

2017

# WEST KINGSFIELD ROAD

ROADWAY SAFETY EVALUATION



*ESCAMBIA COUNTY*

*OFFICE OF TRANSPORTATION & TRAFFIC OPERATIONS*

## **WEST KINGSFIELD ROAD TRAFFIC SAFETY EVALUATION**

This evaluation is performed at the request of the District 5 County Commissioner's Office to determine what if any recommended measures can be taken to address roadway safety and potentially increasing traffic volumes.

### **Executive Summary of Findings West Kingsfield Road (CR99 – CR97):**

- Roadway has limited right of way availability and based on the existing volume and speed of traffic is deficient in the overall widths of shoulders, road surface and travel lanes per AASHTO (*American Association of State Highway and Transportation Officials*) standards.
- Immediate improvements on the existing condition of roadway surface, traffic control devices and road shoulder elements should be implemented to address current safety concerns.
- Intermediate and long term improvements should be considered to further address safety concerns and bring roadway up to design standards.

### **Recommendations:**

- Immediate
  - Replace / repair damaged or missing traffic control signs.
  - Add additional curve delineation signs and reflective pavement markers where warranted.
  - Refurbish stop bars at terminal intersections and centerline markings in turns where warranted.
  - Reduce overgrowth in right of way where needed.
  - Patch / repair asphalt as needed to the extent practical.
  - Request targeted enforcement of Truck Prohibition.
- Intermediate
  - Resurface and restripe entire roadway.
- Long Term
  - Provide 22' wide roadway with 6' shoulders.

## **WEST KINGSFIELD ROAD TRAFFIC SAFETY EVALUATION**

**Background:** The purpose of this report is to document a traffic safety evaluation of West Kingsfield Road. This evaluation is performed at the request of the District 5 County Commissioner's Office to determine what if any recommended measures can be taken to address roadway safety and potentially increasing traffic volumes. This resulting study and report was performed and prepared by Escambia County Office of Transportation & Traffic Operations' staff.

### **FINDINGS**

#### **Roadway Characteristics:**

- Runs east-west located between CR97 and CR99 (Beulah Road).
- Classified as a Local Roadway with predominantly Rural characteristics.
- Asphalt roadway accommodating 2-way traffic. Width of asphalt is approximately 18' with travel lanes varying 8' – 9' located within a 40' wide right of way.
- Roadside clear zone availability varies 1' – 8' with typical encroachments being trees, mailboxes, power poles, ditches and ditch banks.
- Adjacent land use is agricultural and rural residential. Adjacent lands are zoned low and medium density residential, low density mixed use, and agricultural.
- Daily Traffic Volumes on West Kingsfield Road averaged approximately 640 vehicles per day on the west end near Beulah Road and approximately 1,170 vehicles per day on the east end near CR97.

# WEST KINGSFIELD ROAD TRAFFIC SAFETY EVALUATION

## FINDINGS (continued)

### **Traffic Control:**

- Intersection Control - Traffic traveling West Kingsfield Road is required to stop and yield right of way to traffic traveling on CR99 (west end) and CR97 (east end), with both intersections being controlled by stop signs. All interior public side streets are required to yield right of way to traffic traveling West Kingsfield Road and are controlled by stop signs. All intersecting private roads and driveways are required to yield right of way to traffic on West Kingsfield Road per Florida Statute.
- Speed Zoning - The majority of the roadway is posted at 35 miles per hour with the exception of a 1,000' section located between Tobie Dean Road and Racer Lane which is posted 30 miles per hour.
- Truck Prohibition – The entire roadway is under Truck Prohibition.

### **Roadway Conditions:**

- Asphalt surface is in fair – poor condition displaying many areas where alligator cracking is prevalent and in most areas roadway edges are broken up.
- Traffic Control Devices
  - Striping and pavement Markings
    - Condition of existing edgeline striping is predominantly poor – obliterated / non-existent.
    - Condition of centerline striping is fair in tangent sections but obliterated in the turns located on the eastern portion of roadway.
    - Stop bars at terminal intersections in poor condition.
  - Traffic Control Signs
    - Some signs discovered to be missing.
    - Many signs were observed having bullet holes.
- Road Shoulders
  - Available, usable road shoulders vary from 1' - 8' and in many locations offer little or no obstruction free areas for errant vehicles to navigate. The close proximity of trees to edge of roadway in several locations is problematic as limbs grow into travel lanes and obstruct traffic signs in addition to being crash hazards.

# **WEST KINGSFIELD ROAD TRAFFIC SAFETY EVALUATION**

## **FINDINGS (continued)**

### **Roadway Conditions (continued):**

- Horizontal Curvature West Kingsfield Road west of Tobie Dean Road displays 2 curves with deflections of 130 and 140 degrees. East of Tobie Dean Road presents a series of 4 turns with deflections ranging from 70 to 90 degrees.

