

# **Klockner Elementary School**



**Hamilton Township, NJ  
School Travel Plan  
July 2018**

Prepared by Greater Mercer TMA



**NEW JERSEY**  
**Safe Routes to School**



**GREATER  
MERCER**  
Discover Greener Paths



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# Introduction

Klockner Elementary School is located in Hamilton Township (Mercer County), NJ. The school district comprises nearly 12,400 students and spans 17 elementary schools. According to the 2010 Census, Hamilton Township has 88,464 residents. Klockner's 2.3 acre site has housed the school population since 1908. Due to the historic nature of its foundation, there are spatial challenges for larger vehicles, drop-off areas, and accommodating general population growth.

Greater Mercer Transportation Management Association, a private transportation non-profit was able to assess the current pedestrian facilities and propose the following improvements to not only increase Klockner's green commutation, but to do so safely.

This document, a school travel plan, identifies background and context about the school, observed traffic hazards, some suggested improvements and an estimated timeline/cost breakdown.

## Goals

Using the "Six E's" of Safe Routes to School (Evaluation, Engineering, Education, Encouragement, Enforcement, Equity), Greater Mercer TMA would like to increase the number of bicycle riders and walkers at Klockner Elementary School.

# School Description

## Klockner Elementary School Description

- Address: 830 Klockner Rd, Trenton, NJ 08619
- For the 2018-2019 school years, there were 261 students in grades Pre-K to 8:
  - 22 Pre-K
  - 40 Kindergarten
  - 39 first grade
  - 40 second grade
  - 43 third grade
  - 36 fourth grade
  - 41 fifth grade
- Arrival: Students enter the school at 8:45am and begin instruction at 8:55am.
- Dismissal: A normal school day dismisses at 3:35pm. On a One Session Day, students are dismissed at 1:15pm.

## Current Safe Routes to School Programming

GMTMA conducted a May 30, 2018 Walkability Audit with Joe Radice, School Climate Specialist; Robert Poppert, PP, AICP, Supervising Planner, Hamilton Township; and school parents.

## Working Groups and Partnerships

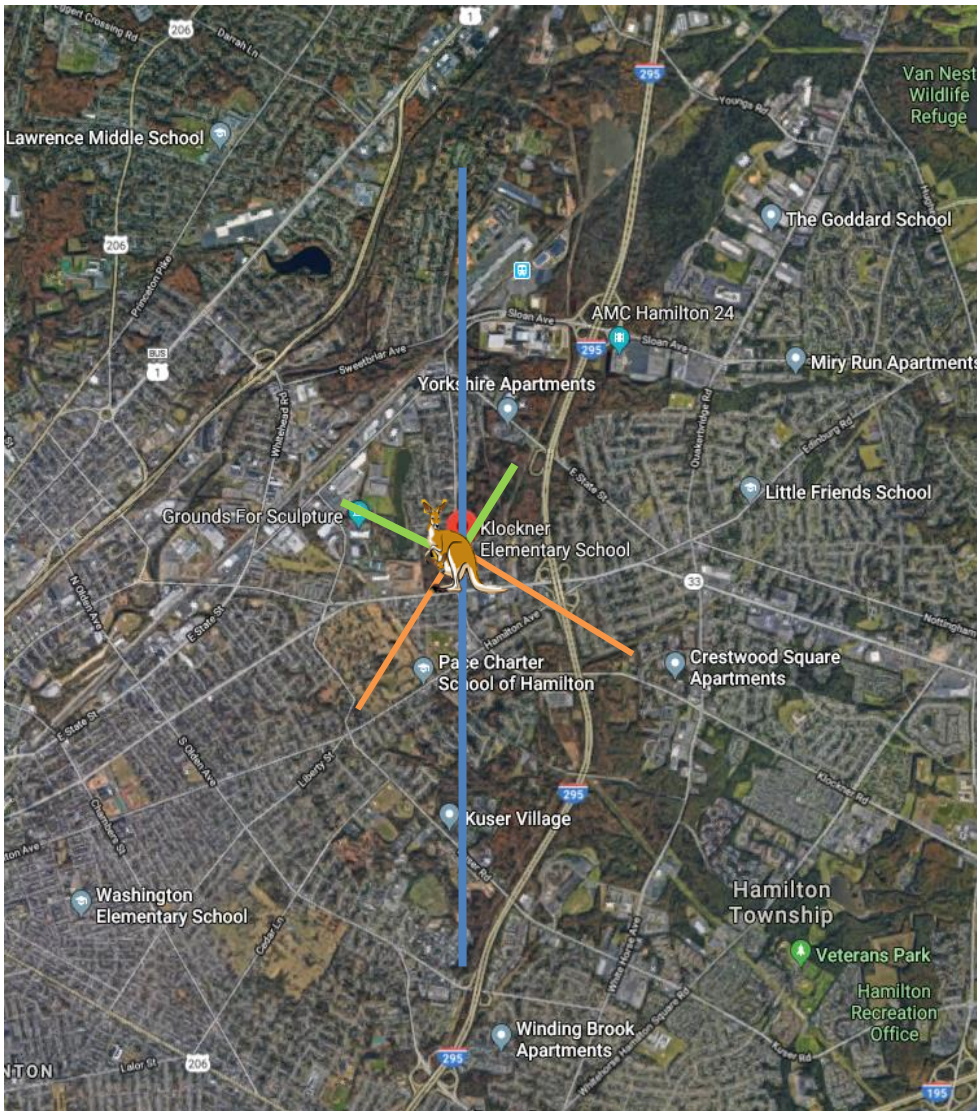
Organization	Role/ Responsibility	Contact
Voorhees Transportation Center	Key Partner	Sean Meehan Project Manager 848.932.2860 <a href="mailto:smeehan@ejb.rutgers.edu">smeehan@ejb.rutgers.edu</a>
Greater Mercer Transportation Management Association	Key Partner	Jerry Foster Transportation Safety Educator 609.452.1491 x 227 <a href="mailto:jfoster@gmtma.org">jfoster@gmtma.org</a>
Greater Mercer Transportation Management Association	Key Partner	Ian Henderson Sustainable Transportation Coordinator 609.452.1491 x 237 <a href="mailto:ihenderson@gmail.com">ihenderson@gmail.com</a>
Klockner Elementary Champion	School Partner	Joe Radice Culture and Climate Specialist <a href="mailto:jradice@hamilton.k12.nj.us">jradice@hamilton.k12.nj.us</a>
Klockner Elementary Champion	School Partner	Sharon Young Principal <a href="mailto:syoung@hamilton.k12.nj.us">syoung@hamilton.k12.nj.us</a>
Hamilton Municipal SRTS Champion	Community Partner	Robert C. Poppert Township Planner Municipal Housing Liaison <a href="mailto:rpoppert@hamiltonnj.com">rpoppert@hamiltonnj.com</a>

## Partnerships

- Hamilton Township School District
- Hamilton NJ Department of Community Planning and Compliance

## Existing Conditions- Maps

Fig 1. School Neighborhood



Blue=2 miles, Orange=1 mile, Green=.5 mile  
Source: Google Maps

The Klockner School building, located at **830 Klockner Rd, Trenton, NJ 08619**, is a historic structure constructed in 1908 with extensive renovations in 1990. It lies adjacent to a U.S. Army Reserve post and sits across the street from dense, tree-lined Klockner Road.

