

KY 185 IHSDM Evaluation: Existing Corridor Without Crash Data (Predicted Crash Frequency)



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

February 9, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview **1**
Section 1 Evaluation **1**

List of Tables

Table Evaluation Highway - Homogeneous Segments (Section 1) 3
Table Expected Highway Crash Rates and Frequencies (Section 1) 9
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1) 9
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1) 12
Table Expected Segment Crash Type Distribution (Section 1) 13

List of Figures

Figure Crash Prediction Summary (Section 1) 2

Report Overview

Report Generated: Feb 9, 2018 8:59 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Fri Feb 09 08:58:59 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: KY 185 Safety Analysis

Project Comment: Entire Corridor

Project Unit System: U.S. Customary

Highway Title: KY 185

Highway Comment: South of Runner Road to Green River Bridge

Highway Version: 2

Evaluation Title: KY 185 existing conditions without crash data

Evaluation Comment: Created Fri Feb 09 08:57:01 EST 2018

Minimum Station: 23+65.000

Maximum Station: 304+31.900

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: None

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 23+65.000

Evaluation End Location: 304+31.900

Area Type: Rural

Functional Class: Collector

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

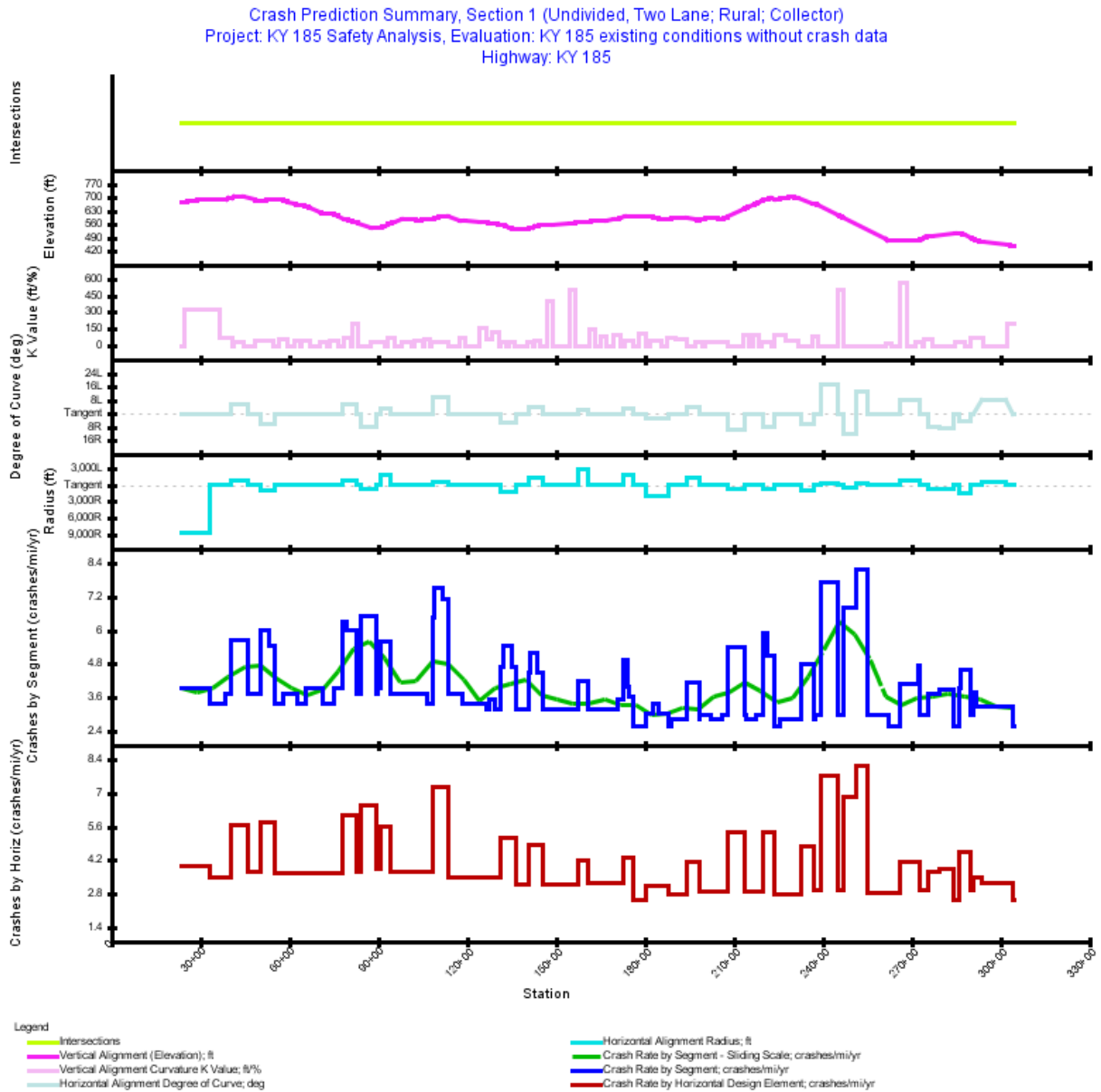


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
1	2U	23+65.00	30+30.00	665.0	0.126	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	3.00	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
2	2U	30+30.00	33+19.00	289.0	0.054	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
3	2U	33+19.00	38+40.00	521.0	0.098	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false					
4	2U	38+40.00	40+24.50	184.5	0.034	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false					
5	2U	40+24.50	42+75.00	250.5	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
6	2U	42+75.00	45+86.20	311.2	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
7	2U	45+86.20	50+25.00	438.8	0.083	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
8	2U	50+25.00	50+42.90	17.90	0.003	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false					
9	2U	50+42.90	53+25.00	282.1	0.053	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
10	2U	53+25.00	55+20.70	195.7	0.037	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
11	2U	55+20.70	58+00.00	279.3	0.052	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false					
12	2U	58+00.00	62+50.00	450.0	0.085	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	6.00	30.0	4	false	0	false	false	false					