### **Crash History for 6 year period Jan. 2011- Dec 2016:**

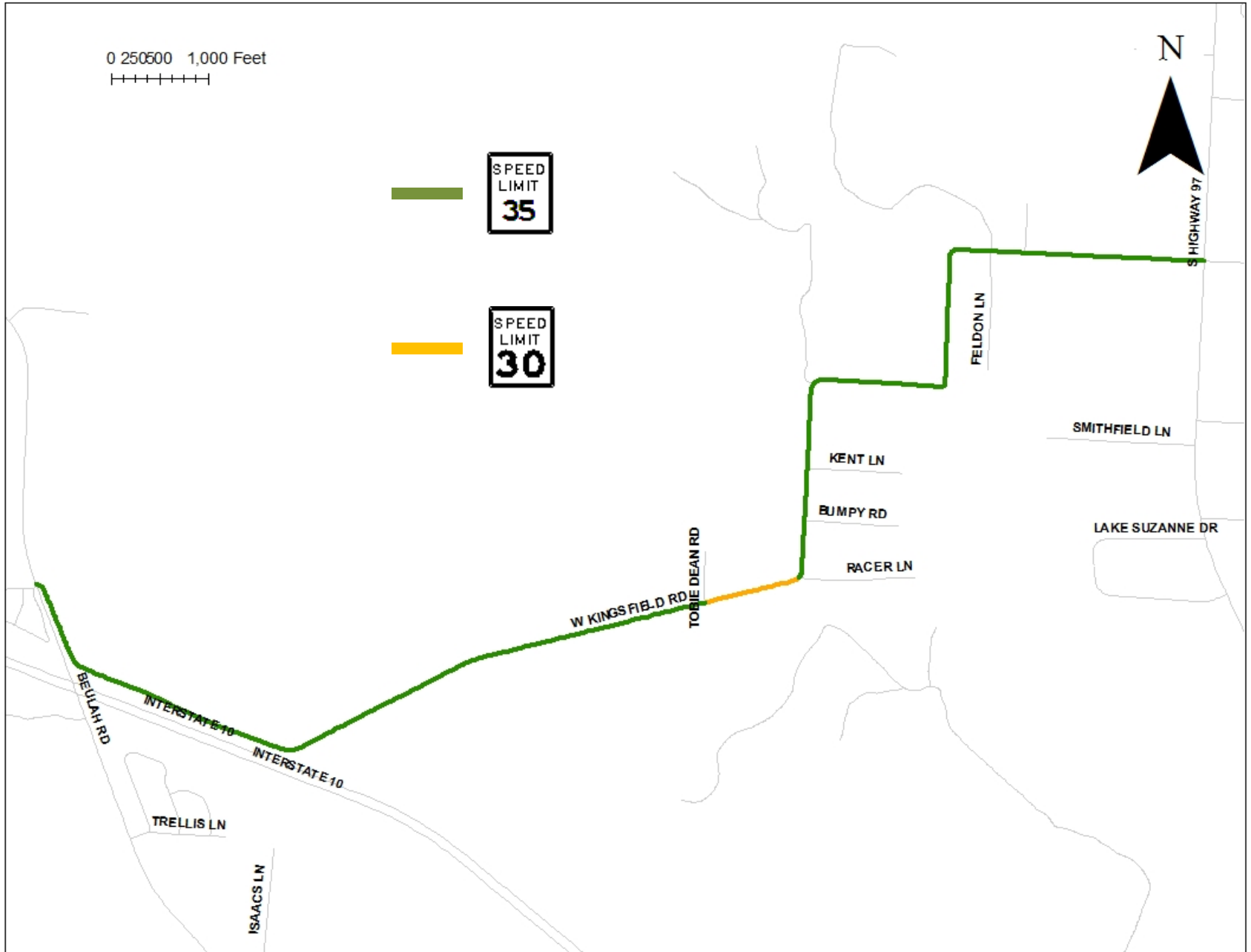
- 18 reported crashes.
  - Average Frequency = 3 per Year / 1 per every 4 months / 122 days
  - Annual Totals – 2011(5), 2012(2), 2013 (4), 2014 (3), 2015 (2), 2016 (1)
  - Crash Type Distribution:
    - Single Vehicle Run Off Road (12) 67%
    - Side Swipe (4) 23%
    - Angle (1) 5%
    - Head On 1) 5%

## **CONSIDERATIONS AND CONCLUSIONS**

Although overall traffic volumes are relatively low on West Kingsfield Road, field observations strongly suggest that this roadway is subject to a large percentage of non-local traffic using this roadway as a direct route between CR97 and CR99. Also based on observation it is evident that a large portion of the non-local volume is using this as a route to access the landfill and many of these vehicles are in violation of the truck prohibition.

Existing roadway, travel lane and shoulder widths are all deficient per AASHTO standards for the existing traffic volumes and speeds of traffic. This deficiency contributes to the high percentage of 'run off road' type crashes. Under existing conditions efforts focused at providing good roadway delineation, maintaining overgrowth and providing regulatory enforcement should be taken however future improvements toward bringing the roadway up standards should be considered.