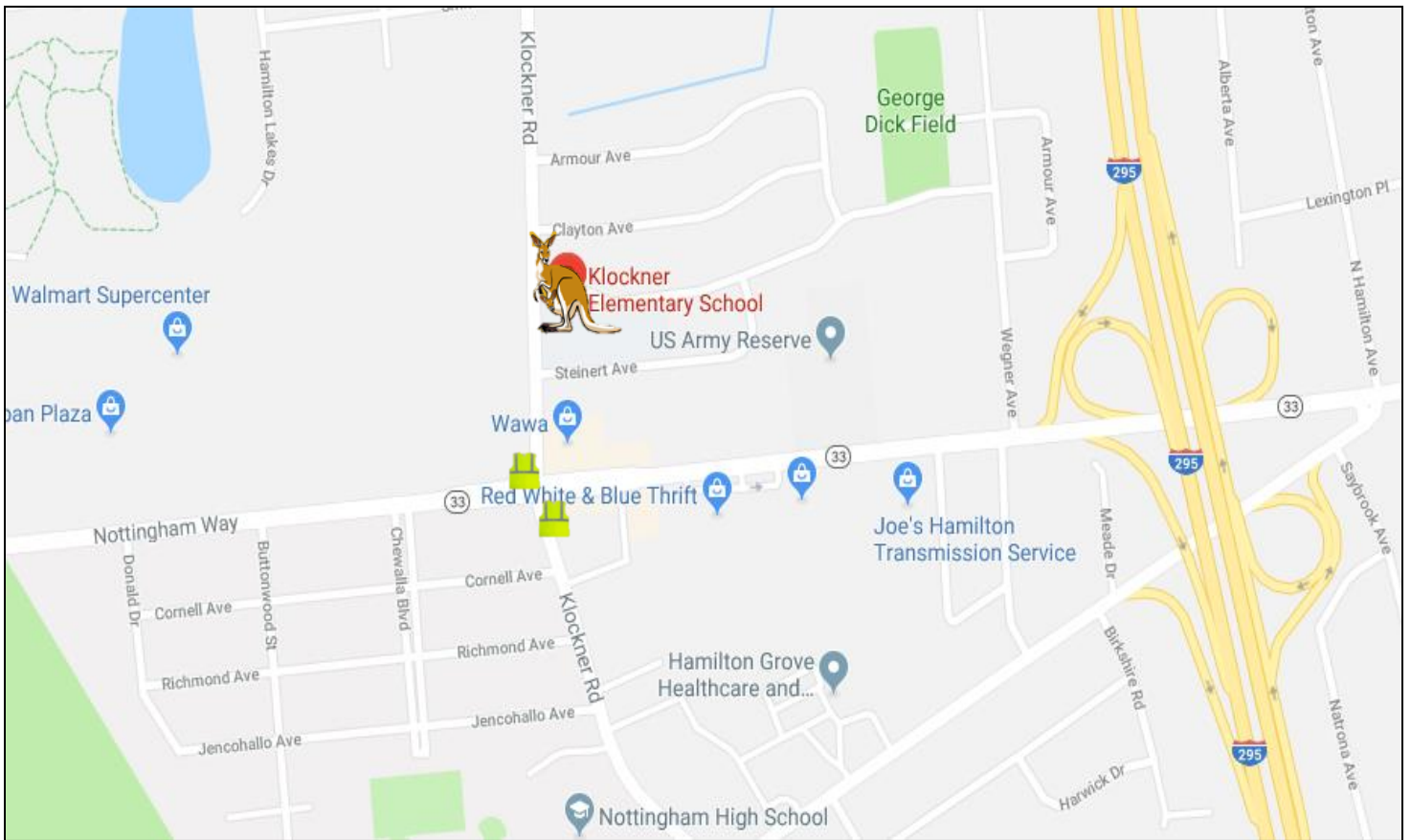
The school is located in close proximity to high-traffic generators. The Nottingham Way/Klockner Rd intersection faces a large volume of rush

hour traffic with both Wawa and Dunkin' Donuts breakfast pick-up and a gas station. In fact, two crossing guards were stationed there to increase visibility and adherence to their commands (see Figures 2 and 3).

The 2.3 acre site is one of seven Hamilton Township Elementary Schools and hosts students from Mercerville neighborhoods.