13	2U	62+50.00	65+50.00	300.0	0.056	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	1.00	30.0	4	false	0	false	false	false					
14	2U	65+50.00	71+25.00	575.0	0.108	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.60	30.0	4	false	0	false	false	false					
15	2U	71+25.00	75+00.00	375.0	0.071	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
16	2U	75+00.00	78+06.90	306.9	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false					
17	2U	78+06.90	79+50.00	143.1	0.027	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
18	2U	79+50.00	82+00.00	250.0	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.20	30.0	4	false	0	false	false	false	955.37	9.0	false	50	

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
19	2U	82+00.00	82+84.70	84.70	0.0160	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
20	2U	82+84.70	83+88.90	104.20	0.0197	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
21	2U	83+88.90	89+09.30	520.40	0.0986	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	716.78	10.0	false	50	
22	2U	89+09.30	89+75.00	65.70	0.0124	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
23	2U	89+75.00	90+65.40	90.40	0.0171	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
24	2U	90+65.40	94+07.60	342.20	0.0648	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false	1,910.08	6.0	false	50	
25	2U	94+07.60	94+25.00	17.40	0.0033	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
26	2U	94+25.00	99+50.00	525.00	0.0994	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
27	2U	99+50.00	103+50.00	400.00	0.0758	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.40	30.0	4	false	0	false	false	false					
28	2U	103+50.00	106+50.00	300.00	0.0568	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.48	30.0	4	false	0	false	false	false					
29	2U	106+50.00	108+50.20	200.20	0.0379	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
30	2U	108+50.20	109+00.00	49.80	0.0094	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
31	2U	109+00.00	111+75.00	275.00	0.0521	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	6.60	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
32	2U	111+75.00	113+79.90	204.90	0.0388	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
33	2U	113+79.90	118+50.00	470.10	0.0890	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false					
34	2U	118+50.00	125+25.00	675.00	0.1278	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	1.52	30.0	4	false	0	false	false	false					
35	2U	125+25.00	126+56.00	131.00	0.0248	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
36	2U	126+56.00	127+50.00	94.00	0.0178	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
37	2U	127+50.00	129+50.00	200.00	0.0379	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.25	30.0	4	false	0	false	false	false					