# SPEED ZONING ON WEST KINGSFIELD ROAD



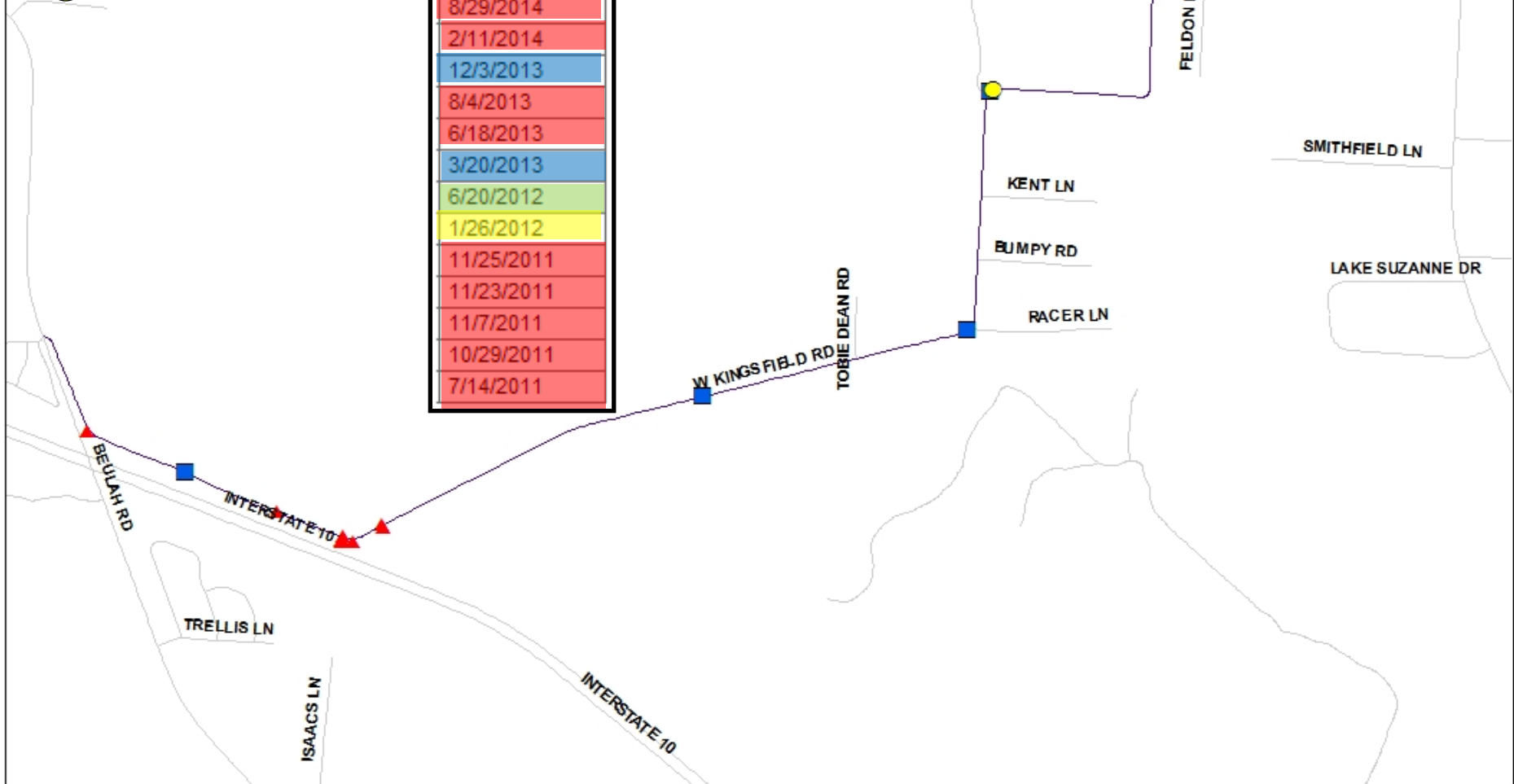
0 260520 1,040 Feet

# WEST KINGSFIELD ROAD 6 YEAR CRASH HISTORY

N

-  SINGLE VEHICLE RUN OFF ROAD
-  SIDE SWIPE
-  ANGLE
-  HEAD ON

CRASH_DATE
4/23/2016
11/24/2015
11/20/2015
10/20/2015
10/25/2014
8/29/2014
2/11/2014
12/3/2013
8/4/2013
6/18/2013
3/20/2013
6/20/2012
1/26/2012
11/25/2011
11/23/2011
11/7/2011
10/29/2011
7/14/2011