Fig 2. Crossing Guards



Vest=crossing guard

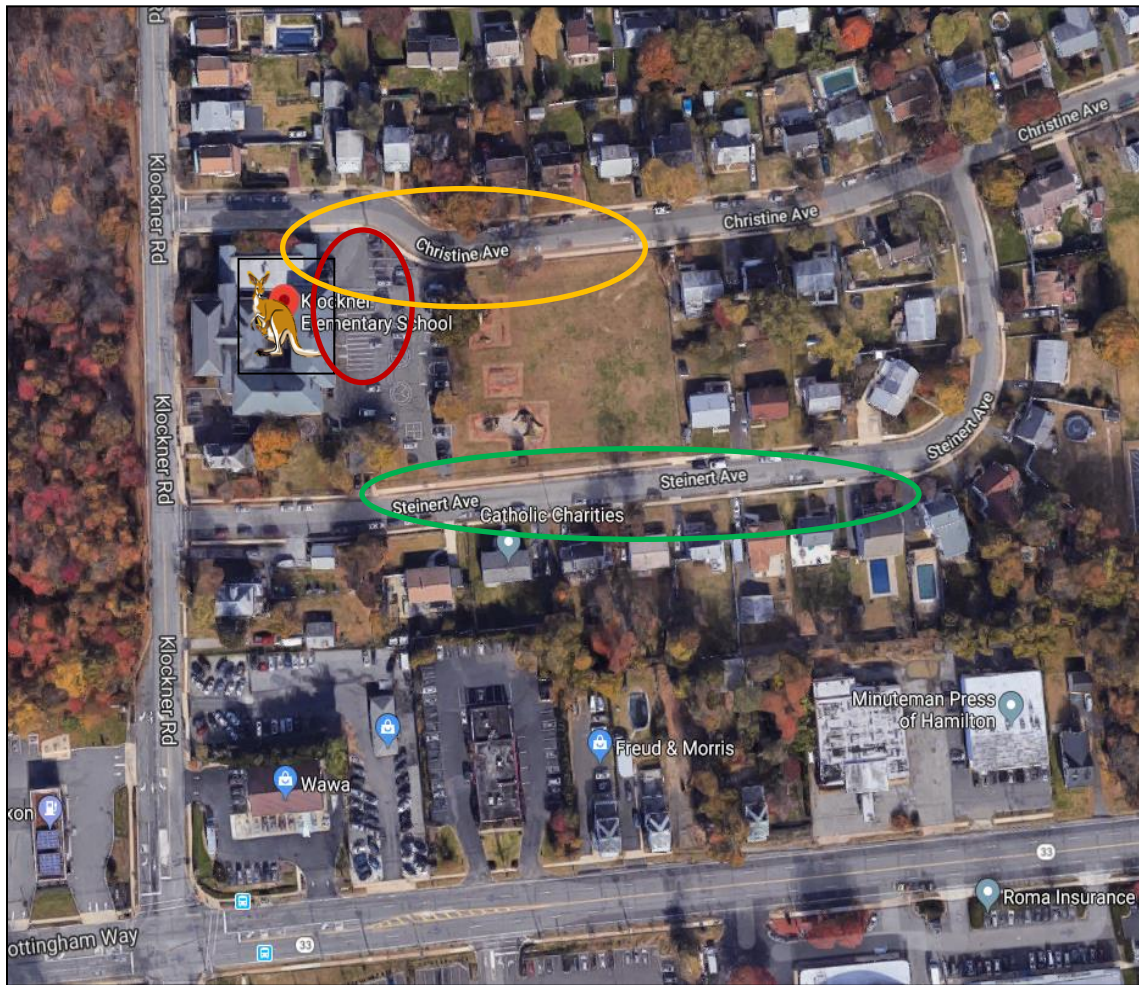
Source: Google Maps




Fig 3. Klockner Rd./Nottingham Way



## Arrival/Parking/Dismissal

Fig 4. Klockner Arrival/Dismissal Zones



-  Staff parking
-  Parent Drop-off
-  Bus Drop-off

One drawback to the historic structure is the lack of parking for its staff. Car drop-off occurs along Christine Avenue and parents often double park according to walkability audit participants. There is “No Parking” signage and yellow paint, but it has done little to deter parents.

In order to remedy the bottlenecks, teachers and PTO members have voluntarily patrolled the lot at dismissal.

Buses align the length of the opposite side of the school, Steinert Avenue.

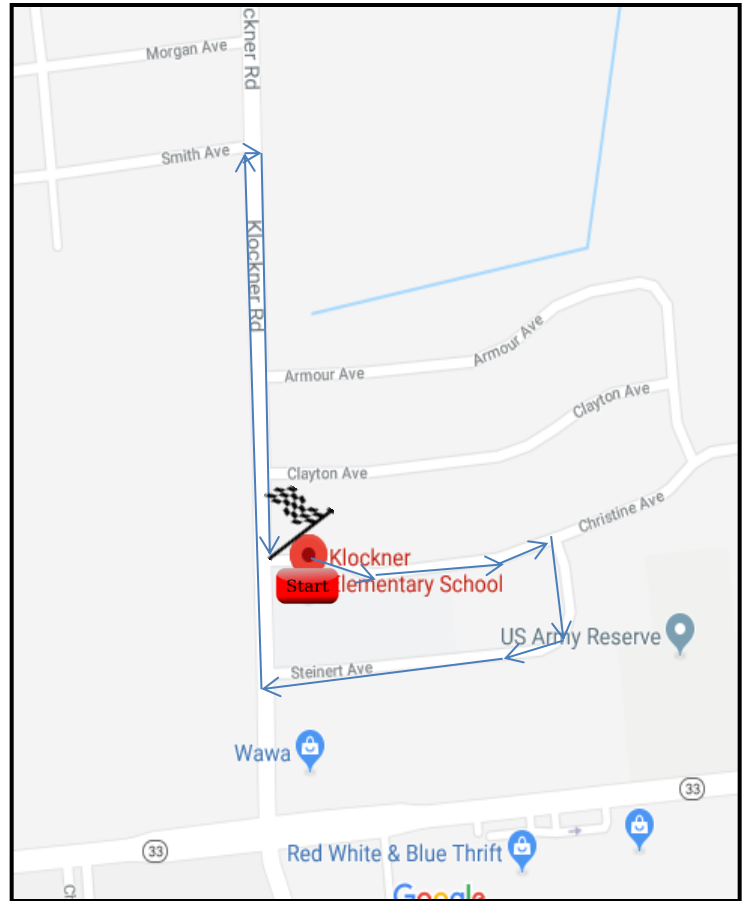
It is unknown how many elementary students cross Klockner/Nottingham Way. Nottingham High School likely accounts for some of that foot traffic. During the walkability audit, there were high-school age students crossing and headed toward Klockner.

## May 30, 2018 Walkability Audit

In order to gather ground-level observations, representatives from Greater Mercer TMA, Hamilton Township Planning, Klockner School, and parents were present for a walkability audit around the school. Photographs taken on the audit are used in the recommendation section found below. The group was able to observe traffic flow, road safety hazards, model/ideal fixes, and brainstorm new traffic safety improvements.

The route included a majority of the Klockner School perimeter and Klockner Road.