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
38	2U	129+50.00	131+26.100	176.10	0.0333	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.57	30.0	4	false	0	false	false	false				
39	2U	131+26.100	132+00.000	73.90	0.0140	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.57	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
40	2U	132+00.000	135+00.000	300.00	0.0568	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
41	2U	135+00.000	136+31.400	131.40	0.0249	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
42	2U	136+31.400	140+75.500	444.10	0.0841	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
43	2U	140+75.500	141+00.000	24.50	0.0046	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
44	2U	141+00.000	143+50.000	250.00	0.0474	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.36	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
45	2U	143+50.000	145+48.000	198.00	0.0375	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.50	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
46	2U	145+48.000	148+00.000	252.00	0.0477	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.50	30.0	4	false	0	false	false	false				
47	2U	148+00.000	155+50.000	750.00	0.1421	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.00	30.0	4	false	0	false	false	false				
48	2U	155+50.000	157+45.700	195.70	0.0371	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false				
49	2U	157+45.700	160+54.000	308.30	0.0584	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false	2,864.93	4.0	false	50
50	2U	160+54.000	162+00.000	146.00	0.0277	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false				
51	2U	162+00.000	166+00.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
52	2U	166+00.000	170+50.000	450.00	0.0852	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.40	30.0	4	false	0	false	false	false				
53	2U	170+50.000	172+52.500	202.50	0.0384	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
54	2U	172+52.500	174+28.000	175.50	0.0322	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false	1,910.08	6.0	false	50
55	2U	174+28.000	174+50.000	22.00	0.0042	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.60	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
56	2U	174+50.000	176+02.500	152.50	0.0289	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.60	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)		
57	2U	176+02.500	179+00.000	297.50	0.0563	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.60	15.0	4	false	0	false	false	false						
58	2U	179+00.000	180+37.800	137.80	0.0261	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.26	15.0	4	false	0	false	false	false						
59	2U	180+37.800	182+50.000	212.20	0.0402	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.26	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50		
60	2U	182+50.000	184+50.000	200.00	0.0379	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.80	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50		
61	2U	184+50.000	187+82.200	332.20	0.0629	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50		
62	2U	187+82.200	188+75.000	92.80	0.0176	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false						
63	2U	188+75.000	192+00.000	325.00	0.0616	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.60	15.0	4	false	0	false	false	false						
64	2U	192+00.000	194+18.600	218.60	0.0414	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false						
65	2U	194+18.600	198+18.600	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false	1,432.69	7.0	false	50		
66	2U	198+18.600	198+25.000	6.40	0.0012	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false						
67	2U	198+25.000	202+00.000	375.00	0.0710	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.20	15.0	4	false	0	false	false	false						
68	2U	202+00.000	206+00.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.84	15.0	4	false	0	false	false	false						
69	2U	206+00.000	207+83.300	183.30	0.0347	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
70	2U	207+83.300	213+64.300	581.00	0.1100	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	579.69	10.0	false	50		
71	2U	213+64.300	214+00.000	35.70	0.0068	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
72	2U	214+00.000	217+50.000	350.00	0.0663	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.91	15.0	4	false	0	false	false	false						
73	2U	217+50.000	219+74.300	224.30	0.0425	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
74	2U	219+74.300	221+00.000	125.70	0.0238	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50		
75	2U	221+00.000	223+59.700	259.70	0.0492	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false	716.78	10.0	false	50		

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
76	2U	223+59.700	225+50.000	190.30	0.0360	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false					
77	2U	225+50.000	229+50.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.68	15.0	4	false	0	false	false	false					
78	2U	229+50.000	232+81.100	331.10	0.0627	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false					
79	2U	232+81.100	236+92.200	411.10	0.0779	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false	955.37		9.0	false	50
80	2U	236+92.200	237+50.000	57.80	0.0109	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false					
81	2U	237+50.000	239+48.700	198.70	0.0376	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false					
82	2U	239+48.700	244+86.300	537.60	0.1018	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false	319.62		10.0	false	50
83	2U	244+86.300	246+00.000	113.70	0.0215	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false					
84	2U	246+00.000	246+90.200	90.20	0.0171	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false					
85	2U	246+90.200	251+29.900	439.70	0.0833	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	478.34		10.0	false	50
86	2U	251+29.900	254+96.700	366.80	0.0695	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	427.50		10.0	false	50
87	2U	254+96.700	262+25.000	728.30	0.1379	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false					
88	2U	262+25.000	266+14.700	389.70	0.0738	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false					
89	2U	266+14.700	267+25.000	110.30	0.0209	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false	716.78		10.0	false	50
90	2U	267+25.000	272+25.000	500.00	0.0947	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.44	15.0	4	false	0	false	false	false	716.78		10.0	false	50
91	2U	272+25.000	272+55.500	30.50	0.0058	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.97	15.0	4	false	0	false	false	false	716.78		10.0	false	50
92	2U	272+55.500	275+50.000	294.50	0.0558	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.97	15.0	4	false	0	false	false	false					
93	2U	275+50.000	279+21.000	371.00	0.0703	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	716.78		10.0	false	50
94	2U	279+21.000	283+92.500	471.50	0.0893	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	637.28		10.0	false	50