0 250 500 1,000 Feet  
|-----|-----|-----|-----|-----|-----|

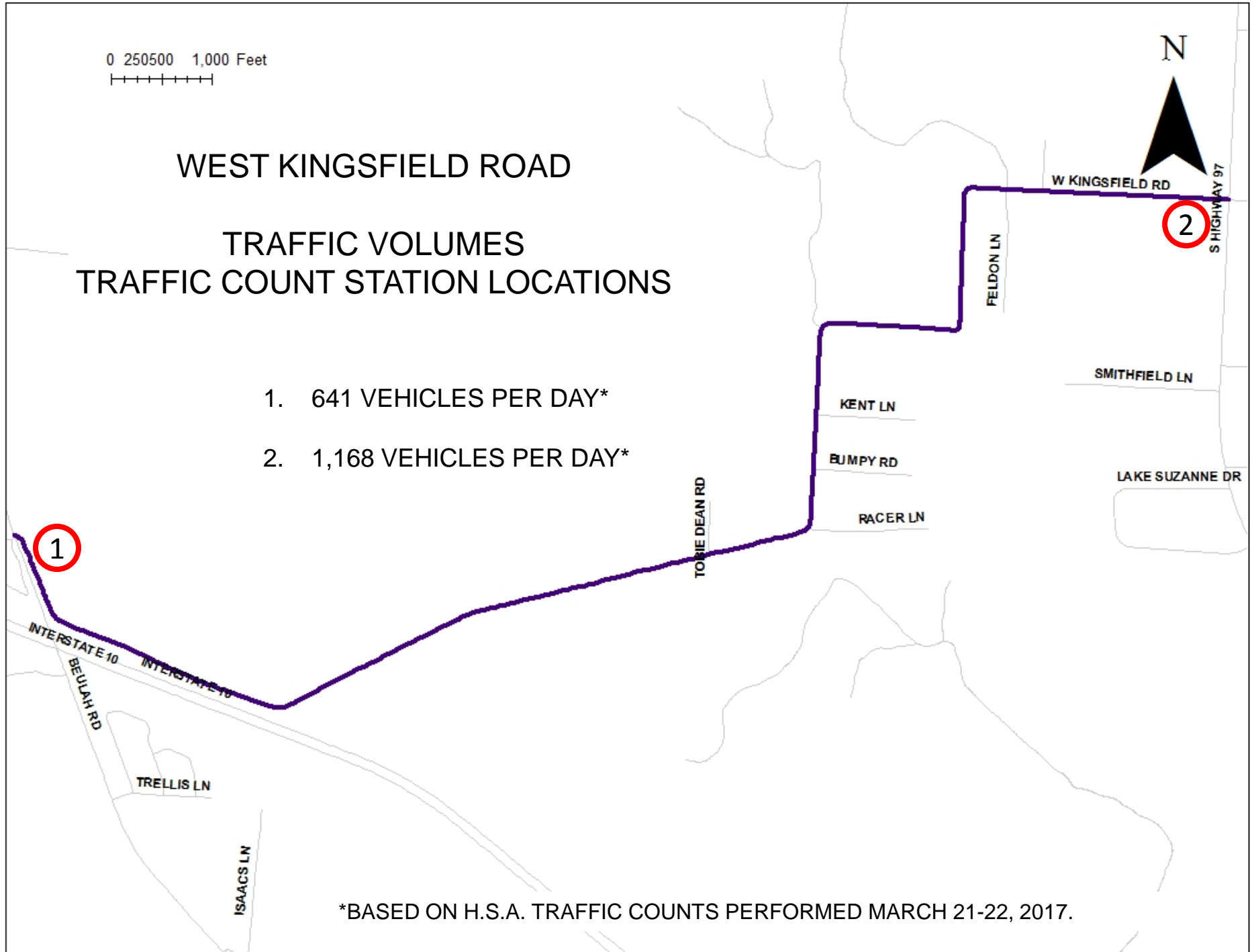
N



# WEST KINGSFIELD ROAD

## TRAFFIC VOLUMES TRAFFIC COUNT STATION LOCATIONS

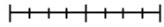
- 1. 641 VEHICLES PER DAY\*
- 2. 1,168 VEHICLES PER DAY\*



\*BASED ON H.S.A. TRAFFIC COUNTS PERFORMED MARCH 21-22, 2017.