Fig 5. Walkability Audit Route

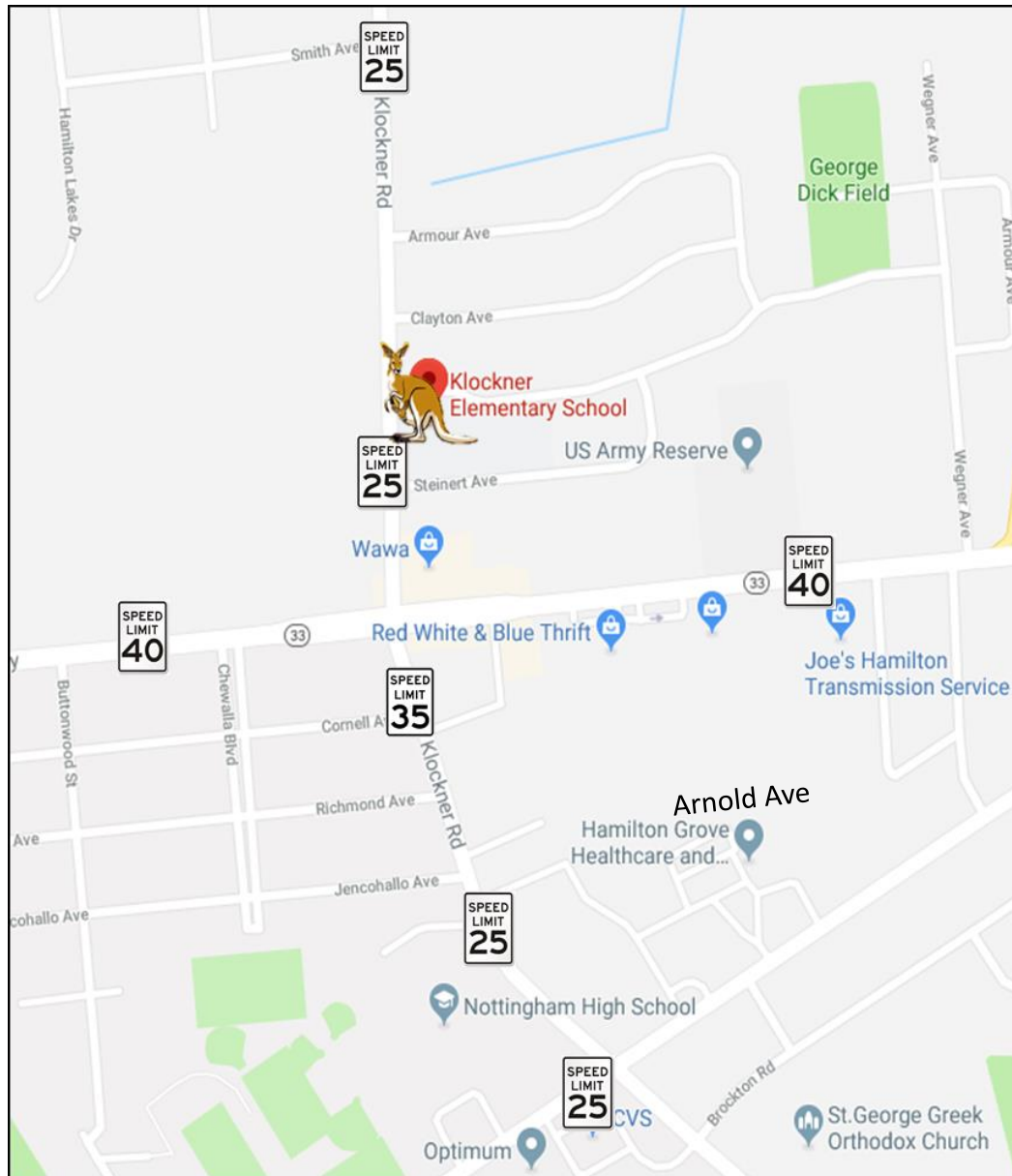


Source: Google Maps



# Walk/ Bike Barriers and Opportunities

Fig 6. Area Speed Limits

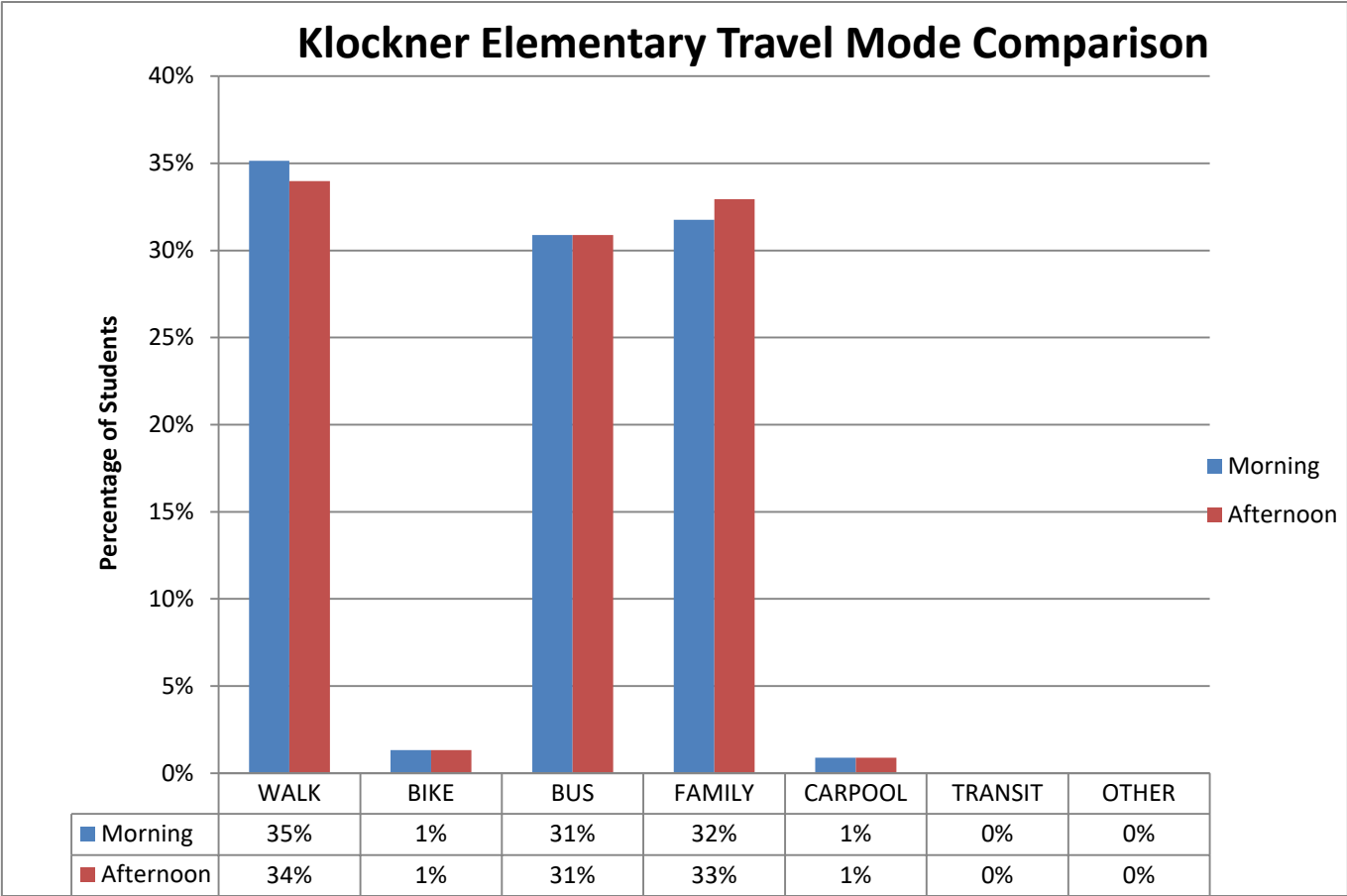


Source: Google Maps

# Travel Tallies

At the end of May 2018, travel mode tallies were taken in classrooms at Klockner Elementary. For three days (Tuesday, Wednesday, Thursday) May 29-31, the students were asked “How did you arrive at school today?” and “How do you plan to leave for home after school?” The students then raised their hands and were counted for each applicable travel mode: walk, bike, school bus, carpool, family vehicle, transit or other. Over the course of three days, 680 student travel trips were recorded and percentage per mode can be found in Table 1 results below.

Table 1. Klockner Travel Tallies



Currently, it is an almost even split in the number of students who walk, take a bus, or ride in a family car. Increasing and improving bicycle and pedestrian infrastructure may inspire those in family vehicles to try a more sustainable mode. Efforts to pool students, either through Walking School Buses or vehicular carpools, should also be sought.

## School Policies

\*Emphasis added

### 8600- TRANSPORTATION (M)

Section: Operations

Date Created: July, 2008

Date Edited: August, 2016

The Hamilton Township Board of Education, while cognizant of the fact that bus transportation of pupils is necessary when safety and/or distance preclude them from walking to school, also expresses its belief that **walking is desirable and healthy and pupils should be encouraged to walk to school whenever possible.**

As required by law (18A:39-1 et seq.) the Board of Education shall provide transportation for all pupils who reside a remote distance from their assigned school of attendance. The words "remote from their school of attendance" shall mean beyond two and one-half miles for high school students (grades nine through 12) and beyond two miles for elementary and middle school students (grades preschool through eight).

The Hamilton Township Board of Education will annually make a determination regarding "courtesy busing.

It shall be the responsibility of the parent(s) to provide transportation for pupils who live less than the specified distance from school. The parent shall decide the means of transport for the child and the parent shall decide the walking route for their child, if applicable.

The measured walking path to school shall refer to N.J.A.C. 6A:27-1.2 which states measurements shall be made by the shortest route along public roadways or public walkways from the entrance of the pupil's residence nearest such public roadway or public walkway to the nearest public entrance of the school which the pupil attends.

Measurements shall be conducted with the use of a calibrated walking wheel along the walking path as described above. There will be a twenty-five foot margin leeway added to the measurement and measurements shall be determined by the Transportation Routing System, Versa Trans.