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
95	2U	283+92.500	286+08.900	216.40	0.0410	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false				
96	2U	286+08.900	286+25.000	16.10	0.0031	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	1,348.14	7.0	false	50
97	2U	286+25.000	289+81.500	356.50	0.0675	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	1,348.14	7.0	false	50
98	2U	289+81.500	290+84.700	103.20	0.0196	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
99	2U	290+84.700	291+84.700	100.00	0.0189	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
100	2U	291+84.700	293+34.700	150.00	0.0284	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
101	2U	293+34.700	301+49.400	814.70	0.1543	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
102	2U	301+49.400	303+31.900	182.50	0.0346	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
103	2U	303+31.900	303+99.400	67.50	0.0128	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
104	2U	303+99.400	304+31.900	32.50	0.0062	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.00	15.0	4	false	0	false	false	false				

Table 2. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	5.3157
Average Future Road AADT (vpd)	5,446
Expected Crashes	
Total Crashes	428.49
Fatal and Injury Crashes	137.54
Property-Damage-Only Crashes	290.94
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	4.0304
Fatal and Injury Crash Rate (crashes/mi/yr)	1.2937
Property-Damage-Only Crash Rate (crashes/mi/yr)	2.7366
Expected Travel Crash Rate	
Total Travel (million veh-mi)	211.31
Travel Crash Rate (crashes/million veh-mi)	2.03
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.65
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	1.38

Table 3. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	23+65.000	30+30.000	0.1259	9.973	3.9594	1.90
2	30+30.000	33+19.000	0.0547	4.334	3.9594	1.90
3	33+19.000	38+40.000	0.0987	6.716	3.4032	1.63
4	38+40.000	40+24.500	0.0349	2.616	3.7435	1.79
5	40+24.500	42+75.000	0.0474	5.361	5.6494	2.71
6	42+75.000	45+86.200	0.0589	6.659	5.6494	2.71
7	45+86.200	50+25.000	0.0831	6.222	3.7435	1.79
8	50+25.000	50+42.900	0.0034	0.254	3.7435	1.79
9	50+42.900	53+25.000	0.0534	6.394	5.9840	2.87
10	53+25.000	55+20.700	0.0371	4.033	5.4400	2.61
11	55+20.700	58+00.000	0.0529	3.600	3.4032	1.63

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
12	58+00.000	62+50.000	0.0852	6.381	3.7435	1.79
13	62+50.000	65+50.000	0.0568	3.867	3.4032	1.63
14	65+50.000	71+25.000	0.1089	8.598	3.9477	1.89
15	71+25.000	75+00.000	0.0710	4.834	3.4032	1.63
16	75+00.000	78+06.900	0.0581	4.589	3.9477	1.89
17	78+06.900	79+50.000	0.0271	3.421	6.3104	3.02
18	79+50.000	82+00.000	0.0473	5.667	5.9840	2.87
19	82+00.000	82+84.700	0.0160	1.920	5.9840	2.87
20	82+84.700	83+88.900	0.0197	1.478	3.7435	1.79
21	83+88.900	89+09.300	0.0986	12.784	6.4854	3.11
22	89+09.300	89+75.000	0.0124	0.932	3.7435	1.79
23	89+75.000	90+65.400	0.0171	1.352	3.9477	1.89
24	90+65.400	94+07.600	0.0648	7.256	5.5978	2.68
25	94+07.600	94+25.000	0.0033	0.260	3.9477	1.89
26	94+25.000	99+50.000	0.0994	7.445	3.7435	1.79
27	99+50.000	103+50.000	0.0758	5.672	3.7435	1.79
28	103+50.000	106+50.000	0.0568	4.254	3.7435	1.79
29	106+50.000	108+50.200	0.0379	2.581	3.4032	1.63
30	108+50.200	109+00.000	0.0094	1.219	6.4628	3.10
31	109+00.000	111+75.000	0.0521	7.809	7.4968	3.59
32	111+75.000	113+79.900	0.0388	5.518	7.1091	3.41
33	113+79.900	118+50.000	0.0890	6.666	3.7435	1.79
34	118+50.000	125+25.000	0.1278	8.701	3.4032	1.63
35	125+25.000	126+56.000	0.0248	1.689	3.4032	1.63
36	126+56.000	127+50.000	0.0178	1.139	3.1985	1.66
37	127+50.000	129+50.000	0.0379	2.666	3.5184	1.82
38	129+50.000	131+26.100	0.0334	2.134	3.1985	1.66
39	131+26.100	132+00.000	0.0140	1.318	4.7072	2.44
40	132+00.000	135+00.000	0.0568	6.205	5.4603	2.83
41	135+00.000	136+31.400	0.0249	2.343	4.7072	2.44
42	136+31.400	140+75.500	0.0841	5.381	3.1985	1.66
43	140+75.500	141+00.000	0.0046	0.417	4.4894	2.33
44	141+00.000	143+50.000	0.0473	4.931	5.2077	2.70
45	143+50.000	145+48.000	0.0375	3.367	4.4894	2.33
46	145+48.000	148+00.000	0.0477	3.053	3.1985	1.66
47	148+00.000	155+50.000	0.1420	9.087	3.1985	1.66
48	155+50.000	157+45.700	0.0371	2.371	3.1985	1.66
49	157+45.700	160+54.000	0.0584	4.891	4.1879	2.17
50	160+54.000	162+00.000	0.0277	1.769	3.1985	1.66
51	162+00.000	166+00.000	0.0758	4.846	3.1985	1.66
52	166+00.000	170+50.000	0.0852	5.452	3.1985	1.66
53	170+50.000	172+52.500	0.0384	2.699	3.5184	1.82
54	172+52.500	174+28.000	0.0332	3.295	4.9562	2.57
55	174+28.000	174+50.000	0.0042	0.331	3.9715	2.06
56	174+50.000	176+02.500	0.0289	2.086	3.6104	1.87
57	176+02.500	179+00.000	0.0563	2.888	2.5630	1.33
58	179+00.000	180+37.800	0.0261	1.338	2.5630	1.33
59	180+37.800	182+50.000	0.0402	2.456	3.0555	1.58
60	182+50.000	184+50.000	0.0379	2.546	3.3611	1.74
61	184+50.000	187+82.200	0.0629	3.845	3.0555	1.58
62	187+82.200	188+75.000	0.0176	0.901	2.5630	1.33