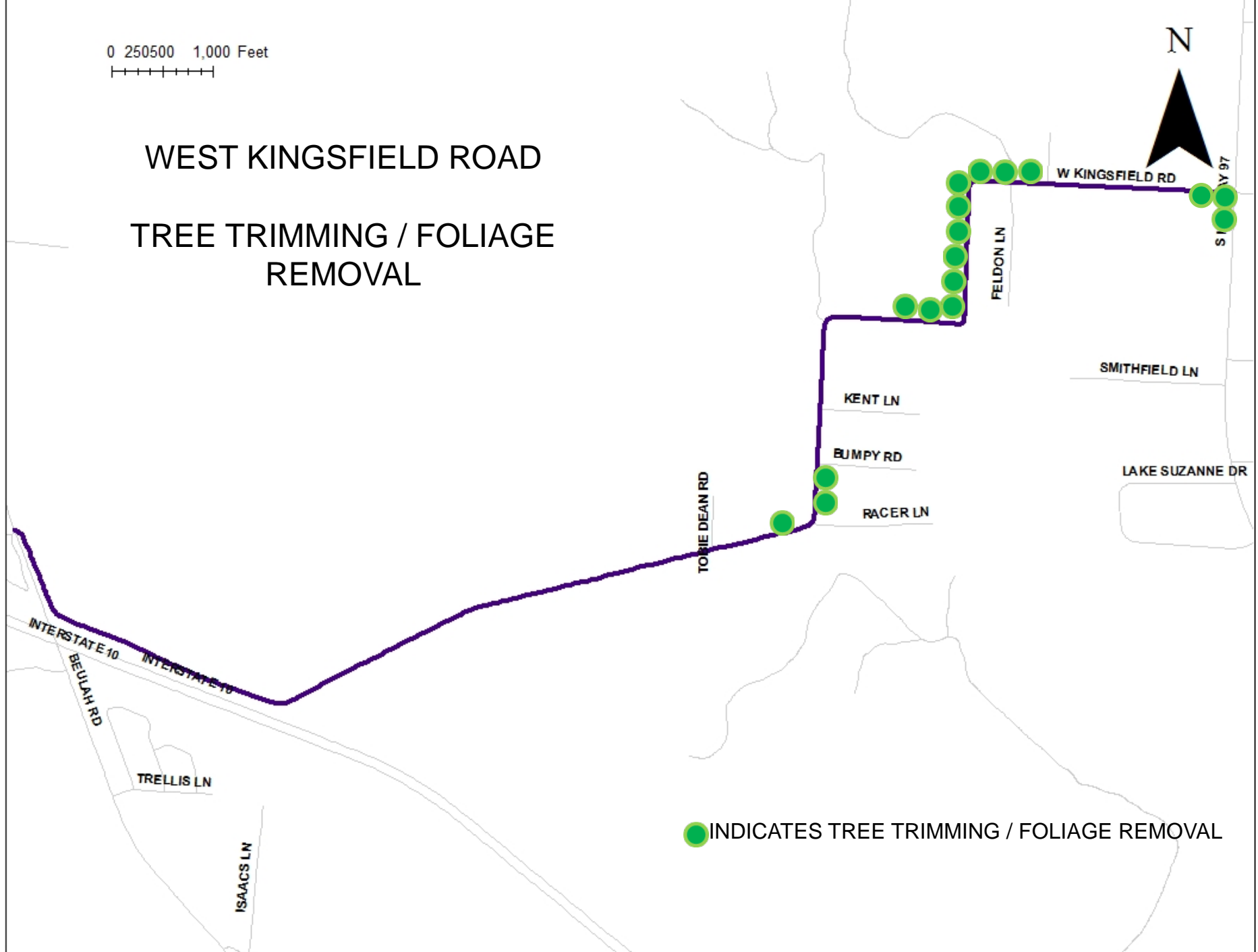


0 250 500 1,000 Feet



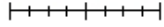
# WEST KINGSFIELD ROAD TREE TRIMMING / FOLIAGE REMOVAL

N



● INDICATES TREE TRIMMING / FOLIAGE REMOVAL

