysis

Main Street – 3-lane conversion

Traffic Volumes

Intersection turning movement and pedestrian counts were conducted in May 2019 in order to identify existing traffic volumes along Main Street. The intersections that were counted for this study are listed below:

- Main Street at Sherman Street
- Main Street at Grant Street
- Main Street at Lincoln Street

Based on the resulting count data, the observed peak hours on Main Street took place from 7:15 to 8:15AM during the weekday morning and from 4:30 to 5:30PM. Additionally, the hour from 3:15 to 4:15PM was evaluated to coincide with the afternoon dismissal peak period.

Intersection Operations

Capacity analysis was performed to analyze the study intersections noted above for the weekday morning, afternoon and evening peak hours using Synchro 10 capacity analysis software. This was completed under the existing 4-lane configuration, as well as under the proposed 3-lane condition.

The operational effectiveness of transportation facilities is measured in terms of Level of Service (LOS). LOS ranges from LOS A to LOS F, with LOS A being the best level of operation for an intersection and LOS F being the worst. LOS A represent free-flow conditions where motorists experience a high level of comfort and convenience. LOS E represents saturated or at-capacity conditions, and LOS F represents oversaturated conditions.

LOS at a signalized intersection is defined in terms of average control delay (measured in seconds per vehicle), which is the portion of total delay experienced by a motorist that is attributable to the traffic signal. LOS A describes operations with minimal delays (up to 10 seconds per vehicle), while LOS F describes operations with delays in excess of 80 seconds per vehicle. At intersections with long cycle lengths, the quantity of red time that is allocated to an approach or movement may near or exceed that 80-second threshold, increasing the likelihood of poor LOS. The LOS criteria for signalized intersections, as defined in the Highway Capacity Manual, Sixth Edition (HCM), are provided in **Table 1**.

Table 1. LOS Criteria for Signalized Intersections

Level of Service (LOS)	Average Delay	Volume-to-Capacity (v/c) Ratio
A	≤ 10.0 seconds	< 1.0
B	> 10.0 and ≤ 20.0 seconds	< 1.0
C	> 20.0 and ≤ 35.0 seconds	< 1.0
D	> 35.0 and ≤ 55.0 seconds	< 1.0
E	> 55.0 and ≤ 80.0 seconds	< 1.0
F	> 80.0 seconds	≥ 1.0

Transportation Research Board. [Highway Capacity Manual, Sixth Edition](#).

For unsignalized intersections, total delay is defined as the total elapsed time from the moment a vehicle stops at the back of the queue until the vehicle departs from the stop bar on the stop-sign controlled approach. This includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The LOS thresholds for unsignalized intersections, which differ from those for signalized intersections, are summarized in **Table 2**.

Table 2. LOS Criteria for Unsignalized Intersections

Level of Service (LOS)	Average Delay	Volume-to-Capacity (v/c) Ratio
A	≤ 10.0 seconds	< 1.0
B	> 10.0 and ≤ 15.0 seconds	< 1.0
C	> 15.0 and ≤ 25.0 seconds	< 1.0
D	> 25.0 and ≤ 35.0 seconds	< 1.0
E	> 35.0 and ≤ 50.0 seconds	< 1.0
F	> 50.0 seconds	≥ 1.0

Transportation Research Board. [Highway Capacity Manual, Sixth Edition](#).

Capacity analysis was performed to analyze the study intersections for the weekday peak hours using Synchro 10 capacity analysis software. Synchro's HCM 6th Edition report was used to evaluate intersection capacity under existing and future conditions, as summarized in **Table 3**.

In comparing the results of the analysis, a conversion of Main Street to three travel lanes, including one lane in each direction plus a left-turn lane, will not be detrimental to traffic flow on Main Street and may even improve some intersection operations where the provision of a new left-turn lane eliminates the interruption of turning traffic in the through lanes. Moreover, 3-lane conversions have significant safety benefits to vehicles and pedestrians:

- Improves pedestrian crossing safety as fewer lanes for pedestrians to cross, and traffic is located farther from the sidewalk
- Regulates speeds and slows traffic
- Center turn lane decreases left-turn and rear-end crashes
- Center turn lane provides easier access to residential driveways
- Availability of center turn lane helps to improve response times for emergency vehicles

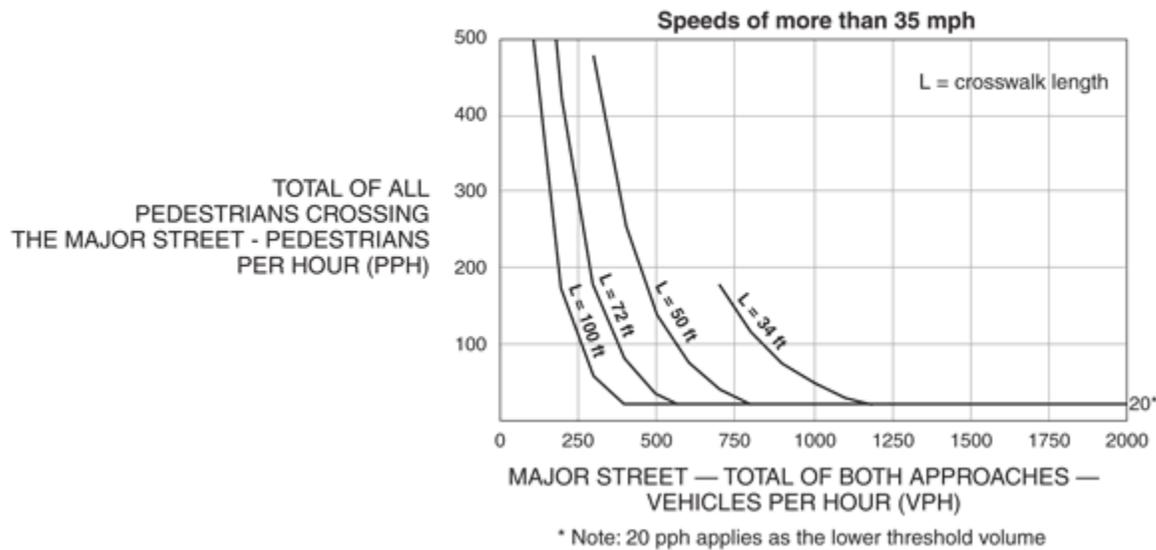
Intersection	Existing Condition						Proposed Conversion					
	Weekday AM Peak		School Dismissal Peak		Weekday PM Peak		Weekday AM Peak		School Dismissal Peak		Weekday PM Peak	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)
Westbound	B	14.0	B	11.7	B	11.6	C	24.3	B	13.3	B	14.0
Southbound Left Turn	B	11.8	A	8.9	A	8.7	B	11.8	A	8.9	A	8.7

Main & Norfolk

Pedestrian Hybrid Beacon

Main Street carries approximately 13,400 vehicles per day based on counts available from the Illinois Department of Transportation. The uncontrolled pedestrian crosswalk on Main Street at Norfolk is approximately 50 feet long. According to the Manual of Uniform Traffic Control

Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways



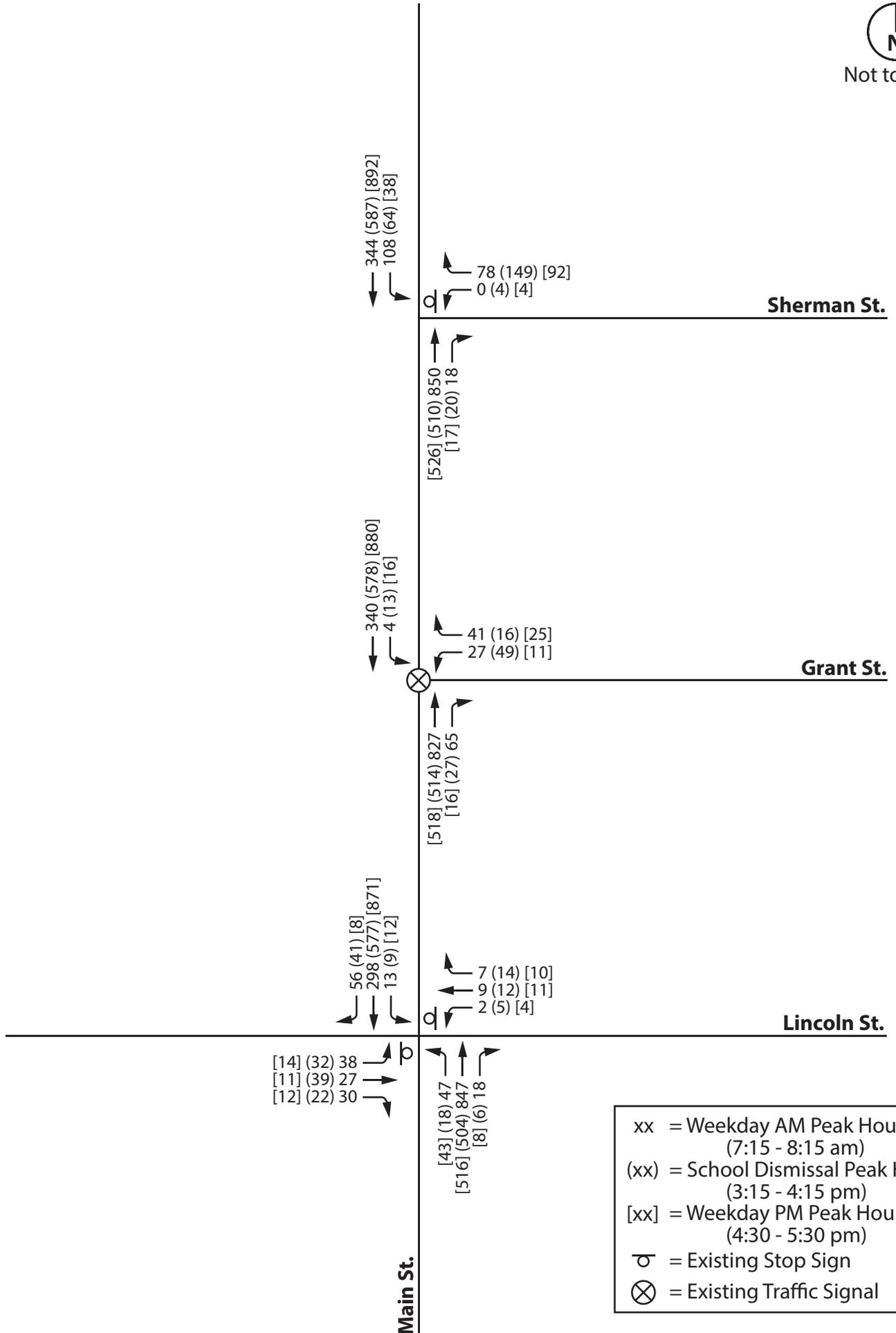
Devices, or MUTCD, if at least 20 pedestrians cross under these conditions, a Pedestrian Hybrid Beacon may be appropriate. However, traffic counts provided by DuPage County show well under 20 pedestrians cross there currently. The signal would also need to be located at least 100 feet from an intersection which would place it immediately adjacent to residential driveways which does not make it a preferred intervention.

4 to 3-lane Conversion

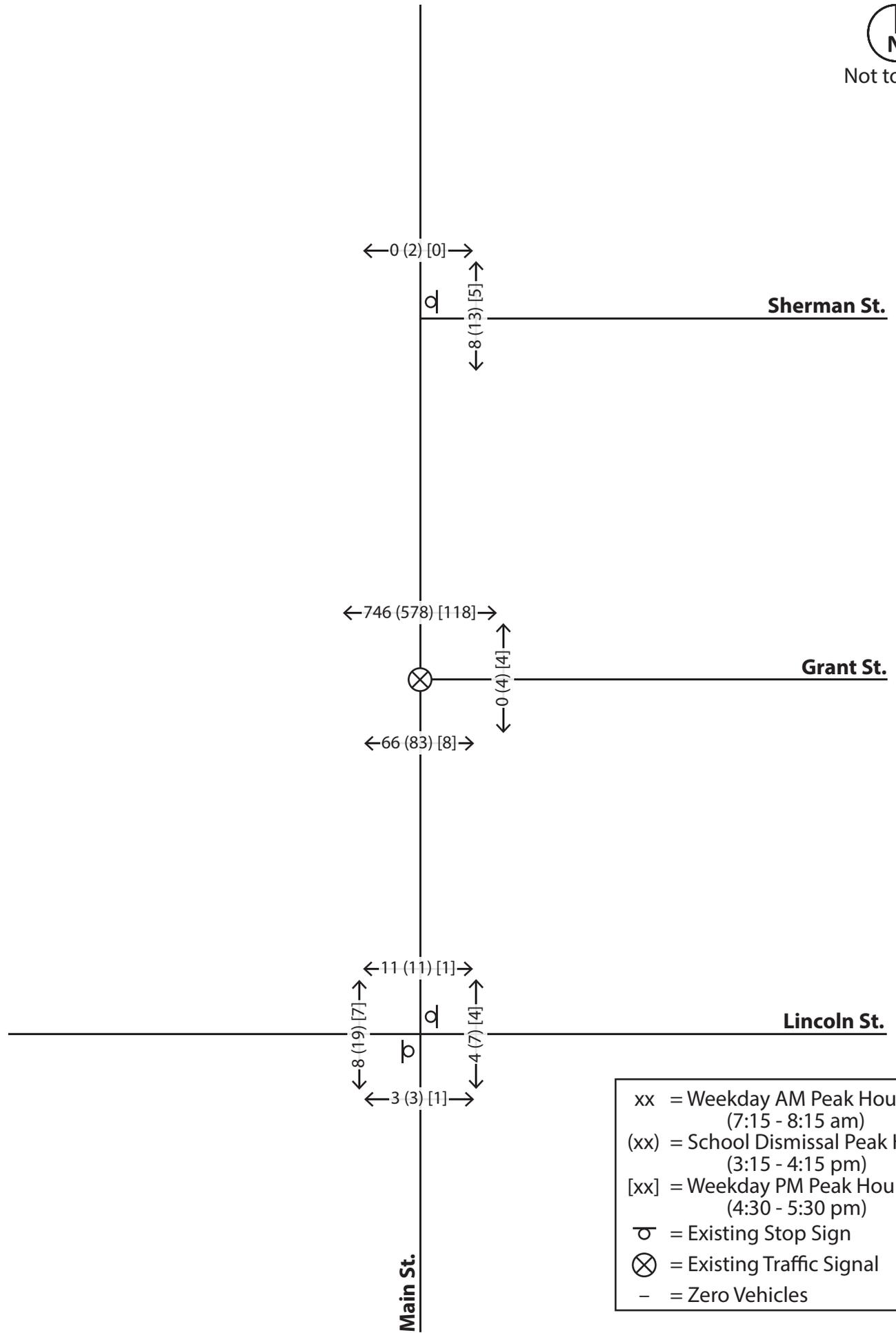
With an ADT well under 15,000 vehicles, Main Street may be a strong candidate for a conversion from 4 travel lanes to three with little impact to intersection capacity, similar to the proposed configuration of Main Street from Sherman to Franklin. This option was not deemed preferable at this time since the extent of improvements would need to be corridor-wide and those impact were not studied. A conversion should be considered in coordination with the County and in combination with a roadway resurfacing project.