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
63	188+75.000	192+00.000	0.0616	3.471	2.8193	1.46
64	192+00.000	194+18.600	0.0414	2.334	2.8193	1.46
65	194+18.600	198+18.600	0.0758	6.308	4.1634	2.16
66	198+18.600	198+25.000	0.0012	0.068	2.8193	1.46
67	198+25.000	202+00.000	0.0710	4.223	2.9731	1.54
68	202+00.000	206+00.000	0.0758	4.272	2.8193	1.46
69	206+00.000	207+83.300	0.0347	2.064	2.9731	1.54
70	207+83.300	213+64.300	0.1100	11.851	5.3848	2.79
71	213+64.300	214+00.000	0.0068	0.402	2.9731	1.54
72	214+00.000	217+50.000	0.0663	3.738	2.8193	1.46
73	217+50.000	219+74.300	0.0425	2.526	2.9731	1.54
74	219+74.300	221+00.000	0.0238	2.816	5.9134	3.06
75	221+00.000	223+59.700	0.0492	5.015	5.0978	2.64
76	223+59.700	225+50.000	0.0360	1.847	2.5630	1.33
77	225+50.000	229+50.000	0.0758	4.272	2.8193	1.46
78	229+50.000	232+81.100	0.0627	3.536	2.8193	1.46
79	232+81.100	236+92.200	0.0779	7.444	4.7805	2.48
80	236+92.200	237+50.000	0.0109	0.617	2.8193	1.46
81	237+50.000	239+48.700	0.0376	2.238	2.9731	1.54
82	239+48.700	244+86.300	0.1018	15.681	7.7002	3.99
83	244+86.300	246+00.000	0.0215	1.280	2.9731	1.54
84	246+00.000	246+90.200	0.0171	1.016	2.9731	1.54
85	246+90.200	251+29.900	0.0833	11.384	6.8350	3.54
86	251+29.900	254+96.700	0.0695	11.328	8.1531	4.22
87	254+96.700	262+25.000	0.1379	8.202	2.9731	1.54
88	262+25.000	266+14.700	0.0738	3.783	2.5630	1.33
89	266+14.700	267+25.000	0.0209	1.708	4.0875	2.12
90	267+25.000	272+25.000	0.0947	7.742	4.0875	2.12
91	272+25.000	272+55.500	0.0058	0.548	4.7415	2.46
92	272+55.500	275+50.000	0.0558	3.317	2.9731	1.54
93	275+50.000	279+21.000	0.0703	5.228	3.7199	1.93
94	279+21.000	283+92.500	0.0893	6.902	3.8643	2.00
95	283+92.500	286+08.900	0.0410	2.101	2.5630	1.33
96	286+08.900	286+25.000	0.0030	0.241	3.9570	2.05
97	286+25.000	289+81.500	0.0675	6.198	4.5901	2.38
98	289+81.500	290+84.700	0.0195	1.162	2.9731	1.54
99	290+84.700	291+84.700	0.0189	1.438	3.7972	1.97
100	291+84.700	293+34.700	0.0284	1.860	3.2735	1.70
101	293+34.700	301+49.400	0.1543	10.102	3.2735	1.70
102	301+49.400	303+31.900	0.0346	2.263	3.2735	1.70
103	303+31.900	303+99.400	0.0128	0.837	3.2735	1.70
104	303+99.400	304+31.900	0.0062	0.316	2.5630	1.33