**The Board of Education shall also provide transportation for pupils, whose travel to and from school exposes them to a condition recognized as hazardous according to the policy.** The recognized route shall be the route used by the Transportation Department for the measurement.

The relative risk criteria are to be applied to conditions only during pupils' normal walking times to and from school. Changes in conditions will result in re-evaluation.

The hazardous route criteria for a particular route will be evaluated independently by the Transportation Supervisor and the School Business Administrator with the assistance of the Hamilton Township Police Traffic Safety Department as needed.

The following is a list of the **hazardous route criteria:**

1. **Lack of continuous existing walkway and/or walking path along the measured walking path to school. Walking path shall include concrete, blacktop, cinder, grass and/or soil as they exist. Absence of walkway within residential developments will not entitle residents to transportation.**
2. **Pupils crossing a major intersection, defined as an intersection with four or more lanes of traffic, and in rare circumstances, two or more lanes, unprotected by crossing guard (elementary/middle pupils only).**
3. **Obstructed walkway impeding the walking path that must be crossed to reach the school, including entry/exits of major expressways, railroad crossings, bridges, and unprotected overpasses.**

In the interest of pupil safety, the Board of Education will not establish bus routes that require school vehicles to make "U" or "K" turns or enter cul-de-sacs except in unusual circumstances.

Temporary transportation will include any condition posing immediate and substantial danger not otherwise described above resulting in immediate busing.

Transportation shall continue only so long as the unsafe condition(s) exist. Once the unsafe condition(s) are corrected or eliminated, transportation will cease and the provision of this policy concerning walking distances will be in effect.

Students who live less than the defined distances in this policy, from the school they attend and whose travel to and from school exposes them to a condition recognized by the Board of Education as hazardous are eligible for busing. **Any handicapped pupil authorized by the Board to attend school on a full-time basis outside of the district shall be provided transportation on the days that the receiving district is in attendance.**

For purposes of this policy, "hazard" shall be defined as any area designated by the Transportation Supervisor, School Business Administrator and Superintendent, and approved by the Board, including but not limited to non-continuous roadways/walkways, and entry/exits of on/off ramps of major expressways.

A pupil's claim for transportation eligibility under this policy shall be resolved in accordance with the following procedures:

1. The applicant shall submit the claim in writing to the Transportation Supervisor with a statement of reasons in support of the claim.
2. The Transportation Supervisor shall review and investigate the applicant's claim and, together with the Superintendent and School Business Administrator, shall evaluate the applicant's claim in the light of the Board's criteria for hazardous conditions. The Transportation Supervisor shall notify the applicant in writing of the decision reached by the three school officials.

The Board of Education recognizes that illness or injury may render a pupil in temporary need of special transportation arrangements, and circumstances may make it impossible for the parents/guardians to provide same.



Providing school transportation in such instances is in keeping with Board practice of providing transportation where bona fide and exceptional circumstances apply.

Temporary medical emergencies, as described by a pupil's physician, verified and approved by the district Chief Medical Inspector, shall be cause for providing special transportation, with the least disruptive adjustment possible to the existing transportation system.

N.J.S.A. 18A:39-1 et seq.

N.J.S.A. 27:15-16

N.J.S.A. 39:3B-1 et seq.

N.J.A.C. 6A:27-1.1 et seq.; 6A:27-2.1 et seq.; 6A:27-3.1.

Adopted: 23 July 2008

Revised: 23 November 2010; 24 August 2016

## **5514- STUDENT USE OF VEHICLES ON THE SCHOOL GROUNDS**

Section: Students

Date Created: July, 2008

Date Edited: January, 2017

**Students riding bicycle to school must comply with all applicable State and local laws for operating a bicycle.** The Principal of each school may develop school rules for the operation of the student's bicycle on school grounds. Students must park and lock their bicycle s in an area outside the school building designated by the Principal. A bicycle may not be brought into the school building without the Principal's permission.

**Students are not permitted to bring non-motorized skateboards, scooters, roller skates, or any other non-motorized mode of transportation on school grounds during the school day.**

**Students are not permitted to bring any motorized bicycle, skateboard, scooter, roller skates, hoverboard, or any other motorized mode of transportation on school grounds during the school day.**

The Principal of each school building may revoke the privilege of a student's use of any vehicle or mode of transportation permitted by this Policy for the student's failure to follow the provisions of this Policy and any requirements of State or local law or any school rule. The Board of Education assumes no responsibility for the loss, damage, or theft of any vehicle or any mode of transportation permitted on school grounds in accordance with this Policy.