Not to Scale



xx = Weekday AM Peak Hour (7:15 - 8:15 am)
 (xx) = School Dismissal Peak Hour (3:15 - 4:15 pm)
 [xx] = Weekday PM Peak Hour (4:30 - 5:30 pm)
 ⌚ = Existing Stop Sign
 ⊗ = Existing Traffic Signal



**Figure A2
Existing Pedestrian Volumes**

Appendix B:

Construction Cost & Timeline Estimate

Downers Grove

Construction Cost Estimate

Main St - Ogden to Franklin	
Improvements	Max
Three Lane Conversion - Ogden to Franklin	
3780' resurfacing - w/ pmk	\$ 360,000.00
Pedestrian Refuge Islands & Signs (5)	\$ 27,000.00
Sherman to Lincoln	
Improved street lighting	\$ 48,000.00
Painted intersection	\$ 30,000.00
Covered High Capacity bike parking	\$ 15,000.00
Bump out at Grant	\$ 6,000.00
Bus layby (west side)	\$ 9,000.00
Bus shelter & pad (east side)	\$ 13,000.00
Prairie to Downtown	
Grant signal modification	\$ 12,000.00
Franklin signal mod	\$ 2,000.00
Prairie signal retiming	\$ 2,000.00
Total Cost= \$ 524,000.00	

Main - Norfolk to Oxford	
Improvements	Max
Norfolk to Oxford	
Speed Management	\$ 2,000.00
Signalized intersection	\$ 200,000.00
Resurface and stripe intersection	\$ 6,000.00
ADA curb ramps	\$ 8,000.00
Total Cost= \$ 216,000.00	

Ogden	
Improvements	Max
Saratoga Signal LPI	\$ 5,000.00
Stripe crosswalks	\$ 2,000.00
Construct Sidewalks	\$ 15,000.00
No turn on Red signs (2)	\$ 2,400.00
Total Cost= \$ 24,400.00	

Highland	
Improvements	Max
Chicane	
Curb Extensions & Pavement Marking	\$ 15,000.00
Total Cost= \$ 15,000.00	

Saratoga	
Improvements	Max
Raised Intersection	\$ 6,000.00
Additional Crosswalks	\$ 2,000.00
Additional Sidewalks	\$ 100,000.00
Total Cost= \$ 108,000.00	

63rd	
Improvements	Max
Right-in / Right out	\$ 20,000.00
Signal Timing at Dunham	\$ 200,000.00
Curb Extensions & Sidewalks	\$ 90,000.00
Fencing & Streetscape	\$ 230,000.00
Speed Management	\$ 2,000.00
Total Cost= \$ 542,000.00	

Dunham & Norfolk	
Improvements	Max
Mid block crossing w/ curb extension	\$ 12,000.00
Drop-off lane	\$ 60,000.00
Norfolk curb extension	\$ 15,000.00
Close driveway	\$ 9,000.00
Total Cost= \$ 96,000.00	

Appendix C:
Safety Forum #1, DGN
September 5th, 2019



TRAFFIC SAFETY FORUM

Downers Grove North High School

September 5, 2019

Community
HIGH SCHOOL District 99

NORTH HIGH FORUM AGENDA

6:30 – 6:45 District 99 and the Village of Downers Grove

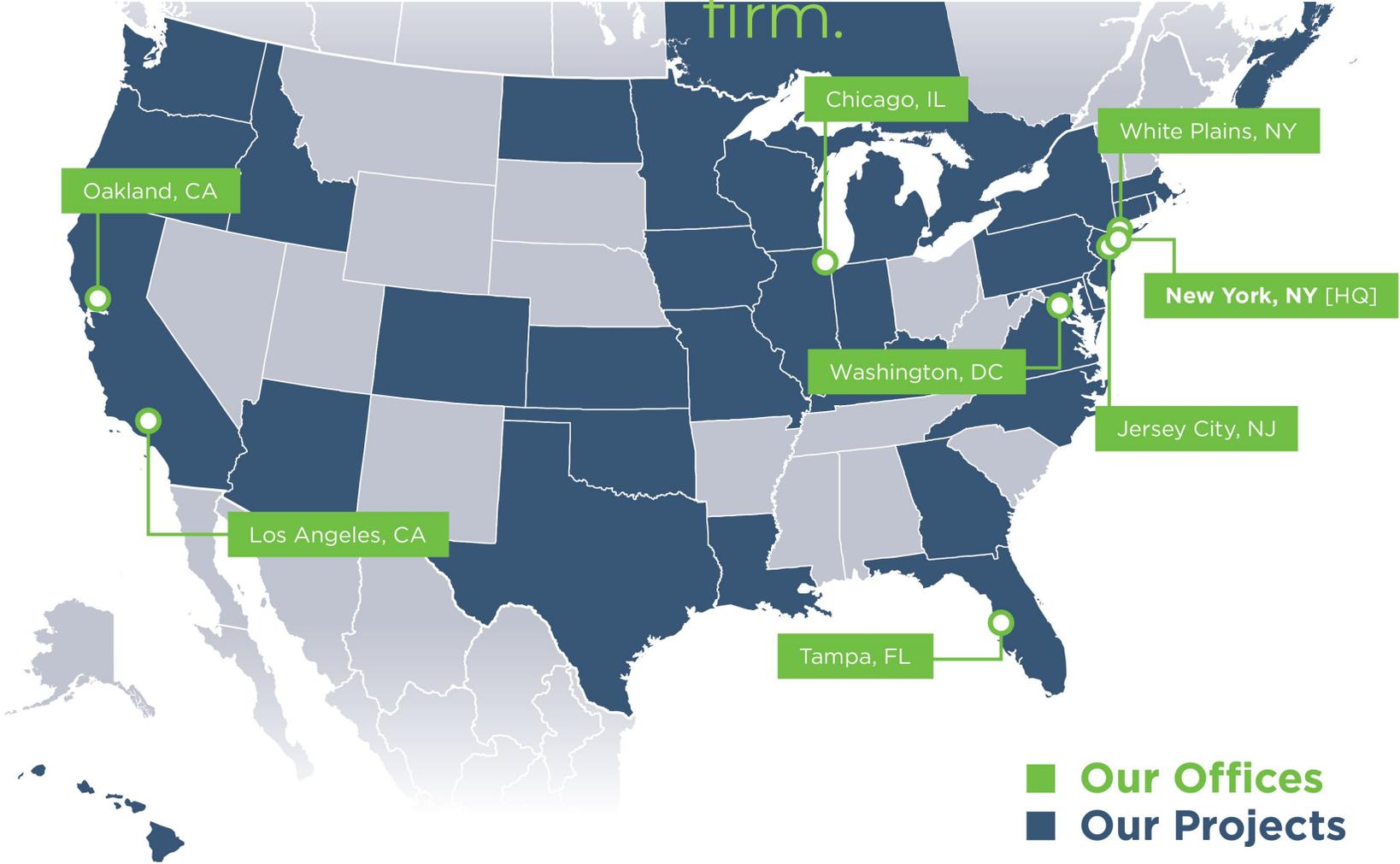
6:45 – 6:55 Presentation of program and instructions

6:55 – 7:00 Presentation conclusion

7:00 – 8:00 Forum activities



Sam Schwartz is a national engineering, planning and consulting firm.



PROJECT SCHEDULE

we are here



Project kickoff
June 2019

Safety Forum I
September 2019

Technical Analysis
October 2019

Safety Forum II
November 2019

**Final Report &
Conceptual Design**
December 2019

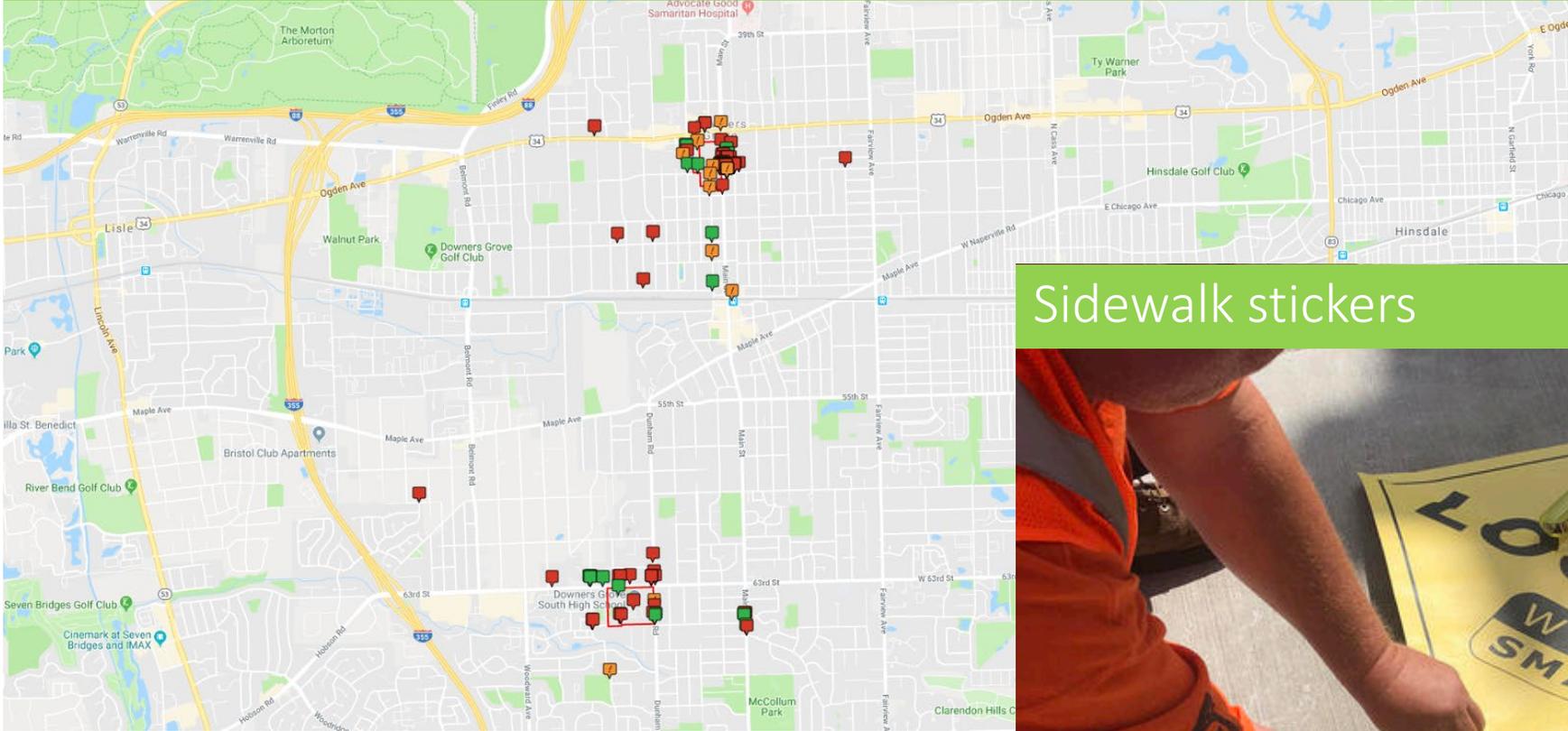
Outreach



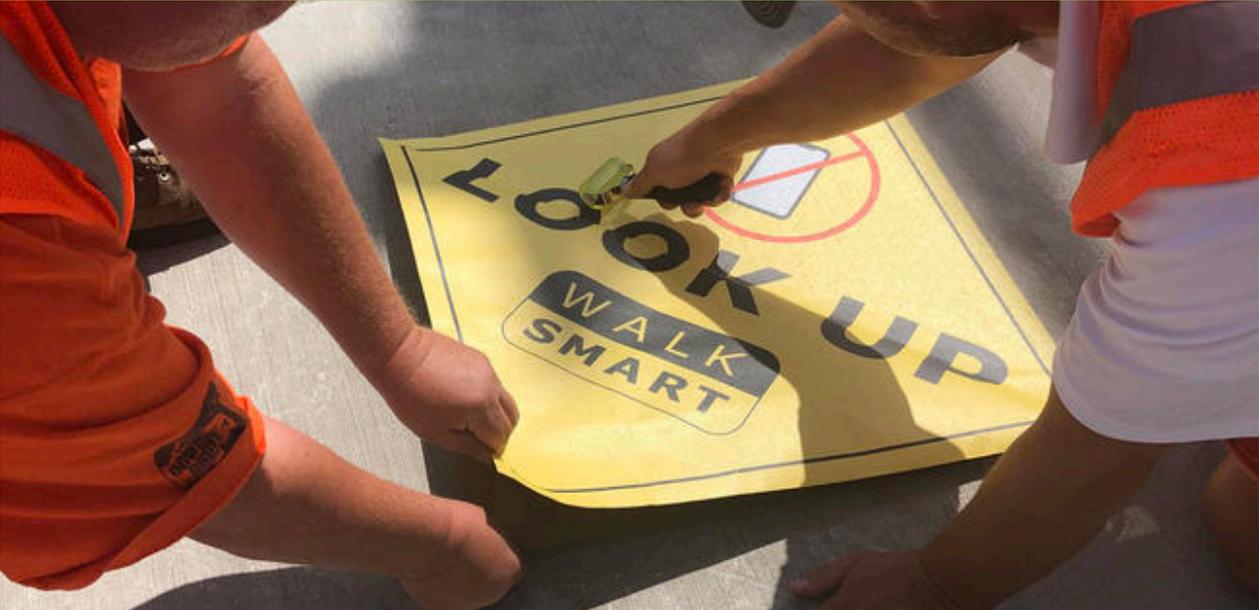
WHAT WE'VE DONE SO FAR

Speed feedback...variable message board

Interactive map: 200+ responses to date



Sidewalk stickers



TAKE THE SAFETY PLEDGE!

TAKE THE STREETSMARTS PLEDGE



I PLEDGE...

TO BE A CAUTIOUS DRIVER BY ALWAYS...

- Wearing a seatbelt while in a vehicle and encouraging others to do the same
- Reducing my speed in school zones
- Coming to a complete stop at all stop signs
- Putting my phone away while at the wheel
- Looking out for and slowing down for pedestrians and cyclists

TO BE AN ATTENTIVE PEDESTRIAN BY ALWAYS...

- Stopping and looking both ways before crossing the street
- Obeying "walk" and "don't walk" signals
- Trying to make eye contact with drivers to confirm I am seen before crossing the street
- Putting my phone down while crossing the street

TO BE A COGNIZANT CYCLIST BY ALWAYS...

- Giving pedestrians the right of way
- Wearing proper protective gear including a helmet and lights at night
- Putting my phone away while driving

TO BE AN INFORMED MEMBER OF THE COMMUNITY BY ALWAYS...

- Informing others in the community of traffic, pedestrian, and traffic safety tips
- Being proactive in spreading the word about the important role that safety plays in the community

SIGN THE PLEDGE!



IDEAS FOR NORTH HIGH

Based on input collected by District 99 in collaboration with partners, here are the safety ideas we have heard so far. Place your stickers on the idea(s) you would most like to see around North High!



PAINTED INTERSECTION

Painted intersections grab the attention of drivers and pedestrians, reduce speeds and increase awareness.
VOTE HERE!