Table 4. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	23+65.000	33+19.000	0.1807	14.308	3.9594	1.90
Tangent	33+19.000	40+24.500	0.1336	9.332	3.4922	1.67
Simple Curve 2	40+24.500	45+86.200	0.1064	12.020	5.6494	2.71
Tangent	45+86.200	50+42.900	0.0865	6.476	3.7435	1.79
Simple Curve 3	50+42.900	55+20.700	0.0905	10.427	5.7612	2.76
Tangent	55+20.700	78+06.900	0.4330	31.870	3.6803	1.76
Simple Curve 4	78+06.900	82+84.700	0.0905	11.007	6.0818	2.92
Tangent	82+84.700	83+88.900	0.0197	1.478	3.7435	1.79
Simple Curve 5	83+88.900	89+09.300	0.0986	12.784	6.4854	3.11
Tangent	89+09.300	90+65.400	0.0296	2.283	3.8618	1.85
Simple Curve 6	90+65.400	94+07.600	0.0648	7.256	5.5978	2.68
Tangent	94+07.600	108+50.200	0.2732	20.212	3.6988	1.77
Simple Curve 7	108+50.200	113+79.900	0.1003	14.546	7.2496	3.47
Tangent	113+79.900	131+26.100	0.3307	22.994	3.4764	1.70
Simple Curve 8	131+26.100	136+31.400	0.0957	9.866	5.1543	2.67
Tangent	136+31.400	140+75.500	0.0841	5.381	3.1985	1.66
Simple Curve 9	140+75.500	145+48.000	0.0895	8.715	4.8694	2.52
Tangent	145+48.000	157+45.700	0.2268	14.511	3.1985	1.66
Simple Curve 10	157+45.700	160+54.000	0.0584	4.891	4.1879	2.17
Tangent	160+54.000	172+52.500	0.2270	14.766	3.2526	1.68
Simple Curve 11	172+52.500	176+02.500	0.0663	5.711	4.3079	2.23
Tangent	176+02.500	180+37.800	0.0824	4.226	2.5630	1.33
Simple Curve 12	180+37.800	187+82.200	0.1410	8.847	3.1376	1.62
Tangent	187+82.200	194+18.600	0.1205	6.706	2.7820	1.44
Simple Curve 13	194+18.600	198+18.600	0.0758	6.308	4.1634	2.16
Tangent	198+18.600	207+83.300	0.1827	10.628	2.9083	1.51
Simple Curve 14	207+83.300	213+64.300	0.1100	11.851	5.3848	2.79
Tangent	213+64.300	219+74.300	0.1155	6.666	2.8849	1.50
Simple Curve 15	219+74.300	223+59.700	0.0730	7.830	5.3638	2.78
Tangent	223+59.700	232+81.100	0.1745	9.655	2.7664	1.43
Simple Curve 16	232+81.100	236+92.200	0.0779	7.444	4.7805	2.48
Tangent	236+92.200	239+48.700	0.0486	2.855	2.9385	1.52
Simple Curve 17	239+48.700	244+86.300	0.1018	15.681	7.7002	3.99
Tangent	244+86.300	246+90.200	0.0386	2.296	2.9731	1.54
Simple Curve 18	246+90.200	251+29.900	0.0833	11.384	6.8350	3.54
Simple Curve 19	251+29.900	254+96.700	0.0695	11.328	8.1531	4.22
Tangent	254+96.700	266+14.700	0.2117	11.985	2.8302	1.47
Simple Curve 20	266+14.700	272+55.500	0.1214	9.997	4.1187	2.13
Tangent	272+55.500	275+48.100	0.0554	3.295	2.9731	1.54
Simple Curve 21	275+48.100	279+21.000	0.0706	5.249	3.7161	1.93
Simple Curve 22	279+21.000	283+92.500	0.0893	6.902	3.8643	2.00
Tangent	283+92.500	286+08.900	0.0410	2.101	2.5630	1.33
Simple Curve 23	286+08.900	289+81.500	0.0706	6.440	4.5628	2.36
Tangent	289+81.500	290+84.700	0.0195	1.162	2.9731	1.54
Spiral Curve 24	290+84.700	293+34.700	0.0473	3.298	3.4830	1.80
Simple Curve 25	293+34.700	301+49.400	0.1543	10.102	3.2735	1.70
Spiral Curve 26	301+49.400	303+99.400	0.0473	3.100	3.2735	1.70
Tangent	303+99.400	304+31.900	0.0062	0.316	2.5630	1.33