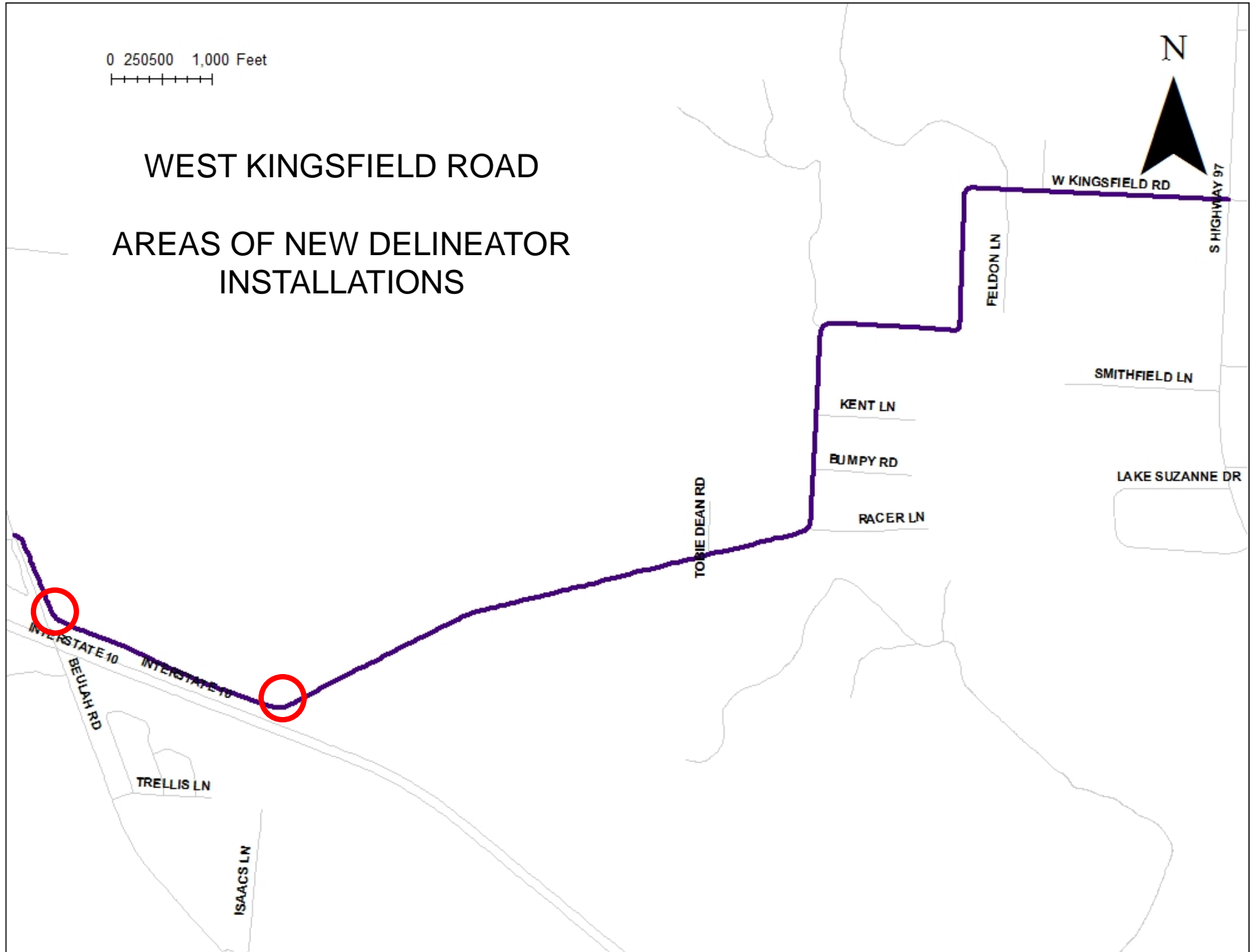
0 250 500 1,000 Feet



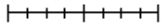
# WEST KINGSFIELD ROAD

## AREAS OF NEW DELINEATOR INSTALLATIONS

N



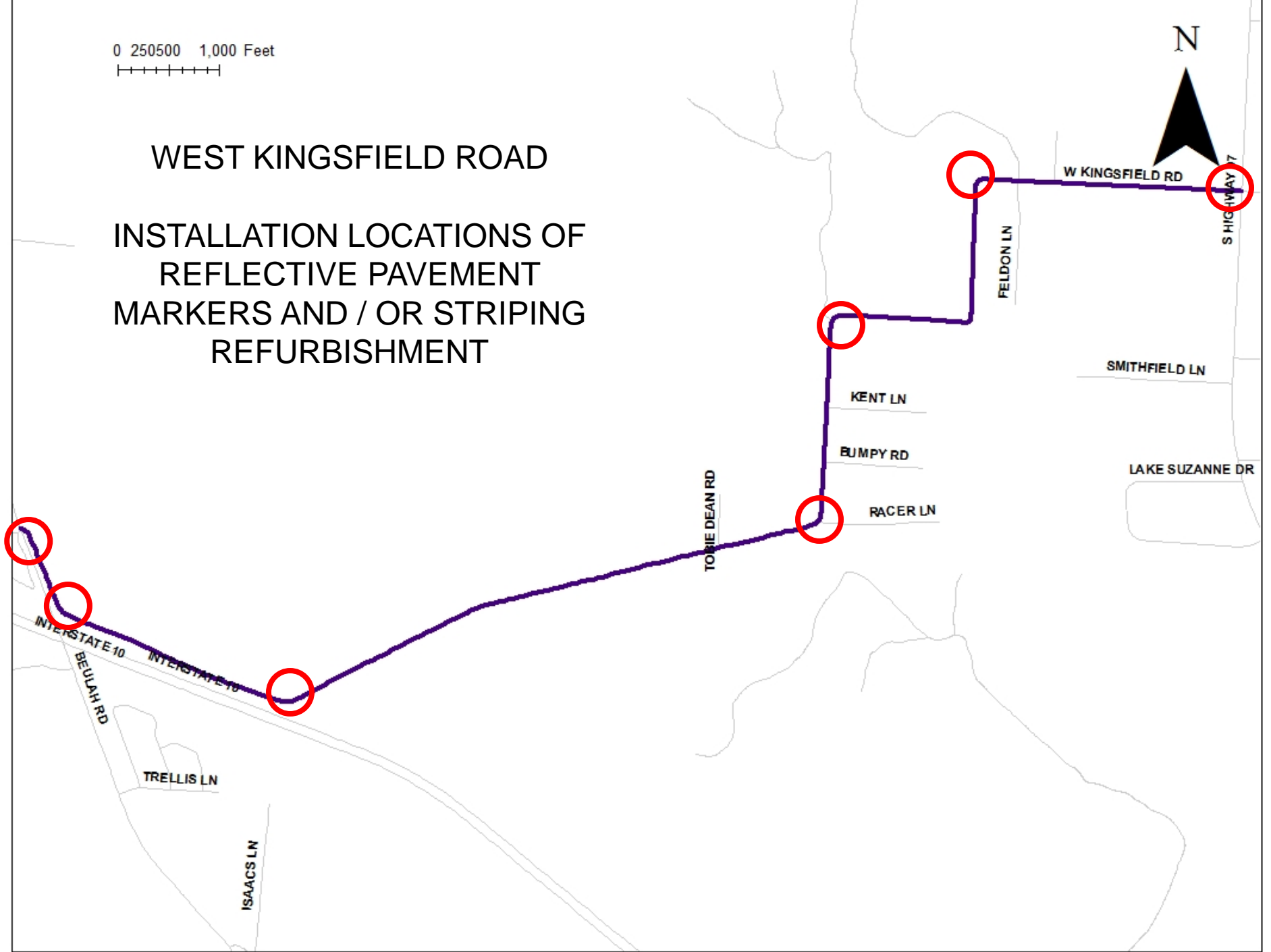
0 250500 1,000 Feet