PAINTED CROSSWALKS

A painted crosswalk improves crosswalk visibility and fosters a sense of place.
VOTE HERE!



BANNERS

Street banners hang from light poles or posts to spread a message and make people aware of programs and events.
VOTE HERE!



CONCRETE PLANTERS

Concrete planters create a physical barrier between sidewalks and the roadway while improving aesthetics.
VOTE HERE!



BIKE PARKING CANOPY

Bicycle storage options encourage people to use alternative modes and feel safer when locking their bikes.
VOTE HERE!



STREET LIGHTING

Street lighting allows all roadway users to be more aware of their surroundings and feel safer traveling the corridor.
VOTE HERE!

INSTRUCTIONS:

Based on input collected by District 99 and collaboration with partners, here's what we've heard so far.

Take stickers and choose the idea(s) you would most like

City of Fort Lauderdale

Twitter, Alisa Hauser

Virginia Tech Daily

CityLab

SPOT YOUR TRANSPORTATION CHALLENGES & CONCERNS



Place a sticker or post-it on the map at an area you think could use improvements and let us know what it is. Use the comments cards to write down your thoughts as well.



NORTH

STREET SMARTS

INSTRUCTIONS: Put a sticker on the map to show us a street or intersection you would like to change. Take a comment card



Share *your* **story**



INSTRUCTIONS: Talk to a representative and fill out a comment card so we can hear about your traffic safety stories at Downers Grove.

We want to hear from YOU!

SAFETY MESSAGE IDEAS

This is only the beginning! We will be creating digital messaging, yard signs, speed signs, and more. Below are some of our ideas. Please tell us what you think by placing a post-it note on the ones you like or which ones don't work.



INSTRUCTION

S: We have provided some ideas on this board, please tell us what you think by placing a post-it note on the ones you like

CREATE YOUR OWN SAFETY MESSAGE!

Do you have any ideas for North High's safety campaign? Share your ideas below!

INSTRUCTION

NS: Your turn. Please use the post-it notes to share your traffic safety slogan or messaging

DON'T FORGET TO TAKE A HANDOUT!

THERE'S ALWAYS TIME FOR SAFETY

WHAT YOU CAN DO...

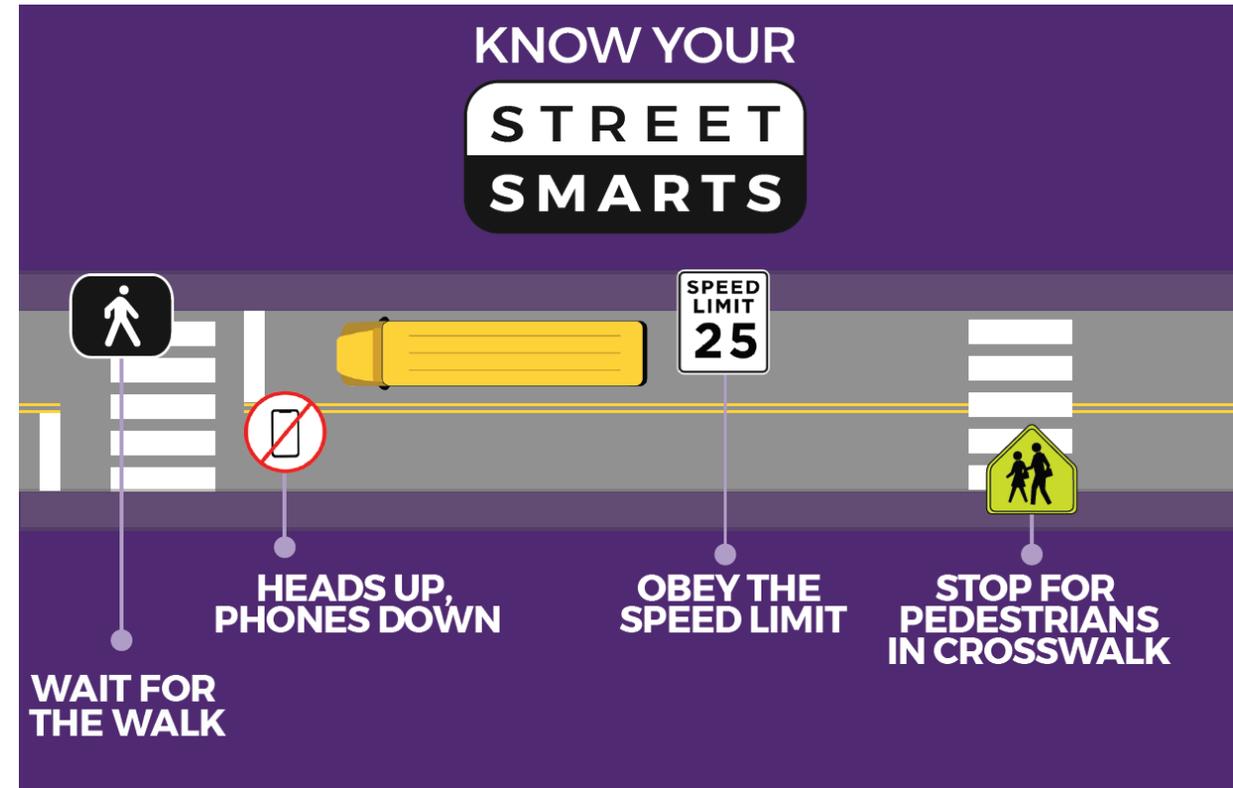
Tell us your transportation thoughts
on our **INTERACTIVE MAP**:



www.wikimapping.com/DGHS-Traffic-Safety.html

WHAT WE'RE DOING...

We are working to improve safety around Downers Grove North and South High Schools. While long-term improvements are being planned, several safety tools have been implemented such as speed feedback signs, digital message boards, and an awareness campaign.



Appendix D:
Safety Forum #1, DGS
September 5th, 2019

TRAFFIC SAFETY FORUM

Downers Grove South High School

September 5, 2019

Mustang Friday Winner!



DOWNERS GROVE
SOUTH



Mustang Friday Winner!



THANK
YOU
Mr. [Name]

SOUTH HIGH FORUM AGENDA

7:00 – 7:15 District 99 and Village of Downers Grove

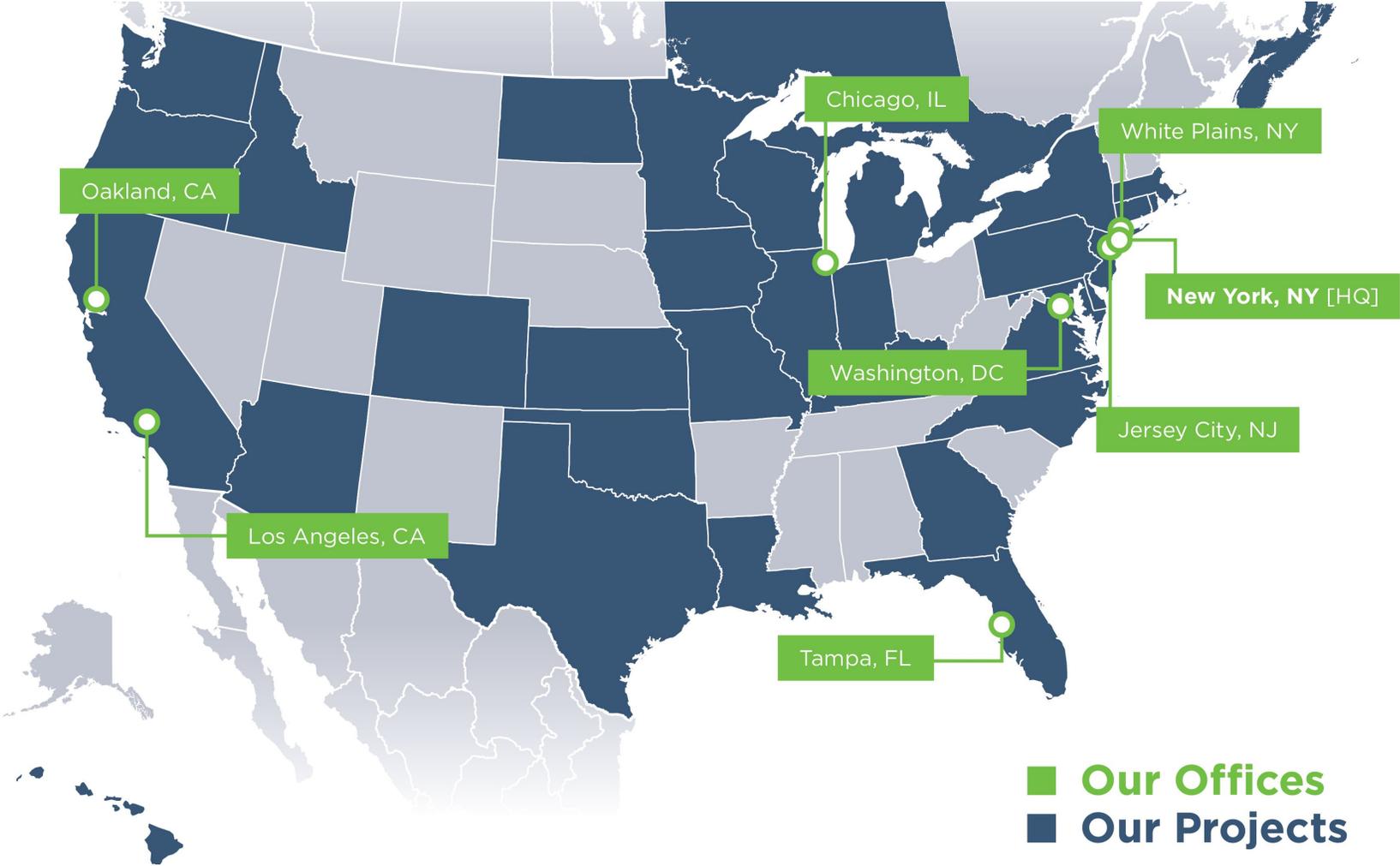
7:15 – 7:25 Presentation of program and instructions

7:25 – 7:30 Presentation conclusion

7:30 – 8:30 Forum activities



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PROJECT SCHEDULE

we are here



Project kickoff
July 2019

Safety Forum I
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Technical Analysis
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Safety Forum II
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**Final Report &
Conceptual Design**
December 2019

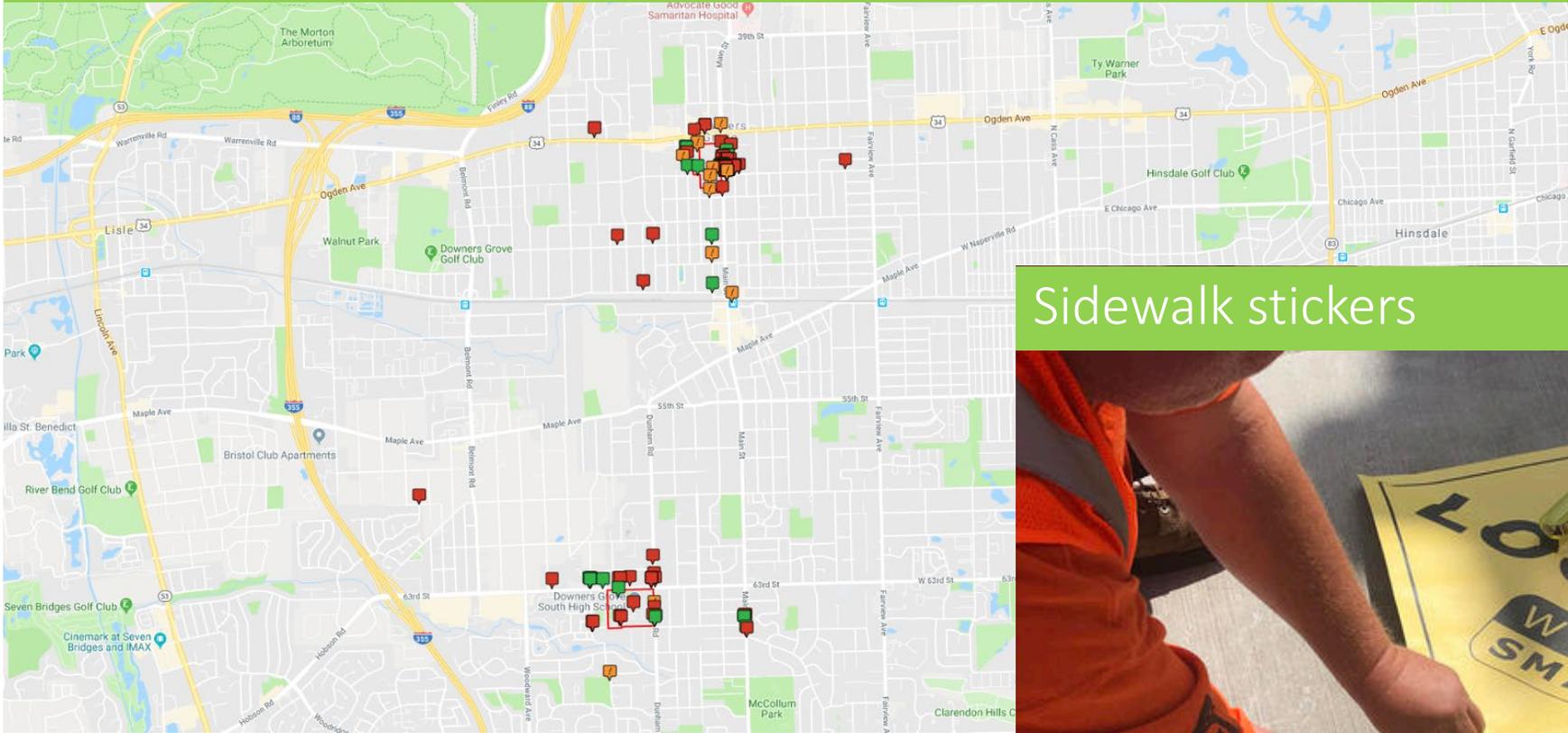
Outreach



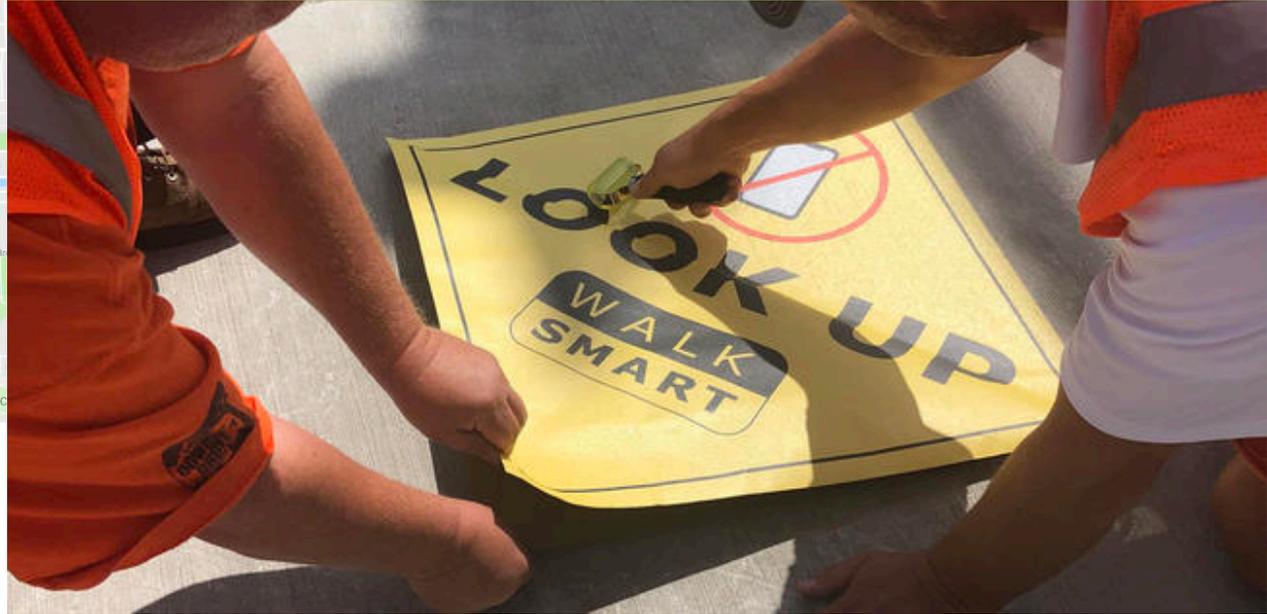
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TAKE THE STREETSMARTS PLEDGE



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- Being proactive in spreading the word about the important role that safety plays in the community

SIGN THE PLEDGE!



