

## **Obstacle #4: Unpaved or Poorly Maintained Shoulders**

### **Area Example:**

Pipestone Road, between Nickerson Road and River Drive in Sodus Township

### **Evidence of Need:**

- Shoulders with ample width for bike use but without paving
- Other problems pertaining to shoulder conditions not seen on this section of Pipestone Rd. include
  - Paved shoulders with excessive debris (rocks, tree limbs, trash, etc.)
  - Paved shoulders with advanced deterioration
  - Concrete seams and longitudinal grids that can catch bike tires and pose a severe risk to riders

### **Potential Design Fixes:**

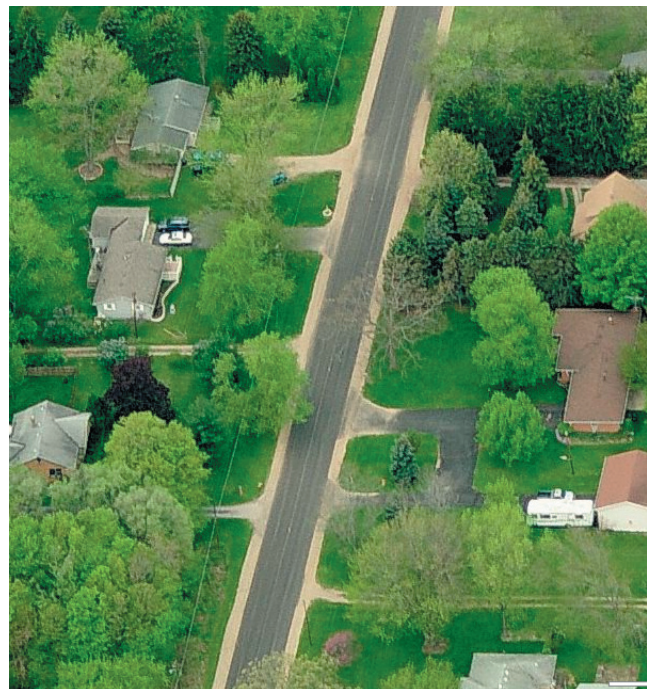
Where sufficient right of way exists, at least four feet of paved shoulders should be provided in order to facilitate safe bike riding. These shoulders should be kept free of debris, should feature pavement maintained in rideable conditions, and should be designed to be free of potentially dangerous edges and seams.

### **Other Area Examples:**

Shawnee Rd. in Lake Township; Marquette Woods Rd. in Lincoln and Royalton Townships; Cleveland Ave., Roosevelt Rd., and Washington Ave. in Lincoln Township; River Rd. in Sodus Township; sections of Red Arrow Hwy. along its length



*Wide, unpaved should on north side of Pipestone Rd., between Nickerson Rd. and River Rd.*



*Aerial view of wide, unpaved shoulders on both sides of Pipestone Rd., between Nickerson Rd. and River Rd. (photo from Bing Maps)*

## **Obstacle #5: Difficult Road Crossings**

### **Area Example:**

The intersection of Napier Avenue and Colfax Avenue, on the border of St. Joseph Township and Benton Township

### **Evidence of Need:**

- A long crossing with no islands or other medians
- Public input reporting difficulty crossing and short signal times crossing Napier Ave.
- Pedestrian traffic generators, with several stores and a middle school directly adjacent to the intersection
- Other possible signs of problematic crossings
  - A history of serious crashes at or near the intersection
  - Intersections that are excessively complicated and difficult to navigate for bicyclists and pedestrians
  - Excessively wide turning radii, allowing for faster car speeds through the intersection and increasing the distances that pedestrians need to cross
  - Observations of pedestrians struggling with intersections or crossing mid-block in difficult circumstances

### **Potential Design Fixes:**

Ways of addressing intersection crossing width including shortening curb radii, extending curbs out into the intersection, installing traffic islands, or simply lengthening the signal time pedestrians have to cross (possibly through the use of pedestrian-activated signals). Other crossing design measures can include installing signs, signals, road markings, or protected medians at frequent midblock crossing sites or at previously unsignaled intersections, as well as making complicated intersections more navigable for pedestrians and cars.

### **Other Area Examples:**

Most of the intersections of both M-139 and Napier Ave., as well as several mid-block crossings, in Benton Township; the intersections of Main St. with Ship St., Port St., and Broad St. in St. Joseph; the intersections of Hilltop Rd. with Cleveland Ave. and Washington Ave. in St. Joseph Township; the intersection of Red Arrow Hwy. and St. Joseph Ave. in Lincoln Township.



*Pedestrian crosses Napier Ave. on the east side of Colfax Ave.*



*Aerial view of the intersection of Napier Ave. (left-right) and Colfax Ave. (up-down), showing a crossing width of five lanes on each side of the intersection, with a school building shown to the lower right*