Table 5. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	5.23	1.2	53.53	12.5	51.85	12.1
Highway Segment	Collision with Bicycle	0.55	0.1	0.29	0.1	0.86	0.2
Highway Segment	Other Single-vehicle Collision	0.96	0.2	8.44	2.0	9.00	2.1
Highway Segment	Overtaken	5.09	1.2	4.36	1.0	10.71	2.5
Highway Segment	Collision with Pedestrian	0.96	0.2	0.29	0.1	1.28	0.3
Highway Segment	Run Off Road	74.96	17.5	146.93	34.3	223.24	52.1
Highway Segment	Total Single Vehicle Crashes	87.75	20.5	213.84	49.9	296.94	69.3
Highway Segment	Angle Collision	13.89	3.2	20.95	4.9	36.42	8.5
Highway Segment	Head-on Collision	4.68	1.1	0.87	0.2	6.86	1.6
Highway Segment	Other Multiple-vehicle Collision	3.58	0.8	8.73	2.0	11.57	2.7
Highway Segment	Rear-end Collision	22.70	5.3	35.49	8.3	60.84	14.2
Highway Segment	Sideswipe	5.23	1.2	11.06	2.6	15.85	3.7
Highway Segment	Total Multiple Vehicle Crashes	50.07	11.7	77.10	18.0	131.54	30.7
Highway Segment	Total Highway Segment Crashes	137.82	32.2	290.94	67.9	428.49	100.0
	Total Crashes	137.82	32.2	290.94	67.9	428.49	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

KY 185 IHSDM Evaluation: Existing Corridor With Crash Data (Expected Crash Frequency)



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

February 9, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview	1
Section 1 Evaluation	2

List of Tables

Table Observed Crashes Used in the Evaluation (Section 1)	3
Table Evaluation Highway - Homogeneous Segments (Section 1)	4
Table Crash History Highway - Homogeneous Segments (Section 1)	10
Table Expected Highway Crash Rates and Frequencies (Section 1)	13
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1)	13
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)	16
Table Expected Segment Crash Type Distribution (Section 1)	17

List of Figures

Figure Crash Prediction Summary (Section 1)	2
---	---

Report Overview

Report Generated: Feb 9, 2018 9:02 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Fri Feb 09 09:02:05 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: KY 185 Safety Analysis

Project Comment: Entire Corridor

Project Unit System: U.S. Customary

Highway Title: KY 185

Highway Comment: South of Runner Road to Green River Bridge

Highway Version: 2

Evaluation Title: KY 185 existing with crash data

Evaluation Comment: Created Fri Feb 09 09:01:21 EST 2018

Minimum Station: 23+65.000

Maximum Station: 304+31.900

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: KY 185

Highway with Crash History Comment: South of Runner Road to Green River Bridge

Highway with Crash History Version: 2

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 23+65.000

Evaluation End Location: 304+31.900

Area Type: Rural

Functional Class: Collector

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

Crash Prediction Summary, Section 1 (Undivided, Two Lane; Rural; Collector)
 Project: KY 185 Safety Analysis, Evaluation: KY 185 existing with crash data
 Highway: KY 185