IDEAS FOR SOUTH HIGH



Based on input collected by District 99 in collaboration with partners, here are the safety ideas we have heard so far.
Place your stickers on the idea(s) you would most like to see around South High!

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VOTE HERE!

City of Fort Lauderdale

CONCRETE PLANTERS



Concrete planters create a physical barrier between sidewalks and the roadway while improving aesthetics.

VOTE HERE!

Twitter, Alisa Hauser

PAINTED CROSSWALKS



A painted crosswalk improves crosswalk visibility and fosters a sense of place.

VOTE HERE!

Project for Public Spaces

BIKE PARKING CANOPY



Bicycle storage options encourage people to use alternative modes and feel safer when locking their bikes.

VOTE HERE!

Virginia Tech Daily

BANNERS



Street banners hang from light poles or posts to spread a message and make people aware of programs and events.

VOTE HERE!

Watsonville Police

STREET LIGHTING



Street lighting allows all roadway users to be more aware of their surroundings and feel safer traveling the corridor.

VOTE HERE!

CityLab

INSTRUCTION

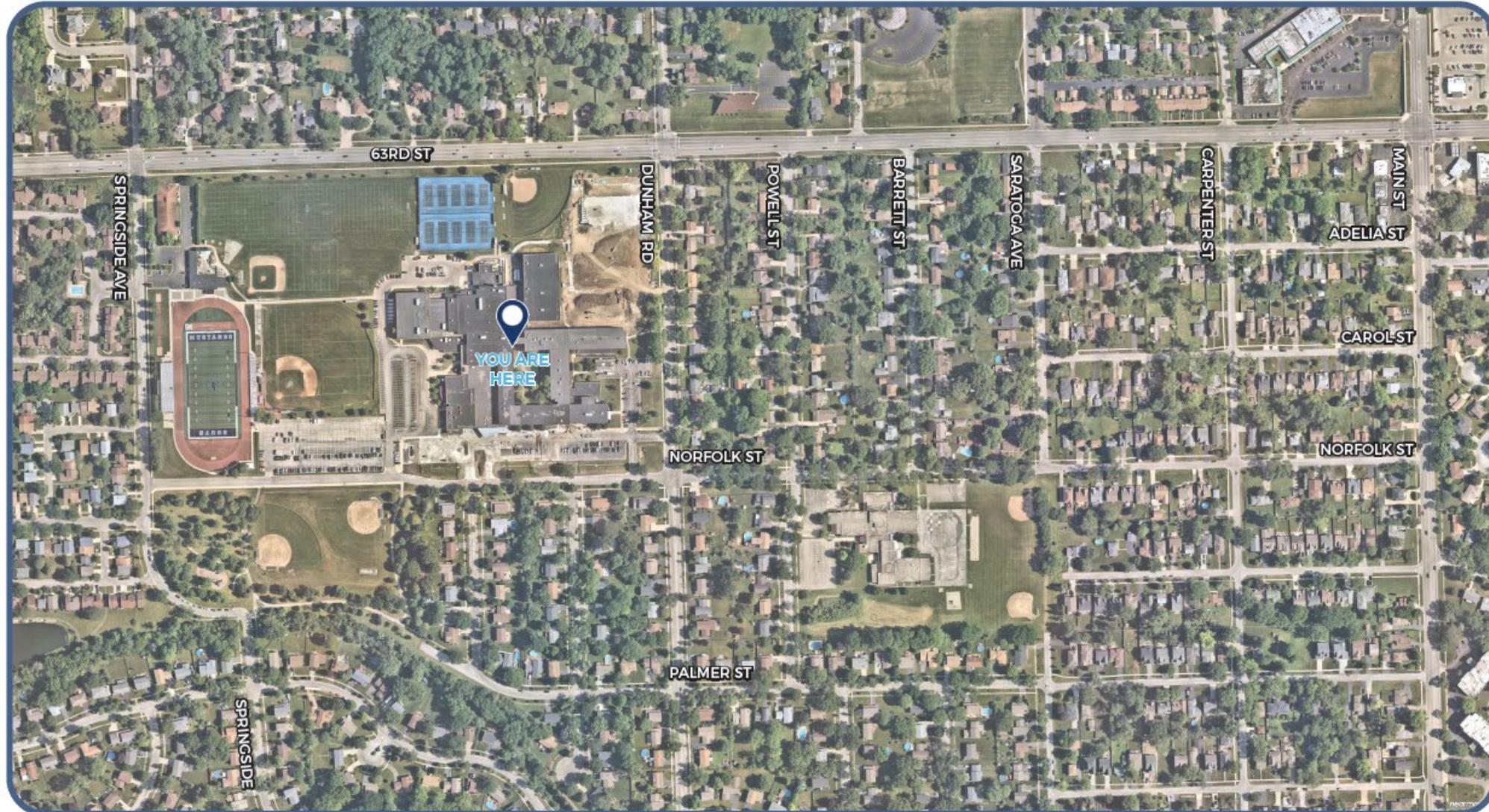
S: Based on input collected by District 99 and collaboration with partners, here's what we've heard so far.

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SPOT YOUR TRANSPORTATION CHALLENGES & CONCERNS

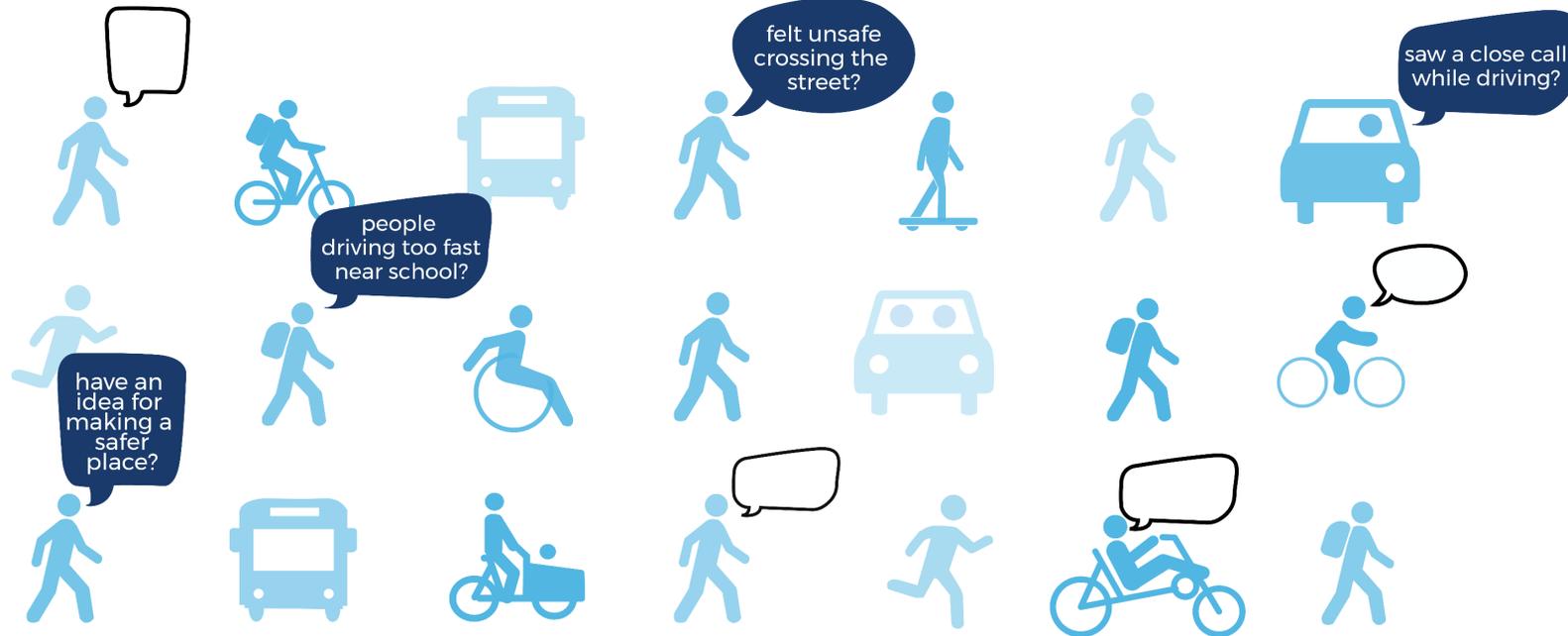
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INSTRUCTIONS:

Put a sticker on the map to show us a street or intersection you would like to change. Then, take a comment card and tell us what

Share *your* story



INSTRUCTION

S: Talk to a representative and fill out a comment card so we can hear about your traffic safety stories at Downers Grove South.

We want to hear from YOU!

SAFETY MESSAGE IDEAS



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INSTRUCTIONS

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CREATE YOUR OWN SAFETY MESSAGE!

Do you have any ideas for South High's safety campaign? Share your ideas below!

INSTRUCTIONS

: Your turn. Use the post-it notes to share your traffic safety slogan or messaging

DON'T FORGET TO TAKE A HANDOUT!

THERE'S ALWAYS TIME FOR SAFETY

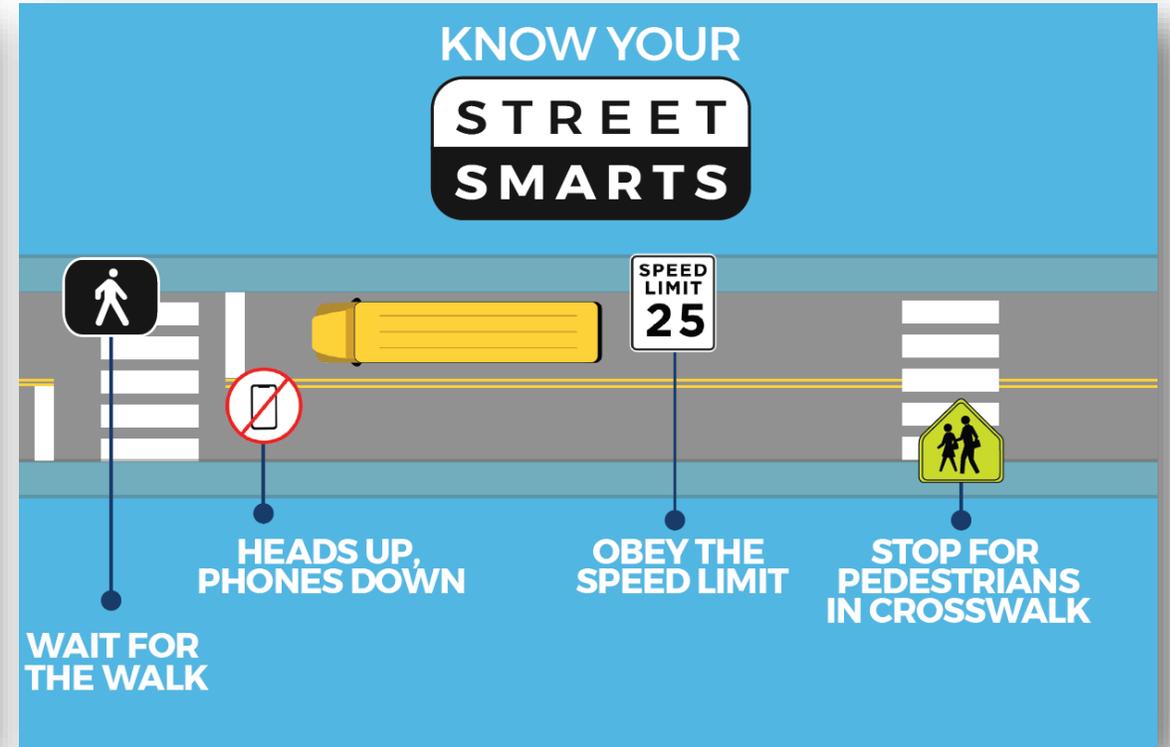
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Tell us your transportation thoughts
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WHAT WE'RE DOING...