Adopted: 23 July 2008

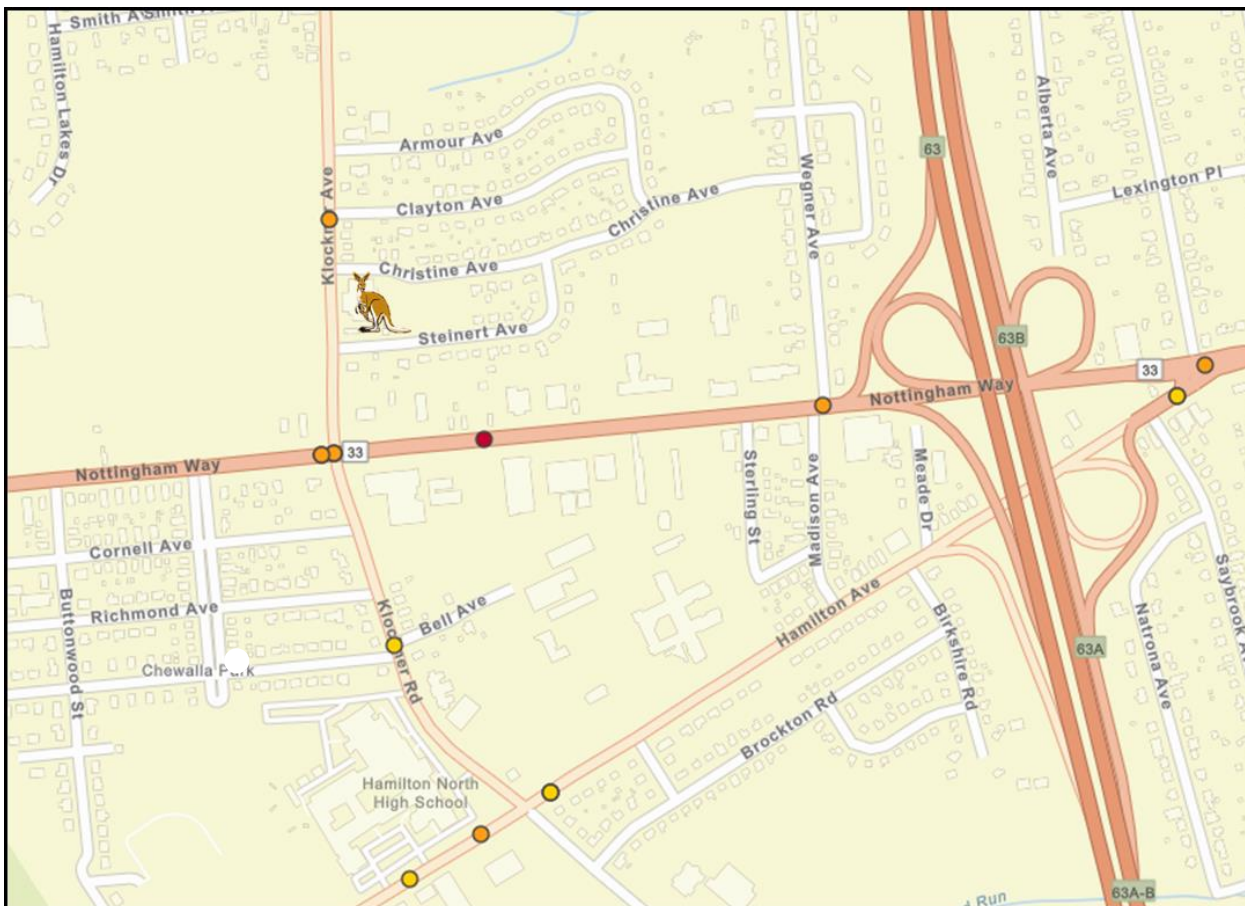
Revised: 16 November 2016

## Safe Routes to School-Disabled Student Inclusion

- Maintenance of current ADA-compliant pads and addition of pads to sidewalks to enable access during Walk to School events
- Adjust safety presentation styles for those with ADHD and other learning obstacles
- During schoolwide walk audit events, tailor routes for special needs students
- Train the Trainers approach- Pass along safety education to the aides who have to tailor educational needs based on individual student plans
- Look into funding sources for purchasing specially-tailored bicycles for disabled.

## Crash Data

Fig. 7 Klockner Vicinity Pedestrian and Cyclist Crash Data 2006-2016



Red=Fatality, Orange= Moderate Injury, Yellow= Pain 2006-2016. School is denoted by kangaroo icon.

Source: NJDHTS

A full list of Klockner Elementary vicinity cyclist and pedestrian crashes from 2006-2016 is listed in Appendix A.

## Identification of Problem Areas

Please see Figure 5 for the route map of the walk audit conducted May 30, 2018. Parent and administrative conversation provided valuable input in determining priority areas.

## Recommended Infrastructure Improvements

\*Please note that good examples of current infrastructure are included for reference purposes.

*In general:*

- School tallies reveal one third of students use a family vehicle. Greater Mercer TMA would like to see more students walk or bike to school.
- Though marked 25 mph, Klockner Road likely has higher-speed traffic, therefore traffic-calming measures should be prioritized.
- Arrival and dismissal along Christine Avenue gets backed up and should be addressed.

The following pages contain infrastructure recommendations. Photographs of current conditions precede a description of suggested solutions.

### Klockner Road

Fig. 8,9 Klockner/Christine Ave Crossing



A high-visibility crosswalk is found connected to the school entrance. Trees provide shade and the sidewalk was redone recently.



Fig. 10, 11 Between Klockner Road Wawa Driveway and Klockner Elementary



Sidewalk pavement extends across the dealership driveway (above), but not across Wawa driveway (below). The sidewalk width was appropriate, as the woman with a stroller could comfortably walk. However, deliveries and cars parking along Klockner can ride too close to the sidewalk. That is more of an enforcement issue.





Fig. 12, 13 Klockner Flashing Signs



Flashing signs (left) were not operational during a walkability audit. While flashing lights are an improvement, yellow-green pedestrian signage, school zone paint, and a pole-mounted speed sentry can also be instituted in each direction to further increase safety. Elements are combined in an overhead configuration seen in Ewing, NJ (below).



Fig. 14 Klockner Road and Smith Avenue



The only marked crosswalk along the audit route has faded paint and diagonal ADA dome that is not compliant with the newest recommendations. A marked crosswalk should be added along Klockner Road across Smith Ave. A Rectangular Rapid Flash Beacon would work well. At a minimum, pedestrian signage should be added. Smith

Street leads into a large neighborhood where it is presumed students from Klockner live. Given the potential number of walkers from this neighborhood, an improved crosswalk would be warranted. No official catchment map was available.

## Christine Avenue

Fig. 15 Christine Ave (Eastbound) Drop-off



Yellow paint does indicate that “No Parking” is permitted. A hanging “No Parking” sign is faded and needs to be replaced.

Fig. 16 Christine Ave (Westbound)



The narrow width and curved road design encourages slow speeds. Even so, enforcement for cars in a drop-off line is ideal.

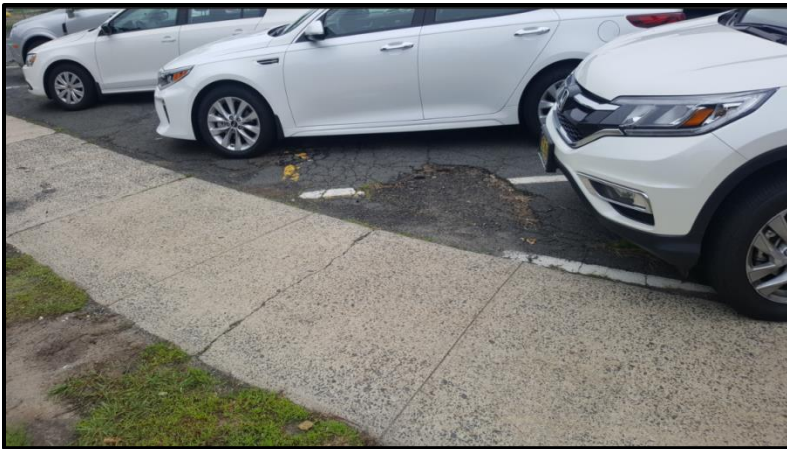


Fig. 17 Staff Parking Lot

Teacher and staff parking is quite limited since the school was built prior to the automobile. Spaces can extend very close to the sidewalk edge (above). Aside from asphalt upgrades, perhaps plastic bollards or low-level fence separation would provide enough separation to avoid vehicles

on the sidewalk, especially in the school drop-off zone adjacent to the lot.

## Parking Near Corners

There was either missing or faded yellow paint on a few curbs. Cars were parked within 25 ft. from corners. This causes a visibility risk for drivers exiting the street or students crossing around vehicles. “No Parking Here to Corner” signs are suggested.

NJ Law (emphasis added):

“39A:PKG-3. Places where parking prohibited a. Except when necessary to avoid conflict with other traffic or in compliance with the directions of a traffic or police officer or traffic sign or signal, the operator of a vehicle shall not stand or park the vehicle in any of the following places... **(5) Within 25 feet of the nearest crosswalk** or side line of a street or intersecting highway, except at alleys;”

## Steinert Avenue

Fig. 18 Bus Drop-off

Buses drop off students along the entire length. This is denoted by yellow paint. This is a good zone for anti-idling signage and enforcement.





## Nottingham Way

Fig. 19 Klockner Road and SR 33 (Nottingham Way)



Wawa and student drop-off draw large morning rush traffic.

After interviewing a crossing guard on the audit, the following was suggested by the guard:

- Left turn lane from Nottingham Way to Klockner to be restrictive: Green left arrow should turn red instead of blank during the straight ahead green phase. There are near miss issues when left-turning traffic has to stop for crossing pedestrians.
- Pedestrian signal heads should have countdown timers

In addition, pedestrian signals should have a leading pedestrian interval and businesses should implement access management measures to share parking lots and reduce the number of driveways.