# WEST KINGSFIELD ROAD

## INSTALLATION LOCATIONS OF REFLECTIVE PAVEMENT MARKERS AND / OR STRIPING REFURBISHMENT

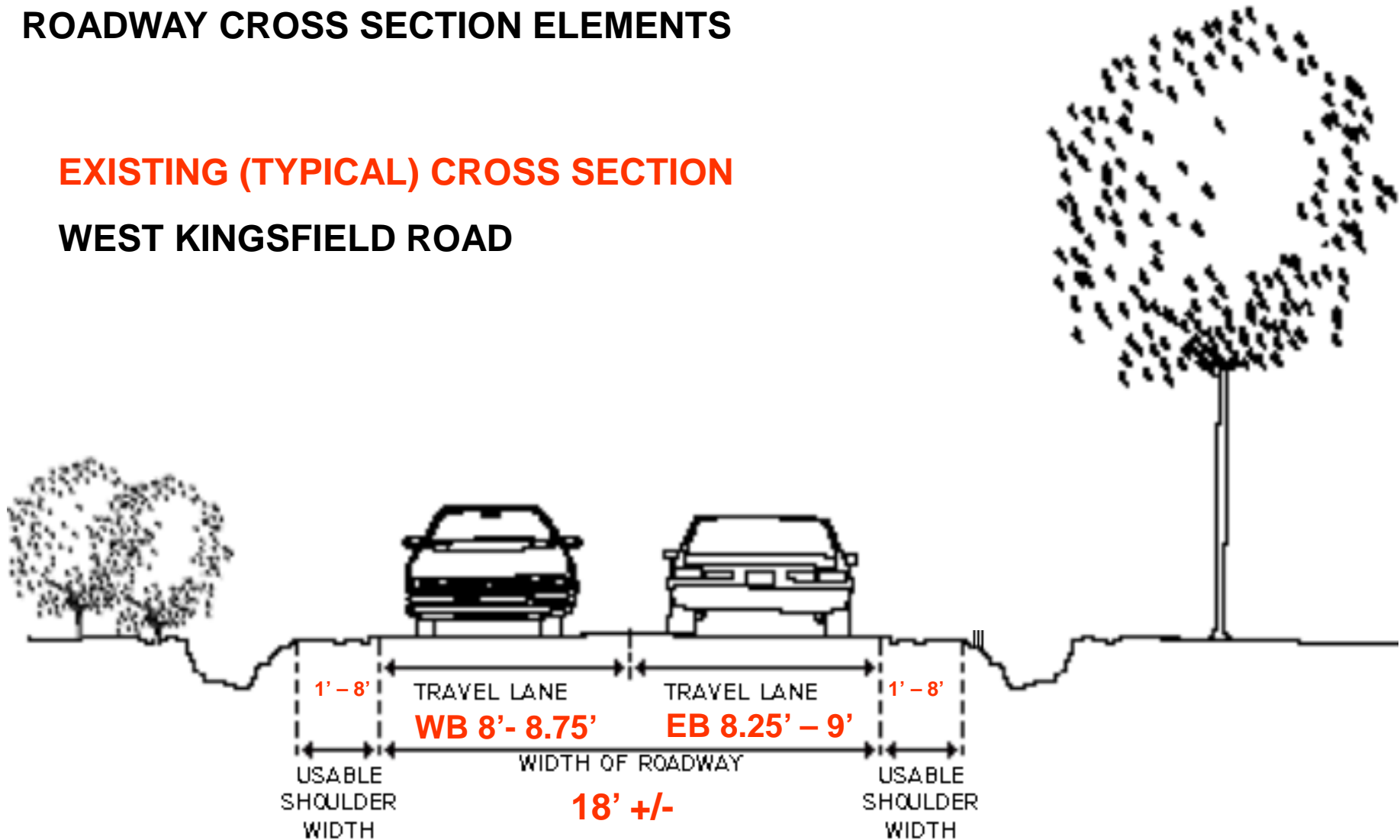
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# ROADWAY CROSS SECTION ELEMENTS