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Appendix E:
Safety Forum #2
November 14th, 2019

COMMUNITY PEDESTRIAN SAFETY FORUM #2

November 14, 2019



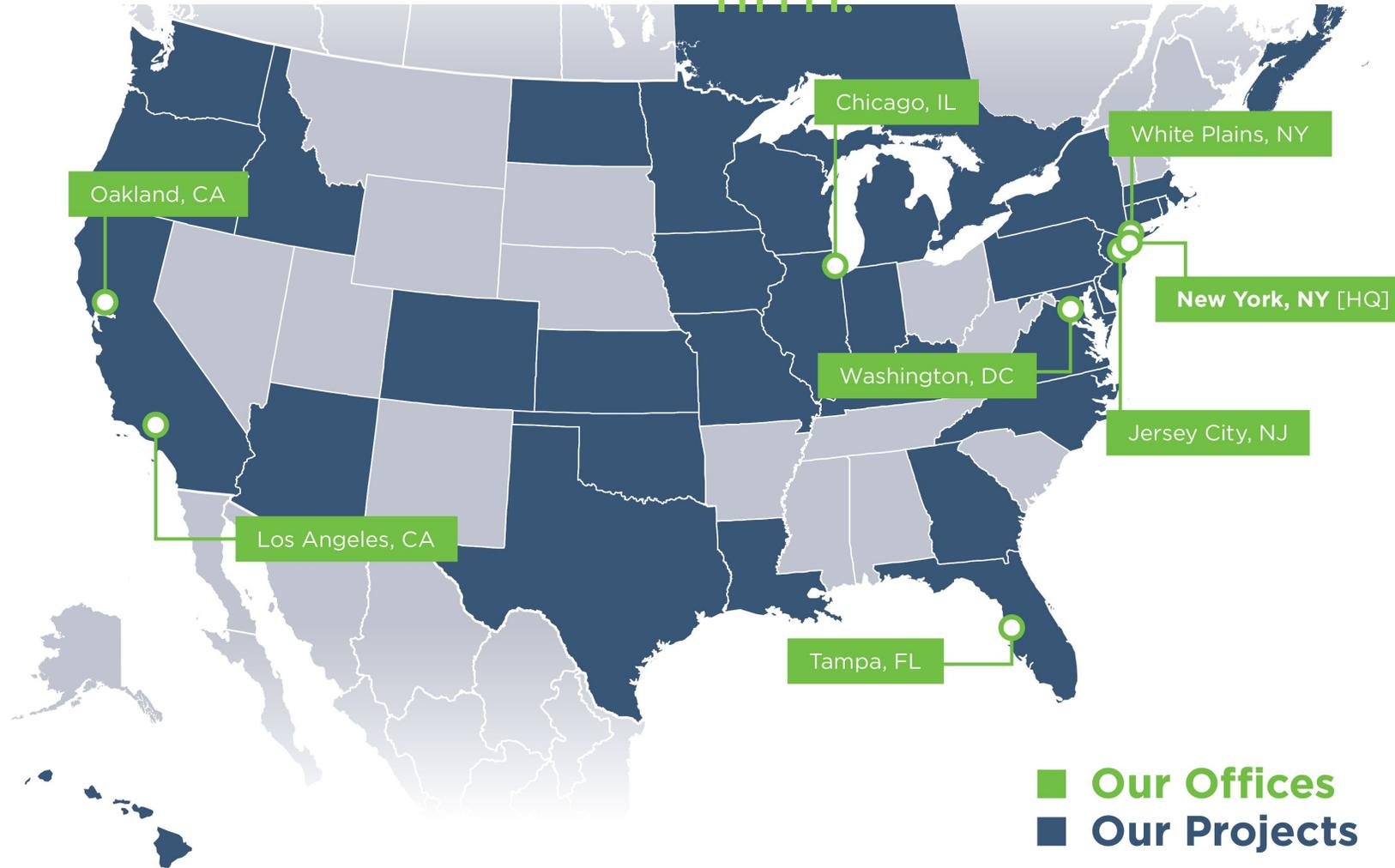
PEDESTRIAN SAFETY

Community Collaboration and Partnership

- **Immediate North High Changes:**
 - ✓ Main St. speed limit reduced to 25 mph, Ogden Ave. to south of North High
 - ✓ School Zone 20 established mph in front of North High
 - ✓ Reviewed signal timing / prioritized for pedestrians
- **Immediate South High Changes:**
 - ✓ Light and crosswalk at 63rd St & Springside approved for installation
 - ✓ Other changes on Dunham being discussed



Sam Schwartz is a national engineering, planning and consulting firm.



PROJECT SCHEDULE

we are here



Project kickoff
July 2019

Safety Forum I
September 2019

Technical Analysis
October 2019

Safety Forum II
November 2019

Refine Recommendations
December 2019

Final Report
December 2019

OUTREACH



COMMUNITY OUTREACH

Safety Forum Activities

Student Input

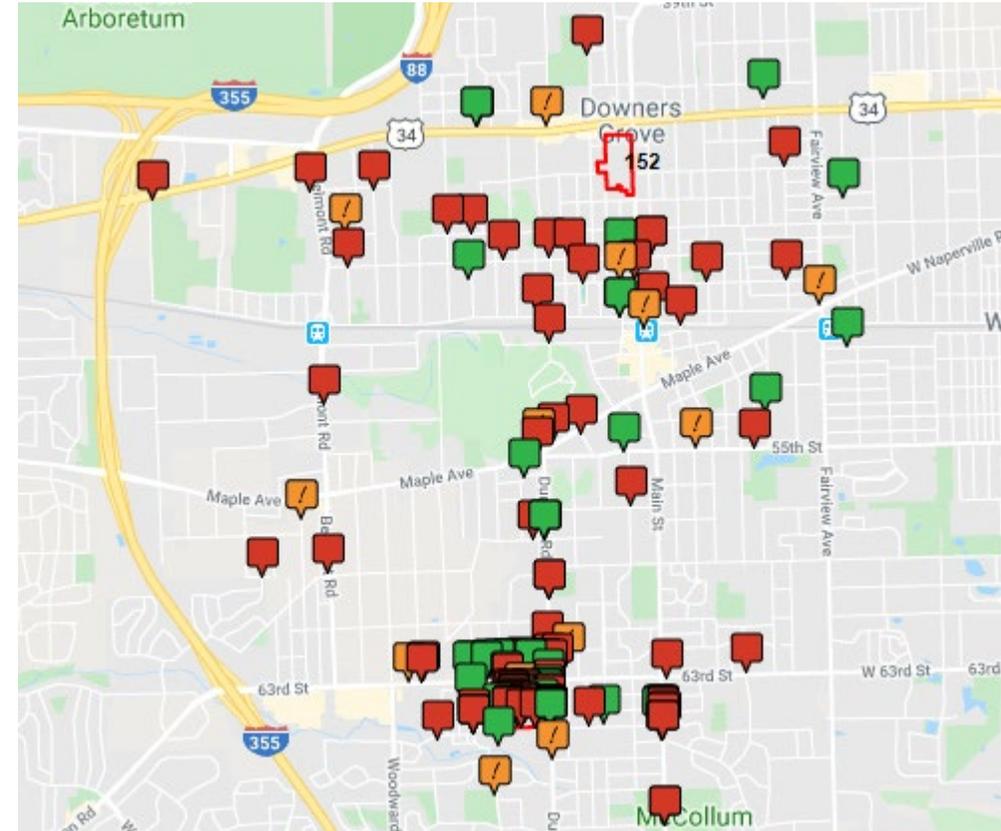
Interactive Map



COMMUNITY FEEDBACK

- 1 Main and Grant
- 2 North High Parking Lot (East of Main)
- 3 South High Parking Lot
- 4 Main and Norfolk
- 5 63rd & Springside

Total # of Comments: 463



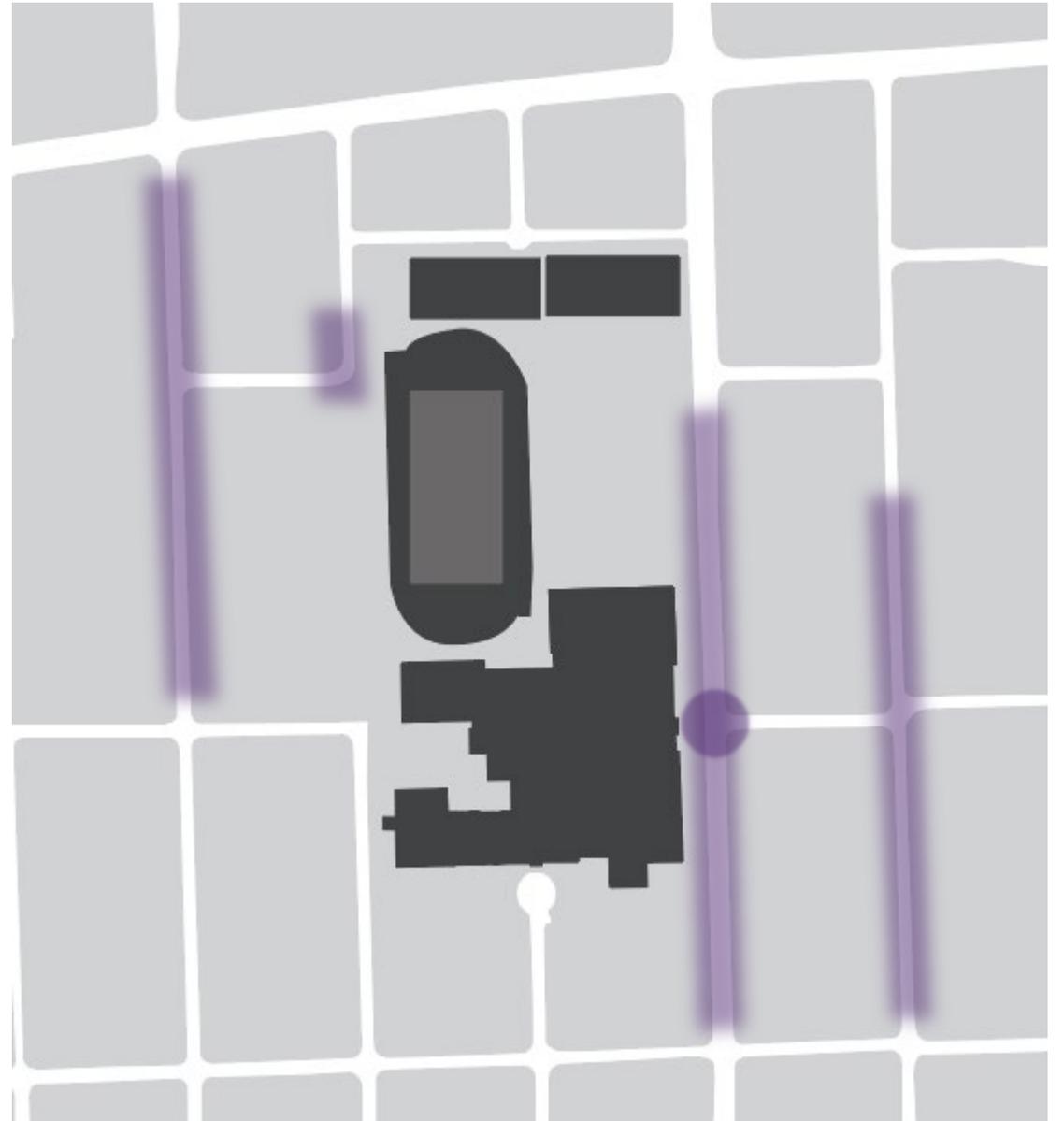
NORTH HIGH

COMMENTS & RECOMMENDATIONS

COMMENT SUMMARY

TOP COMMENT LOCATIONS

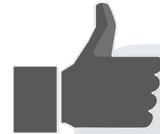
Total # of Comments: 295



MAIN STREET CORRIDOR

TOP COMMENTS

- 1 Dangerous pedestrian crossings
- 2 Turning at Main/Sherman
- 3 Speeding along Main

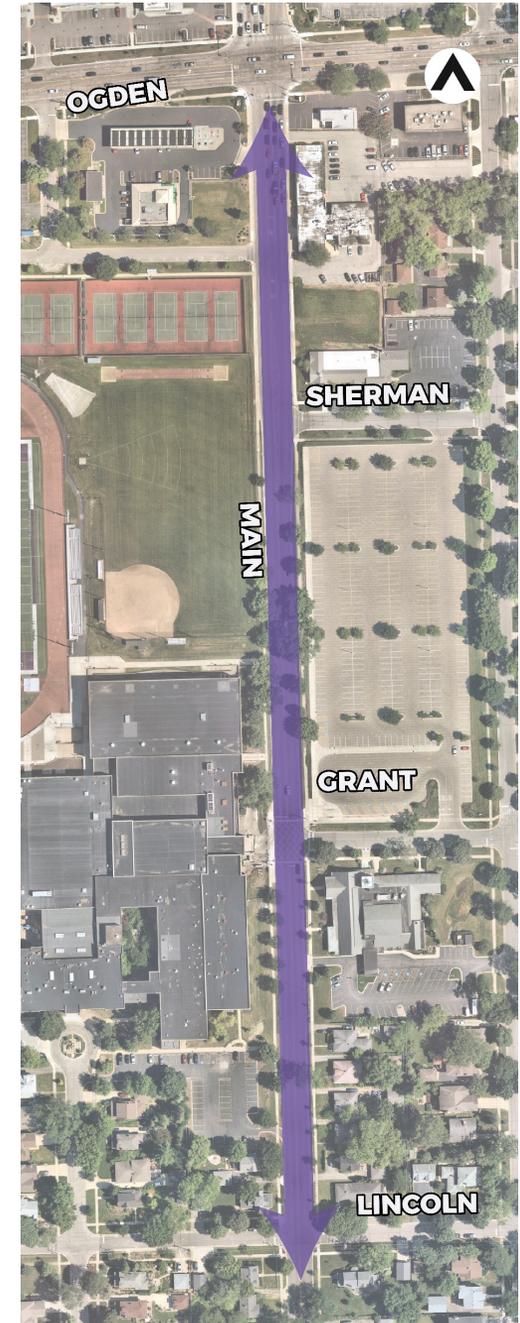


MOST LIKED COMMENT

"This intersection [Main and Lincoln] is also heavily used by pedestrians and traffic to/from DGN. Cars need to slow down here. Needs to be a safer crosswalk for drivers and pedestrians in all directions."

TAKEAWAY:

Calm traffic and emphasize pedestrian crossing locations

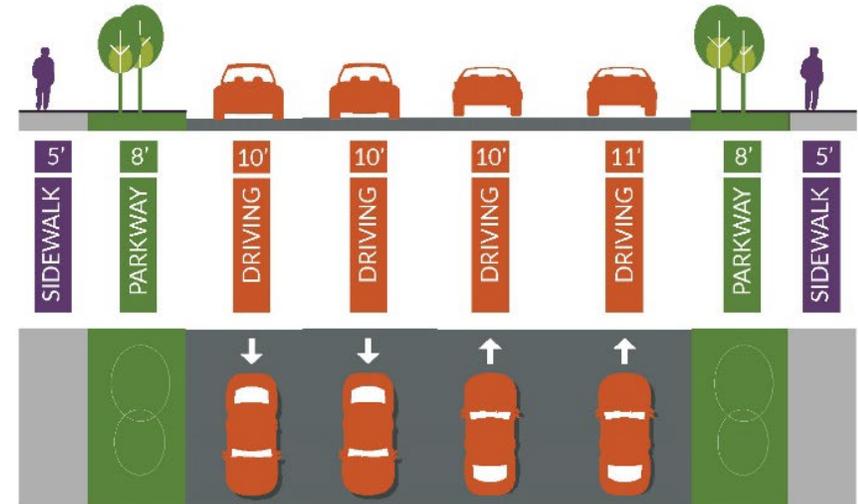


MAIN STREET CORRIDOR

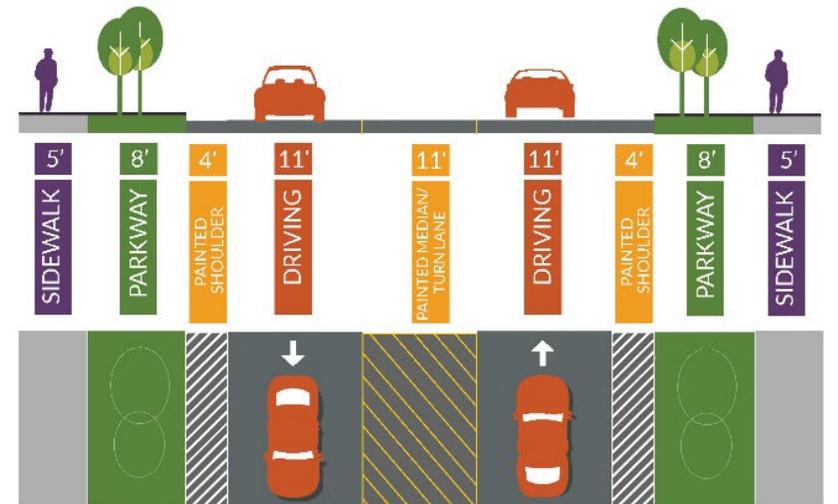
STUDY RECOMMENDATIONS

- 4 to 3-lane conversion on Main (Sherman - Prairie)
- Ped refuge islands at Sherman, Grant & Lincoln
- Pedestrian-scale lighting (Sherman - Lincoln)
- Decreased posted speed limit & install speed feedback signs
- Installed school zone speed limit