## Goals and Actions:

This plan of action is intended to increase safety for students on their walk to and from school and when appropriate, encourage more students to walk. The table below identifies those actions, a responsible party for implementing them, a time frame, and a level of cost. Many actions identified as “short-term” and “low cost” can make a big difference in a shorter time frame and can be accomplished with the help of local partners. This “low-hanging fruit” can be prioritized for greater impact in a shorter period of time. However, traffic calming measures are key items to address allowing students more time to cross and greater visibility (larger driver field of vision at slow speeds).

Cost estimates are for planning purposes only – a professional engineer should prepare the actual estimates used for grant application. These estimates were prepared using the SRTS Implementation Cost sheet prepared in 2017 by NV5 to support the grant application process.<sup>1</sup>

Engineering			
Action	Responsibility	Time Frame	Cost Estimates
Sidewalk panels across Wawa driveway	Hamilton Township	Short Term	\$3.20/SF
Sidewalk bollards for Klockner Road driveways and Christine Ave staff lot	Hamilton Township	Medium Term	\$3,000/Group of 4
Pole-mounted speed feedback sign along Klockner	Hamilton Township	Medium Term	\$5,000/each
School Zone or Pedestrian signage along Klockner or Christine	Hamilton Township	Short Term	\$150 each
Klockner/Smith Crosswalk Paint	Hamilton Township	Short Term	\$360 each
Klockner/Smith Rectangular Rapid Flash Beacon	Hamilton Township	Medium Term	\$10-15,000 each
“No Parking Here to Corner” signage	Hamilton Township	Short Term	\$150 each
Thermoplastic paint- yellow lines	Hamilton Township	Short Term	\$65
Anti-idling signs	Hamilton Township	Short Term	\$15 each

<sup>1</sup> <http://www.saferoutesnj.org/wp-content/uploads/2013/07/SRTS-Costs-August-2017-update.pdf>

Education			
Action	Responsibility	Time Frame	Cost
Educate students, family members, bus drivers and school employees about drop-off/ pick up zones. Make sure everyone knows the best way to keep students safe and to quickly dismiss students from school.	School, School District	Short Term / Ongoing	Low
Increase community outreach about the health benefits of walking and biking to school.	School, PTO	Short Term	Low
Conduct community wide outreach about Safe Routes to School actions such as walking and biking safety.	School, GMTMA	Short Term/ Ongoing	Low
Establish a program to encourage students to walk and/or bike to school. Examples: Golden Sneaker Award, Walking Wednesday, Walking School Bus, Bike Train	School, GMTMA	Short Term/ Ongoing	Low
Educate community and responsible parties about snow removal on sidewalks near schools.	Public Works	Short Term/ Ongoing	Low

Encouragement			
Action	Responsibility	Time Frame	Cost
Establish main walking routes, safety corridors, walking school buses – safety in numbers.	School, PTO, GMTMA, Community Groups	Ongoing	Low
Conduct student and parent surveys to see what actions and rewards could encourage them to walk to school more – and feel safer walking to school.	School, PTO, GMTMA	Short Term	Low

Enforcement			
Action	Responsibility	Time Frame	Cost
Enforce speed limits (in general and specifically in school zones), pedestrians walking safely, drivers watching for pedestrians especially at times when students are going to/ from school.	Police	Ongoing	Low / Medium
Enforce motorist compliance with crossing guard instructions	Police	Ongoing	Low / Medium
Enforce parking laws.	Police	Ongoing	Low / Medium
Conduct Street Smart safety enforcement campaigns.	Police	Ongoing	Low / Medium

Evaluation			
Action	Responsibility	Time Frame	Cost
Conduct student travel tallies on annual basis	School	Annual	Low
Conduct bikeability audit of walking area	School, Township, GMTMA	Short Term	Low

\*Explanation of funding- Greater Mercer TMA is funded through the New Jersey Department of Transportation to offer advice and assistance in starting safe Routes to School programs and projects. Greater Mercer TMA can help with walk and bike to school events, walking school bus programs, youth bicycle and pedestrian education, school travel plans, and surveys that provide evaluation and feedback on local programs.

## Evaluation

### Task Force Timeline

Greater Mercer TMA will be in discussion with participating organizations about implementation progress.

## Conclusion

Klockner Elementary is home to over 250 students. Travel tallies reveal that about a third of students travel to and from school in the family car. It is likely that road safety concerns by parents influence this mode choice decision.

Parents on the walkability audit expressed particular concern about the car drop-off area. Double-parking and idling create a chaotic atmosphere and the staff parking lot is blocked. More students walking would reduce the amount of vehicles in question.

Recent attention has been paid to American Disability Act crossings along Klockner. However, the Klockner/Smith intersection needs to be updated. This would also provide a more visible crossing to drivers and connect that neighborhood's catchment to Klockner. School zone markings and high-visibility signage along Klockner would signal to drivers the message that a school lies nearby.

Klockner Road is marked at 25mph, but driver awareness tools such as a pole-mounted speed sentry may help slow speeding cars.

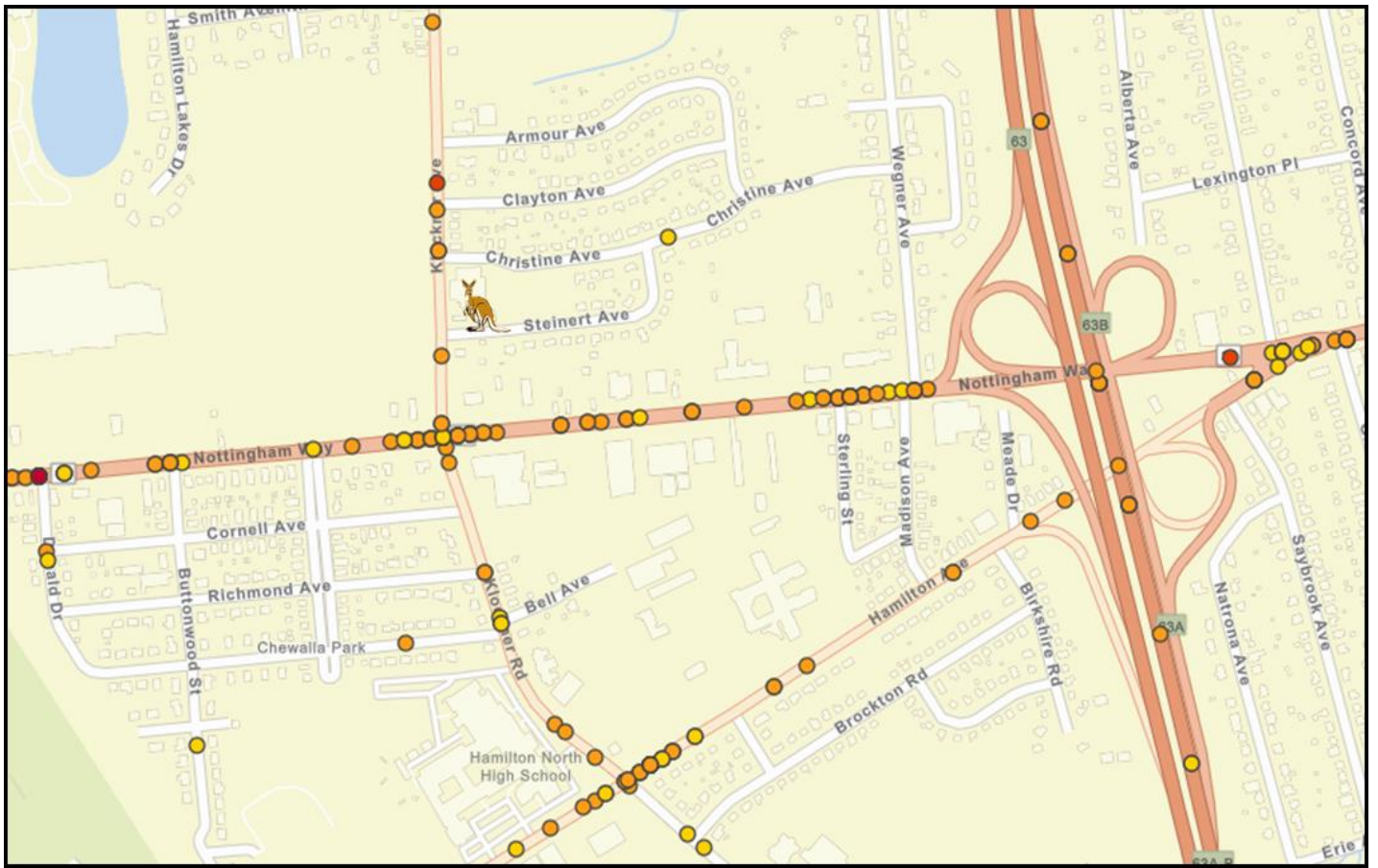
The intersection of SR 33 (Nottingham Way) and Klockner requires two crossing guards for greater visibility while students cross. Countdowns added to the pedestrian signals, including the addition of a leading pedestrian interval, would provide walkers more time to cross and increase driver's visibility of walkers.