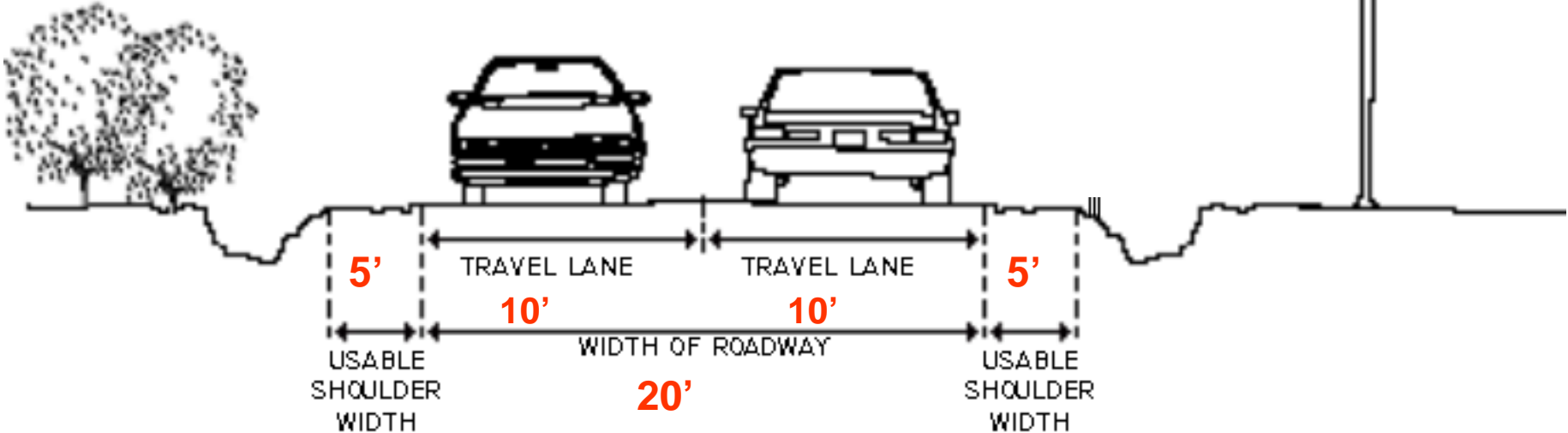
## EXISTING (TYPICAL) CROSS SECTION

### WEST KINGSFIELD ROAD



# ROADWAY CROSS SECTION ELEMENTS

**Required Minimum Widths** per AASHTO  
Specifications for Subject Portion WEST  
KINGSFIELD ROAD



Metric					US Customary				
Minimum width of traveled way (m) for specified design volume (veh/day)					Minimum width of traveled way (ft) for specified design volume (veh/day)				
Design speed (km/h)	under 400	400 to 1500	1500 to 2000	over 2000	Design speed (mph)	under 400	400 to 1500	1500 to 2000	over 2000
20	5.4	6.0 <sup>a</sup>	6.0	6.6	15	18	20 <sup>a</sup>	20	22
30	5.4	6.0 <sup>a</sup>	6.6	7.2 <sup>c</sup>	20	18	20 <sup>a</sup>	22	24 <sup>c</sup>
40	5.4	6.0 <sup>a</sup>	6.6	7.2 <sup>c</sup>	25	18	20 <sup>a</sup>	22	24 <sup>c</sup>
50	5.4	6.0 <sup>a</sup>	6.6	7.2 <sup>c</sup>	30	18	20 <sup>a</sup>	22	24 <sup>c</sup>
60	5.4	6.0 <sup>a</sup>	6.6	7.2 <sup>c</sup>	40	18	20 <sup>a</sup>	22	24 <sup>c</sup>
70	6.0	6.6	6.6	7.2 <sup>c</sup>	45	20	22	22	24 <sup>c</sup>
80	6.0	6.6	6.6	7.2 <sup>c</sup>	50	20	22	22	24 <sup>c</sup>
90	6.6	6.6	7.2 <sup>c</sup>	7.2 <sup>c</sup>	55	22	22	24 <sup>c</sup>	24 <sup>c</sup>
100	6.6	6.6	7.2 <sup>c</sup>	7.2 <sup>c</sup>	60	22	22	24 <sup>c</sup>	24 <sup>c</sup>
Width of graded shoulder on each side of the road (m)					Width of graded shoulder on each side of the road (ft)				
All speeds	0.6	1.5 <sup>a,b</sup>	1.8	2.4	All speeds	2	5 <sup>a,b</sup>	6	8

<sup>a</sup> For roads in mountainous terrain with design volume of 400 to 600 veh/day, use 5.4-m [18-ft] traveled way width and 0.6-m [2-ft] shoulder width.

<sup>b</sup> May be adjusted to achieve a minimum roadway width of 9 m [30 ft] for design speeds greater than 60 km/h [40 mph].

<sup>c</sup> Where the width of the traveled way is shown as 7.2 m [24 ft], the width may remain at 6.6 m [22 ft] on reconstructed highways where alignment and safety records are satisfactory.

See text for roadside barrier and offtracking considerations.

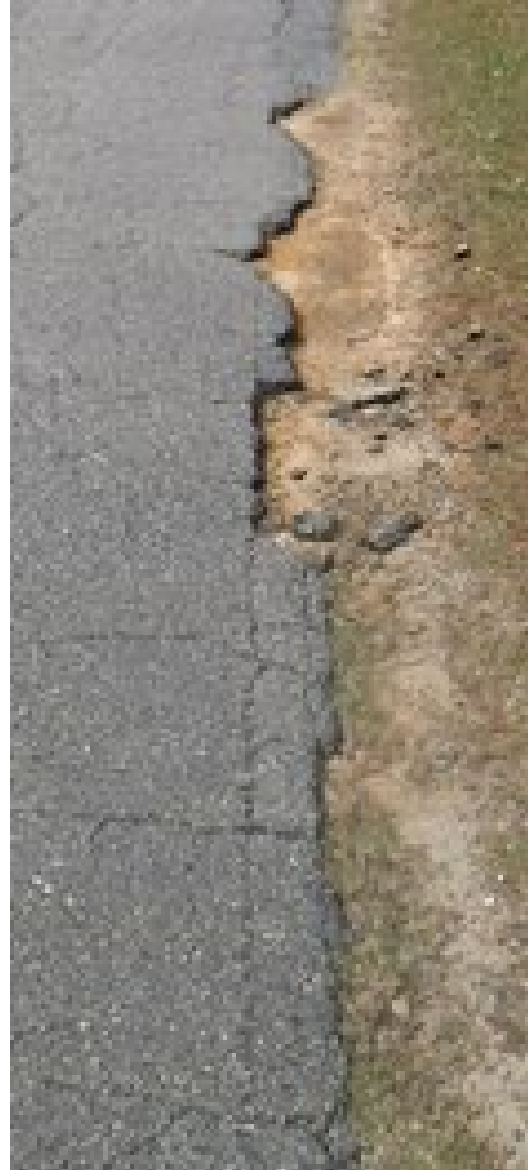
**FOR WEST KINGSFIELD ROAD:**

**For existing volume of 1,168 vehicles per day, AASHTO requires:**  
**Minimum width of asphalt of 20 feet.**  
**Minimum width of graded road shoulder of 5 feet.**

**For projected volumes exceeding 1,500 vehicles per day (21% increase)**  
**Minimum width of asphalt of 22 feet.**  
**Minimum width of graded road shoulder of 6 feet.**

Exhibit 5-5. Minimum Width of Traveled Way and Shoulders

WEST KINGSFIELD ROAD  
EXAMPLES OF EDGE OF ASPHALT DAMAGE



# WEST KINGSFIELD ROAD EXAMPLES OF TRAFFIC SIGN DAMAGE





# WEST KINGSFIELD / BEULAH RD EXAMPLES OF WORN PAVEMENT MARKINGS