MAIN ST - EXISTING



MAIN ST - OPPORTUNITY



PEDESTRIAN REFUGE ISLANDS

@ Sherman, Grant & Lincoln

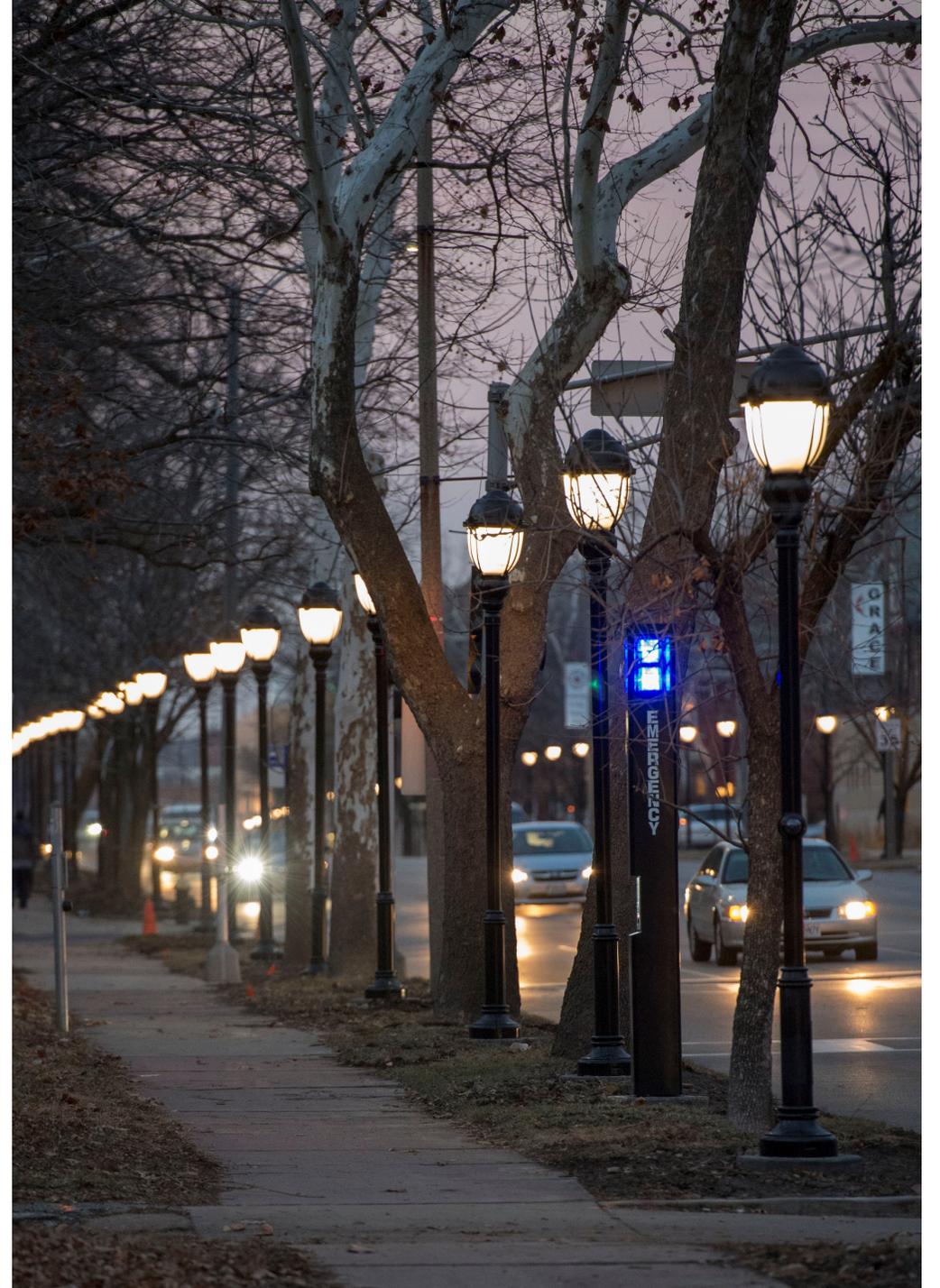


North High

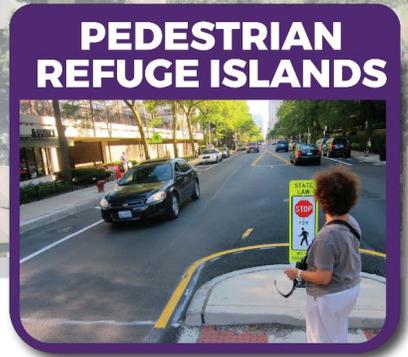
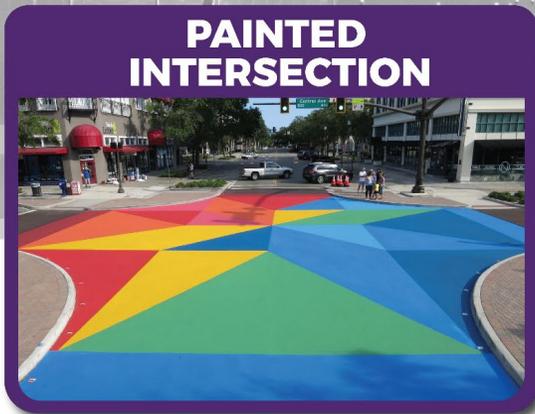
MAIN STREET CORRIDOR

PEDESTRIAN SCALE LIGHTING

Sherman to Lincoln



MAIN STREET CORRIDOR

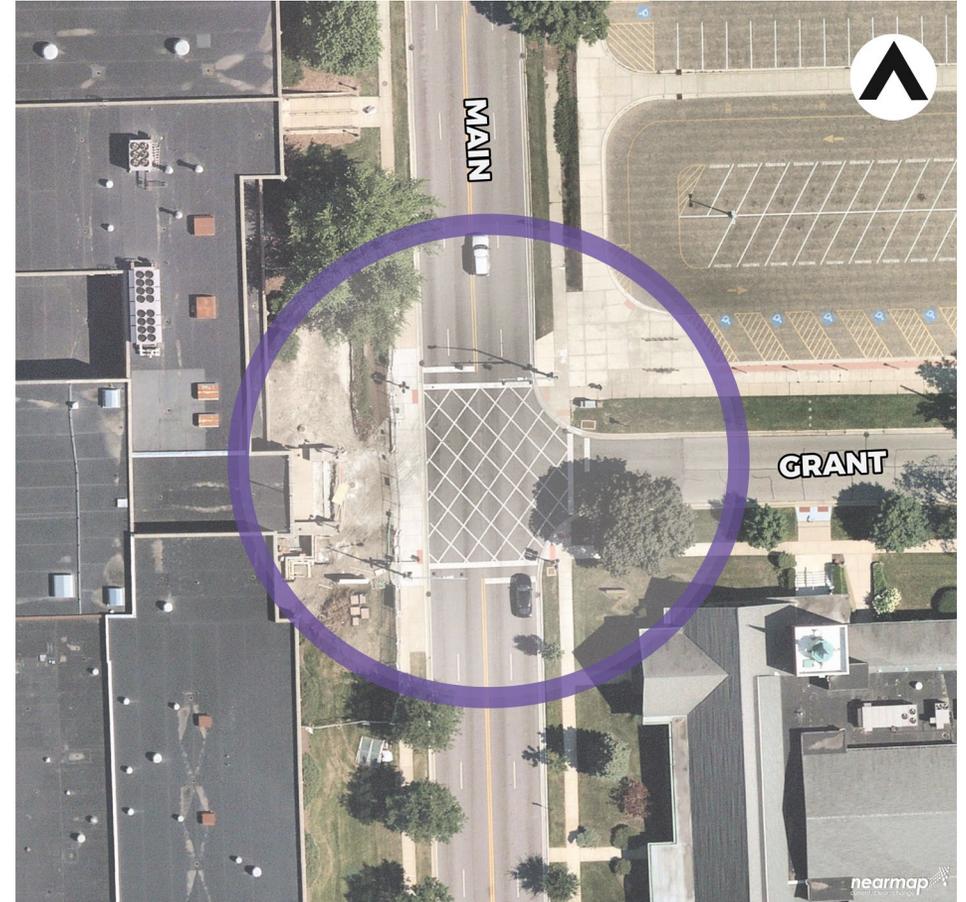


TOP COMMENTS

- 1 Grade separated crossing
- 2 Crosswalk visibility
- 3 Suggested enforcement

TAKEAWAY:

Calm traffic and prioritize pedestrian movements



CURB EXTENSIONS



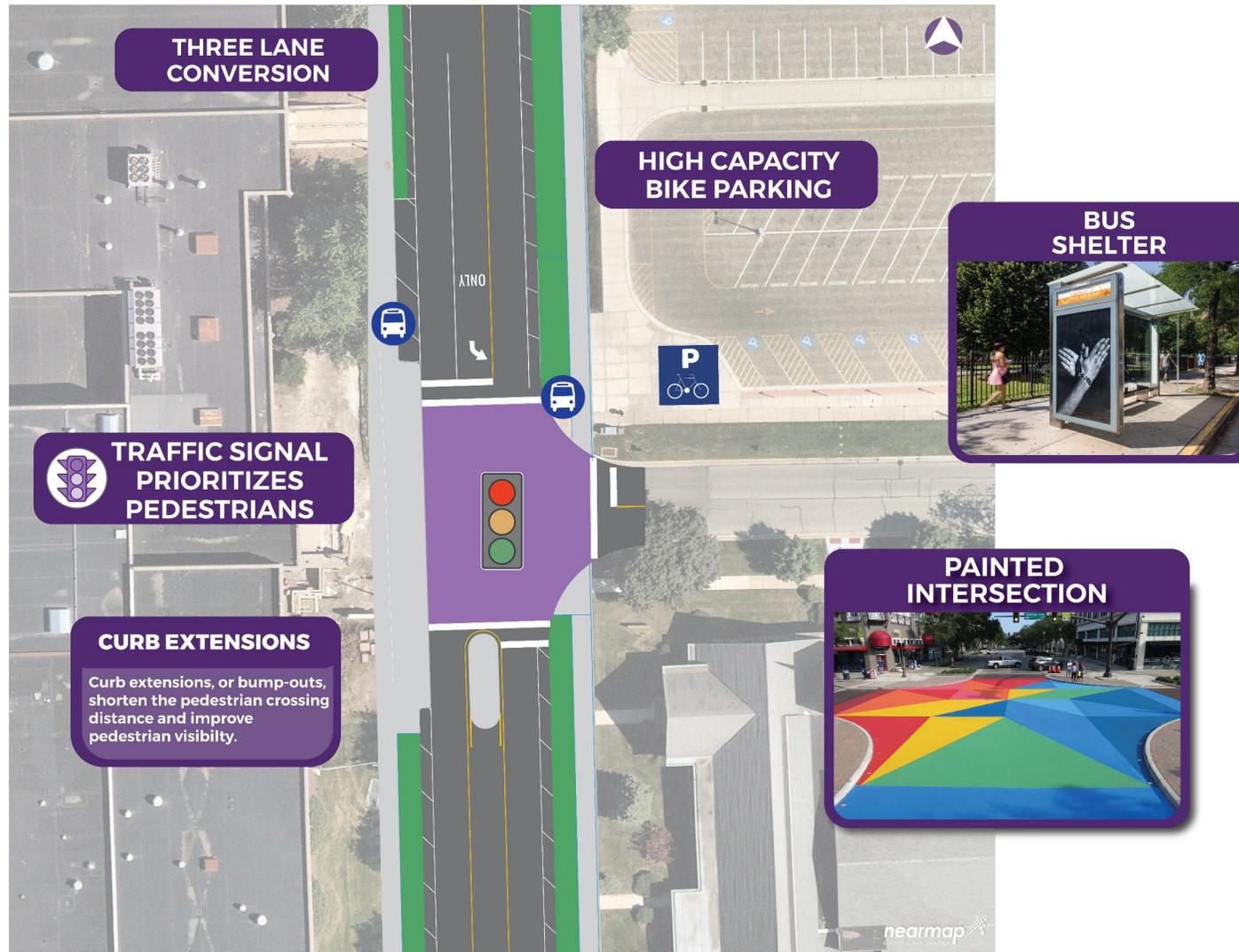
North High

MAIN / GRANT INTERSECTION

PAINTED INTERSECTION



MAIN / GRANT INTERSECTION



TOP COMMENTS

- 1 Suggested stop signs
- 2 Dangerous crosswalks
- 3 Speeding

TAKEAWAY:

Discourage dangerous driving and walking behaviors

**MOST LIKED COMMENT**

"Lincoln/Highland. Seeking 4-way stop. This intersection adjoins a school zone. It is a blind hill. Students leaving school at the end of the day drive well beyond the speed limit and this intersection, due to the lack of a 4-way stop..."



North High

HIGHLAND CORRIDOR

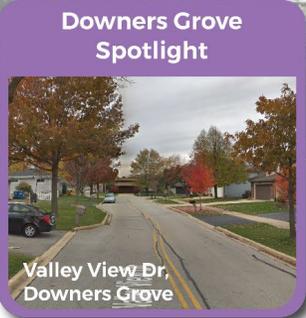
TRAFFIC CALMING ALONG HIGHLAND



CURB EXTENSIONS AT INTERSECTIONS



HIGHLAND CORRIDOR



TOP COMMENTS

1 Crosswalk visibility

2 Missing sidewalk

3 Relocate parking



MOST LIKED COMMENT

“East side of Saratoga should have sidewalks, plenty of room between the road and the field turf practice field.”