In summary, traffic safety improvements are welcome modifications that will not only increase the safety of the neighborhood surrounding Klockner Elementary, but slower speeds can boost the community feeling in town.



## Appendix A: Klockner Elementary Proximity Pedestrian and Cyclist Crashes from New Jersey Department of Traffic and Highway Safety, 2006-2016

<b>Id</b>	<b>Severity</b>	<b>Crash Location</b>	<b>Crash Year</b>	<b>Bicyclist Involved</b>	<b>Pedestrian Involved</b>
14789316	Pain	NJ 33	2016	Yes	No
14789285	Pain	MERCER COUNTY 606	2016	No	Yes
14788247	Moderate Injury	NJ 33	2016	Yes	No
11746682	Fatal	NJ 33	2015	No	Yes
4313269	Pain	MERCER COUNTY 606	2013	No	Yes
4312622	Moderate Injury	MERCER COUNTY 606	2013	Yes	No
4312197	Pain	NJ 33	2013	No	Yes
4311851	Pain	NJ 33	2013	Yes	No
4313967	Pain	MERCER COUNTY 606	2013	No	Yes
3737999	Moderate Injury	MERCER COUNTY 606	2011	Yes	No
3442720	Moderate Injury	DONALD DRIVE	2010	No	Yes
7423296	Pain	KLOCKNER RD	2008	Yes	No
7422036	Moderate Injury	KLOCKNER RD	2008	No	Yes
7115448	Pain	NJ 33	2007	Yes	No
7114163	Moderate Injury	MERCER COUNTY 606	2007	Yes	No
6815425	Pain	NJ 33	2006	No	Yes
6815266	Pain	NJ 33	2006	No	Yes
6814844	Moderate Injury	MERCER COUNTY 606	2006	No	Yes



Red=Fatality, Orange= Moderate Injury, Yellow= Pain 2006-2016. School is denoted by kangaroo icon.

Source: NJDHTS

## Appendix B: FHWA Proven Safety Countermeasures

The Federal Highway Administration is promoting safety through proven roadway design features.

For a full list, see: <https://safety.fhwa.dot.gov/provencountermeasures/>

The following local examples show bicycle and pedestrian safety features from the list of countermeasures and should be considered when analyzing traffic safety solutions.

### Refuge Islands

Link: [https://safety.fhwa.dot.gov/provencountermeasures/ped\\_medians/](https://safety.fhwa.dot.gov/provencountermeasures/ped_medians/)



- Reduces pedestrian crossing distance
- Greater pedestrian visibility
- Narrower lanes reduces driver speeding
- Flashing beacon alerts drivers
- Islands can be landscaped

*Clarksville Rd, CR638, West Windsor NJ*

### Roundabouts

Link: <https://safety.fhwa.dot.gov/provencountermeasures/roundabouts/>



- Raised splitter island raised to form a pedestrian refuge
- Reduction in severe crashes
- Urban, rural, suburban options

*George Dye Rd and Estates Blvd, Hamilton NJ*



## Hybrid Pedestrian Beacon (HAWK Signal)

Link:

[https://safety.fhwa.dot.gov/provencountermeasures/ped\\_hybrid\\_beacon/](https://safety.fhwa.dot.gov/provencountermeasures/ped_hybrid_beacon/)



- Pedestrians can cross midblock or uncontrolled intersections
- Pedestrians activate the signal
- Motorists stop completely

*State Road 35, Seaside Heights NJ*

## Road Diet

Link: [https://safety.fhwa.dot.gov/provencountermeasures/road\\_diets/](https://safety.fhwa.dot.gov/provencountermeasures/road_diets/)

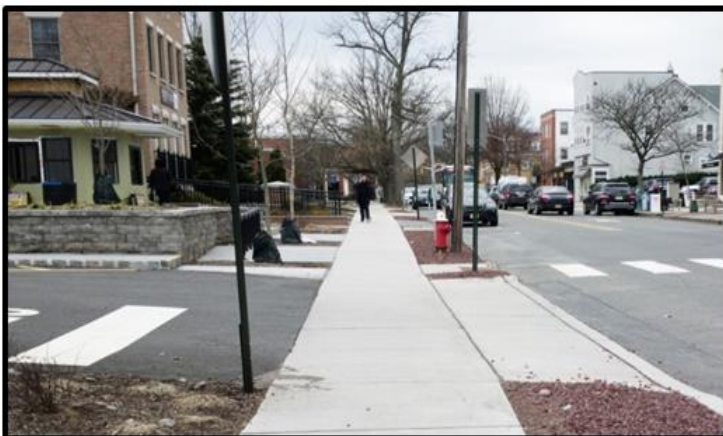


- Reconfigure four general travel lanes:
  - Two general travel
  - Center turn lane
  - Bike lanes

*West Windsor, NJ*

## Walkways

Link: <https://safety.fhwa.dot.gov/provencountermeasures/walkways/>



- Shared-use paths
- Streetscaping opportunities

*Nassau Street, Princeton NJ*



## Leading Pedestrian Interval

Link: [https://safety.fhwa.dot.gov/provencountermeasures/lead\\_ped\\_int/](https://safety.fhwa.dot.gov/provencountermeasures/lead_ped_int/)



- Pedestrian given time prior to motorist green signal

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