TAKEAWAY:

Better define and maintain pedestrian space



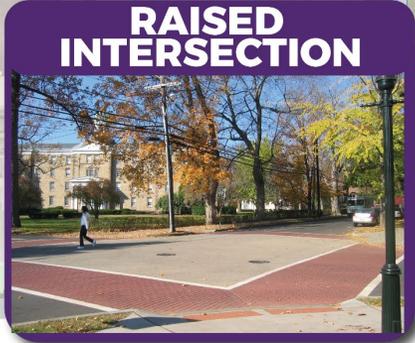
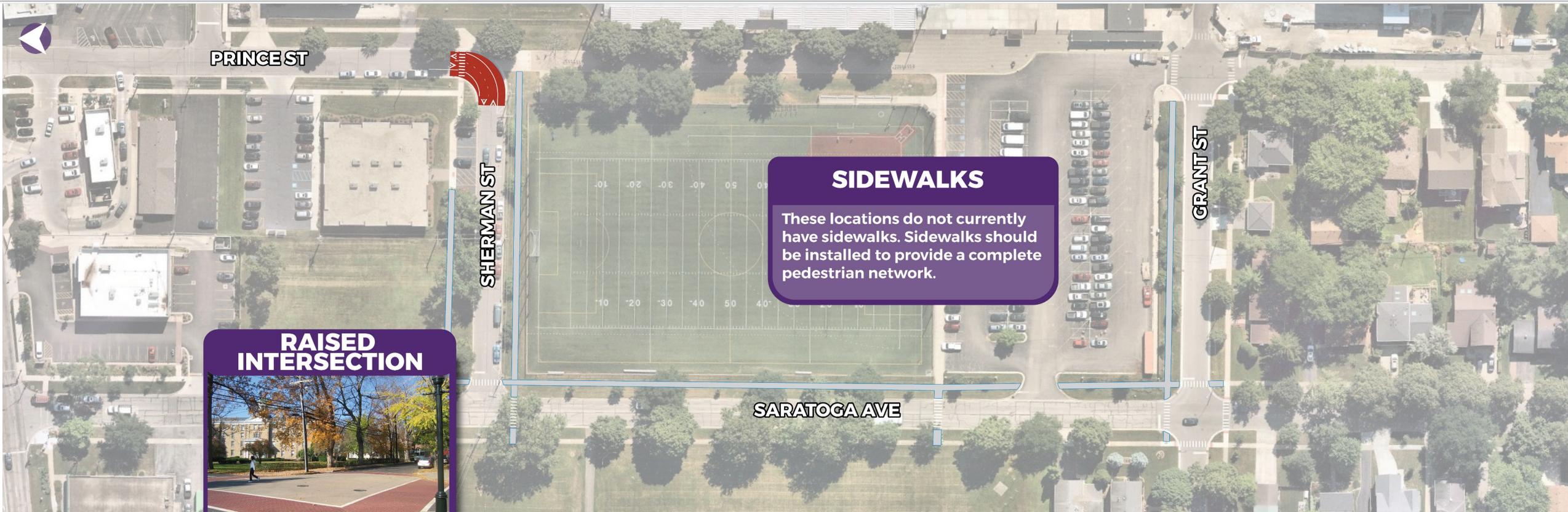
North High

SARATOGA & WEST CAMPUS

RAISED INTERSECTIONS



SARATOGA & WEST CAMPUS



ADDITIONAL CROSSWALK

TOP COMMENTS

- 1 Dangerous pedestrian crossing
- 2 Missing sidewalk
- 3 Crosswalk visibility



MOST LIKED COMMENT

"...Students walking north on Saratoga from Jefferson or from DGN must cross Saratoga at Ogden in order to get a pedestrian crossing signal. This is doubly frustrating because students from DGN need to cross Saratoga at Grant St. to the west side of the street due to the lack of a sidewalk on the east side of the street..."



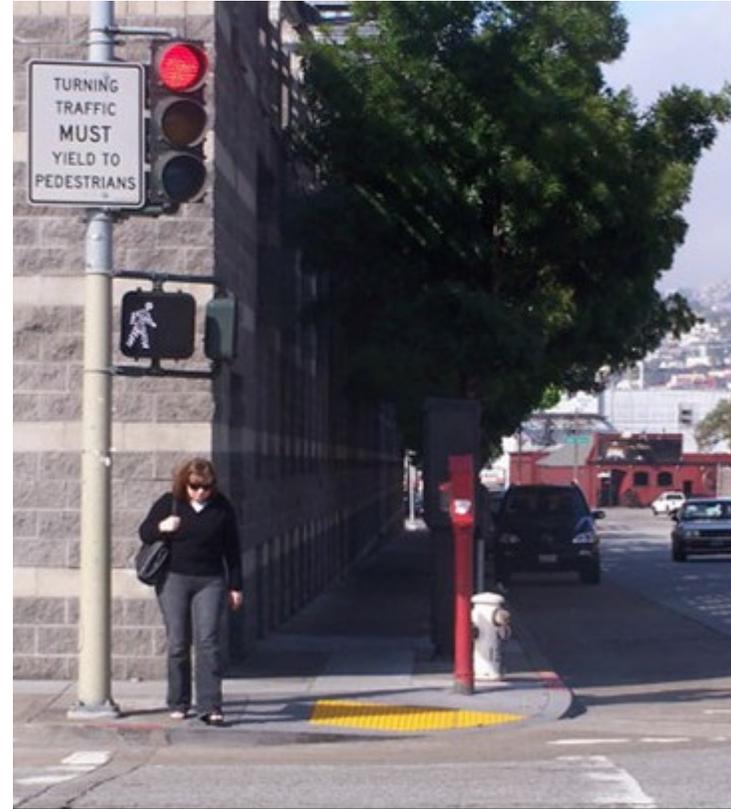
TAKEAWAY:
Improve signalized pedestrian crossings and reduce vehicle turning conflicts

OGDEN AVENUE CORRIDOR

NO TURN ON RED RESTRICTIONS



LEADING PEDESTRIAN INTERVAL



OGDEN AVENUE CORRIDOR



LEADING PEDESTRIAN INTERVAL

Leading pedestrian intervals give pedestrians a 3-7 second head start to enter the intersection before vehicles.

SARATOGA AVE

MAIN ST

OGDEN AVE

SPEED
LIMIT
35

SIDEWALKS

NO TURN ON RED

No Turn on Reds restrictions reduce the opportunity for conflict between people walking and driving. Restrictions may be illuminated when pedestrians are present.

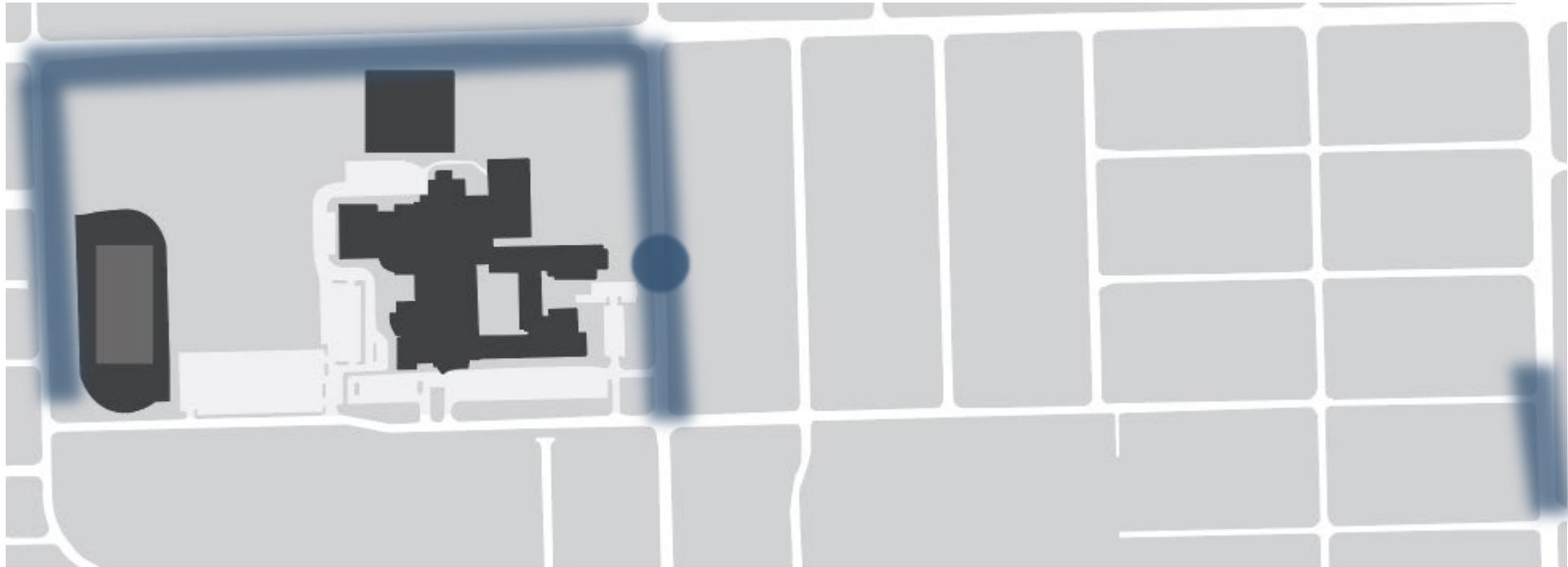


SOUTH HIGH

COMMENTS & RECOMMENDATIONS

TOP COMMENT LOCATIONS

Total # of Comments: 168



TOP COMMENTS

- 1 Speeding
- 2 Springside traffic signal
- 3 School zone/speed limit



MOST LIKED COMMENT

"This [63rd and Springside] is a very dangerous crosswalk for pedestrians. Students in the area north of 63rd street are considered not eligible for bus transportation and thus must cross here..."

TAKEAWAY:

Calm traffic and direct pedestrians to signalized crossings

South High

63RD STREET CORRIDOR

STREETScape

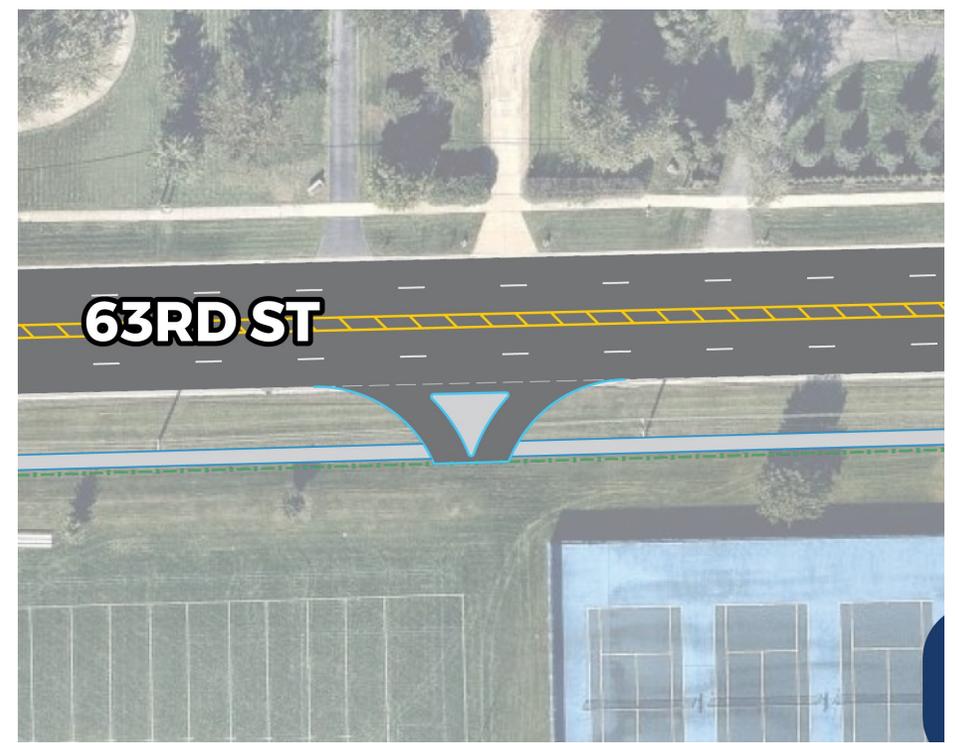


**DECREASE POSTED SPEED &
INSTALL SPEED FEEDBACK SIGNS**



63RD STREET CORRIDOR

NEW ACCESS TO DOWNERS GROVE SOUTH



63RD STREET CORRIDOR



SIGNALIZED INTERSECTION

A signalized intersection is planned to be installed in 2020.



SIGNAL TIMING

LEADING PEDESTRIAN INTERVAL

Leading pedestrian intervals (LPI) are used to give pedestrians priority at intersections and temporarily separate pedestrian and vehicles at crossings.

SPRINGSIDE



SPEED MANAGEMENT

SPEED LIMIT REDUCTION



FENCING/ STREETSCAPE

RIGHT IN, RIGHT OUT



CURB EXTENSIONS



DUNHAM RD

TOP COMMENTS

- 1 Jaywalking
- 2 Distracted students
- 3 Turning (left onto Dunham)



MOST LIKED COMMENT

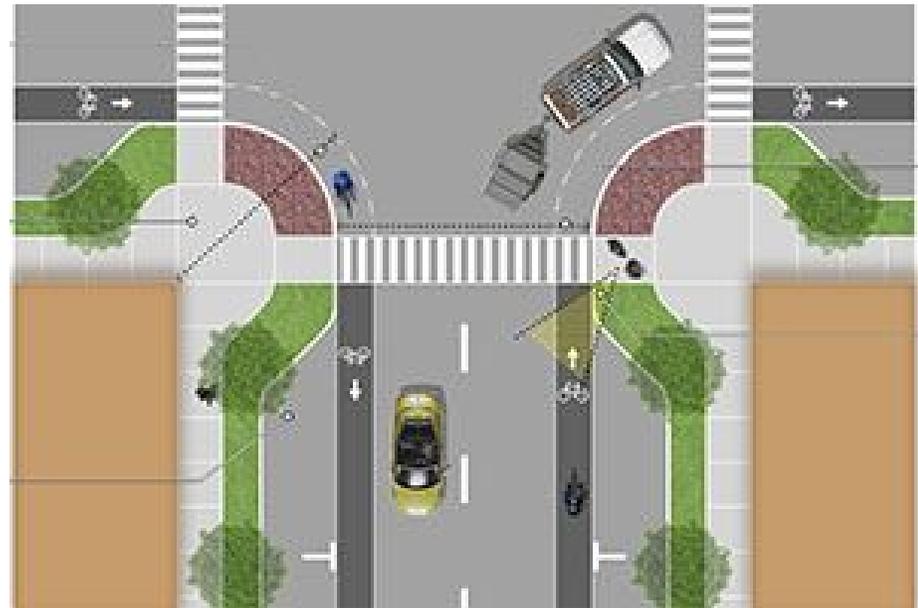
"I take 63rd to Dunham (north) every day and it can be very scary making that left hand turn onto Dunham. Kids that park at the church cross Dunham at the driveway and there is no way to see them when there are other cars waiting for the light going south bound..."



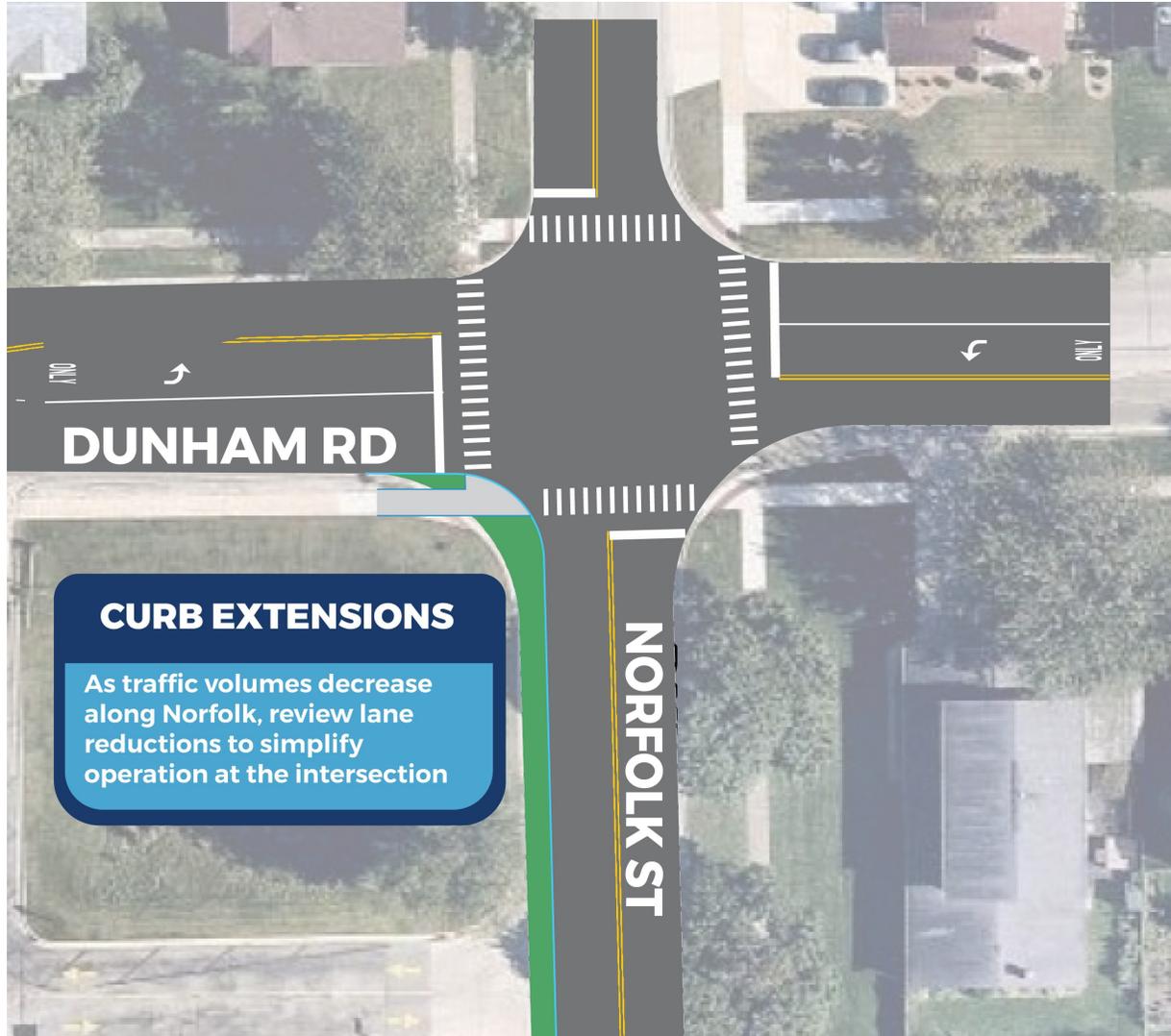
TAKEAWAY:

Channelize pedestrians to signalized crossing and reduce turning conflicts

CURB EXTENSIONS



63RD / DUNHAM INTERSECTION



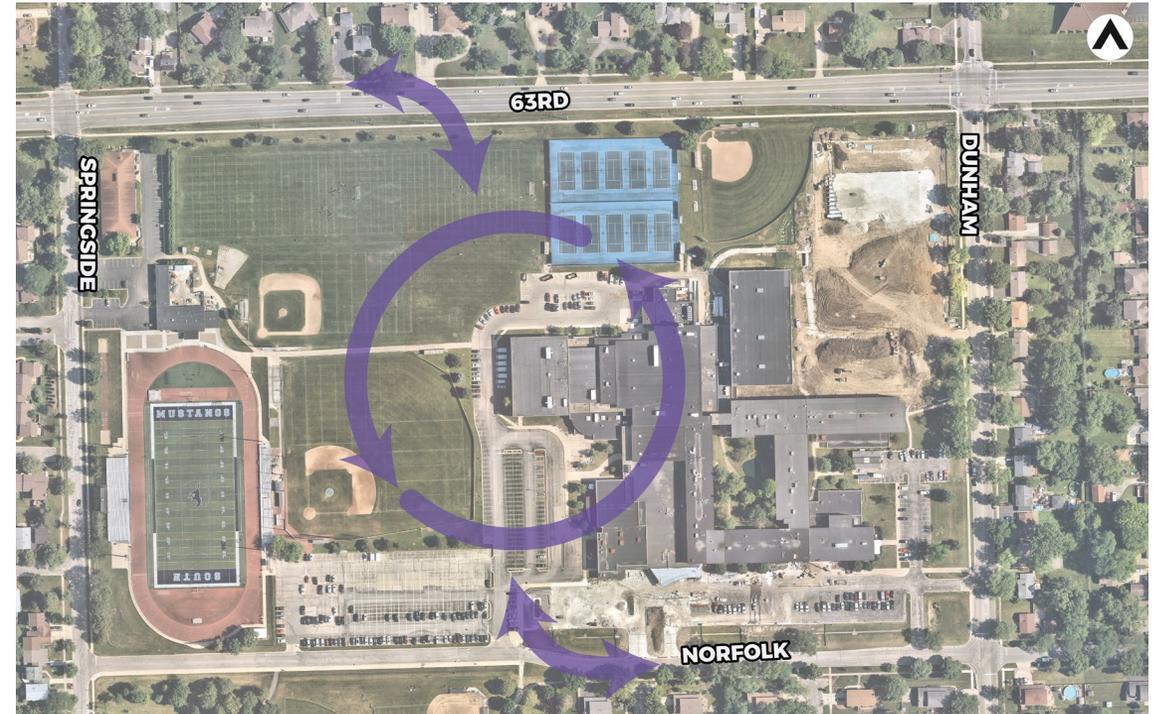
TOP COMMENTS

- 1 Drop off/pick up
- 2 Jaywalking
- 3 Suggested traffic signal [Norfolk]



MOST LIKED COMMENT

"Most people are not stopping at the stop signs that were put up by the crosswalk. They seem to think if someone isn't in front of them in the crosswalk that the stop sign doesn't count."



TAKEAWAY:

Disperse vehicular circulation, increase pick-up storage, and give pedestrians priority

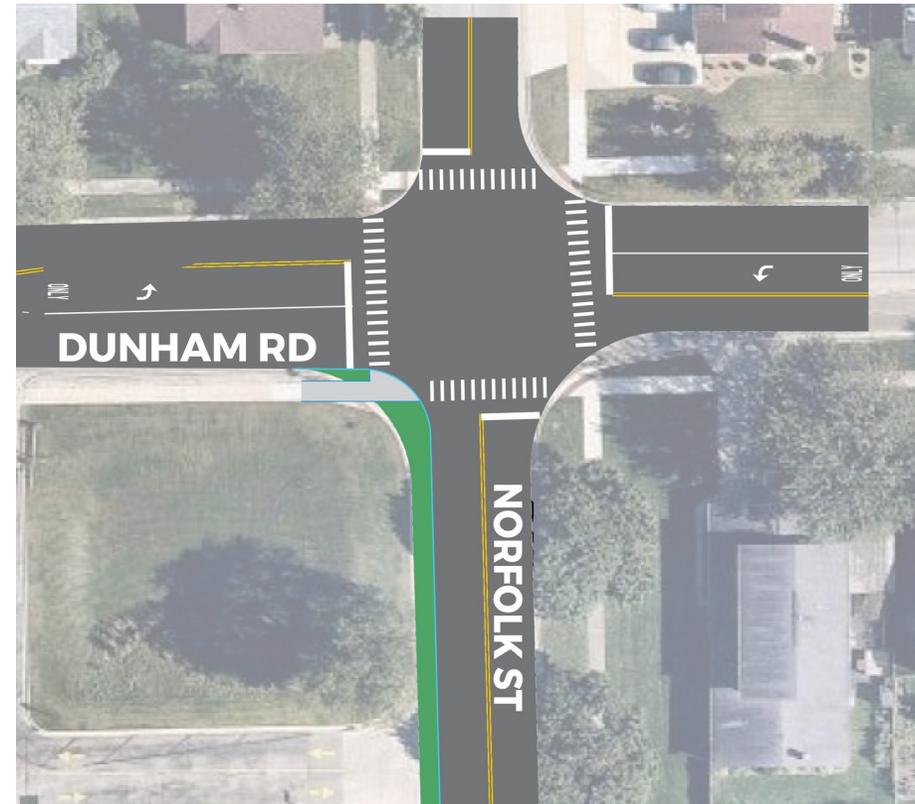
South High

NORFOLK / DGS CIRCULATION

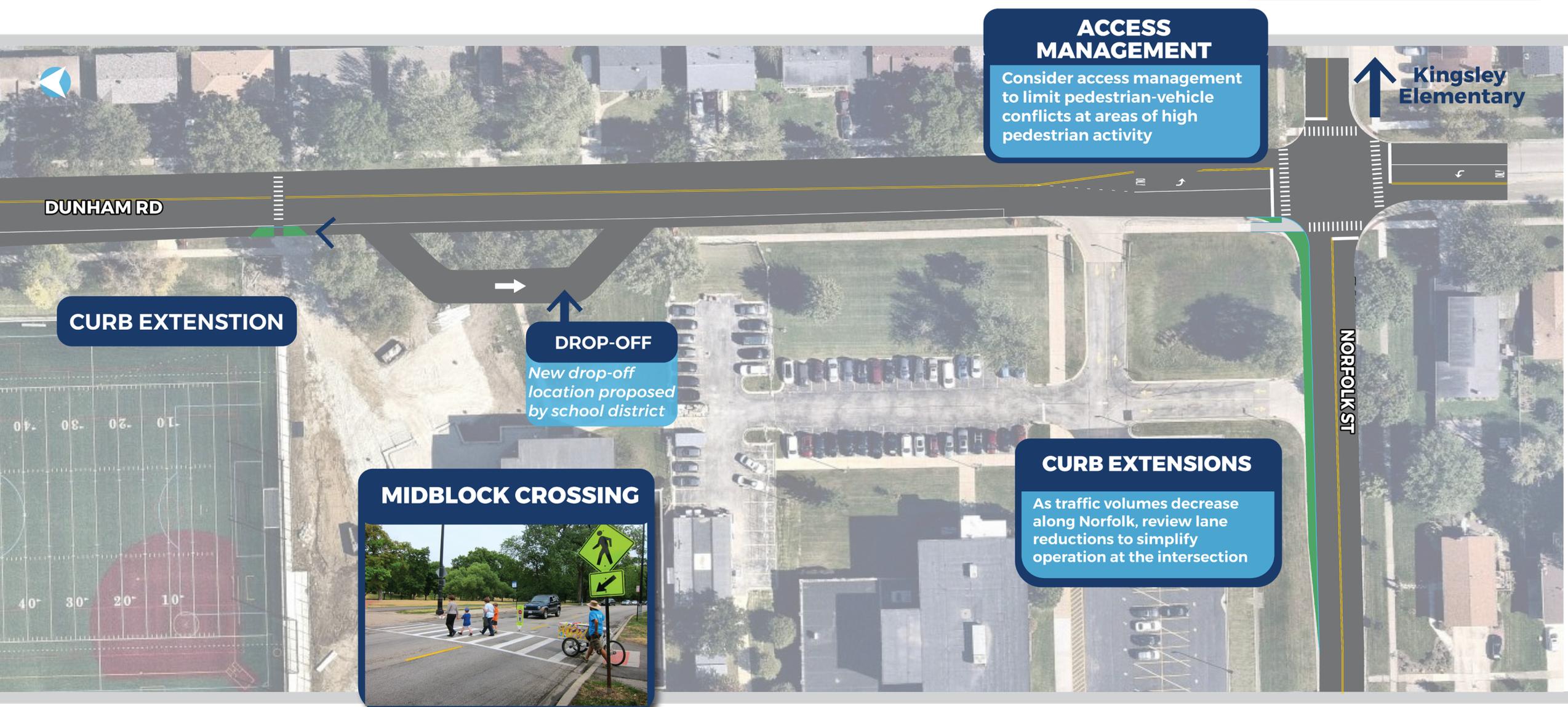
MIDBLOCK CROSSING



TURN LANE REDUCTION



NORFOLK / DGS CIRCULATION



DUNHAM RD

Kingsley Elementary

NORFOLK ST

ACCESS MANAGEMENT

Consider access management to limit pedestrian-vehicle conflicts at areas of high pedestrian activity

CURB EXTENSION

DROP-OFF

New drop-off location proposed by school district

MIDBLOCK CROSSING



CURB EXTENSIONS

As traffic volumes decrease along Norfolk, review lane reductions to simplify operation at the intersection

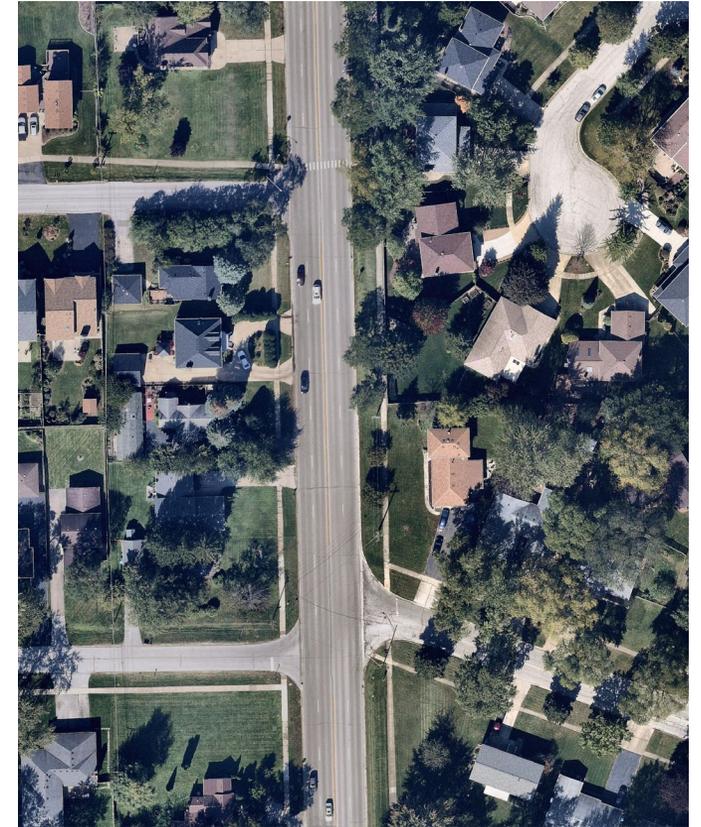
TOP COMMENTS

- 1 Suggested traffic signal
- 2 Dangerous pedestrian crossing
- 3 Speeding



MOST LIKED COMMENT

"This continues to be an unsafe crosswalk for students who live east of Main, and do not get bus service to DGS. 4 lanes of 40+mph traffic is ridiculous, [...] There needs to be a pedestrian-controlled crosswalk fixture that flashes RED / STOP when students are in the crosswalk."



TAKEAWAY:

Speed and crossing distance on Main require that pedestrians should cross at signaled location

South High

MAIN / NORFOLK INTERSECTION

**RELOCATE CROSSWALK AND
INSTALL TRAFFIC SIGNAL**



MAIN / NORFOLK INTERSECTION



NEXT STEPS

- > Post presentation online
- > Gather & assess feedback
- > Present recommendations to Village Board & School Board
- > Choose appropriate recommendations to plan, budget
- > Follow Village implementation process