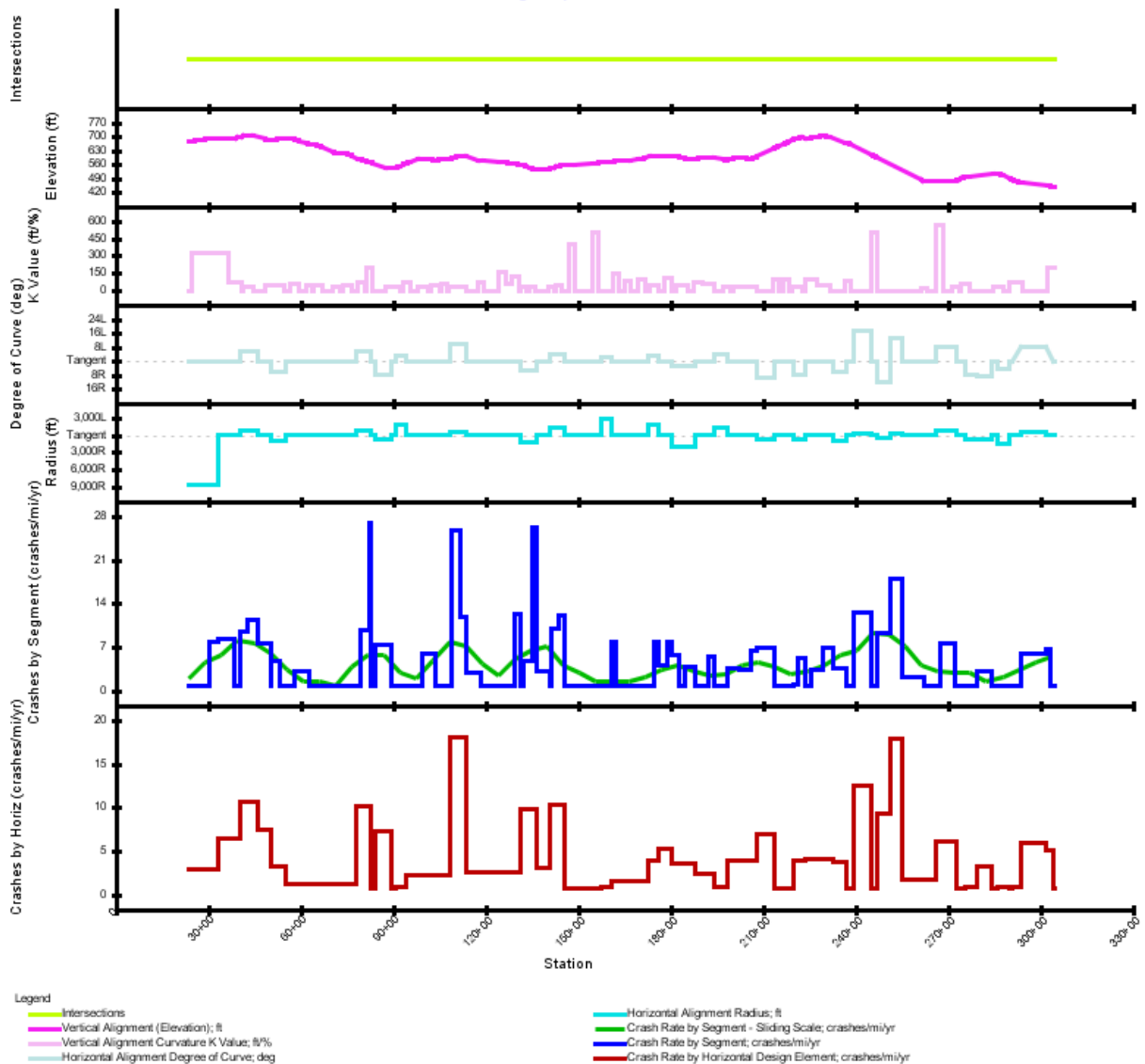


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Observed Crashes Used in the Evaluation (Section 1)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2012	23	23	7	0	16
2013	17	17	5	0	12
2014	12	12	3	0	9
2015	12	12	5	0	7
2016	22	22	8	0	14
All Years	86 ^[1]	86	28	0	58

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	ADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
1	2U	23+65.00	30+30.00	665.0	0.126	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	3.00	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
2	2U	30+30.00	33+19.00	289.0	0.054	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
3	2U	33+19.00	38+40.00	521.0	0.098	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false					
4	2U	38+40.00	40+24.50	184.5	0.034	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false					
5	2U	40+24.50	42+75.00	250.5	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
6	2U	42+75.00	45+86.20	311.2	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
7	2U	45+86.20	50+25.00	438.8	0.083	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
8	2U	50+25.00	50+42.90	17.90	0.003	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false					
9	2U	50+42.90	53+25.00	282.1	0.053	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
10	2U	53+25.00	55+20.70	195.7	0.037	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
11	2U	55+20.70	58+00.00	279.3	0.052	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false					
12	2U	58+00.00	62+50.00	450.0	0.085	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	6.00	30.0	4	false	0	false	false	false					
13	2U	62+50.00	65+50.00	300.0	0.056	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	1.00	30.0	4	false	0	false	false	false					
14	2U	65+50.00	71+25.00	575.0	0.108	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.60	30.0	4	false	0	false	false	false					
15	2U	71+25.00	75+00.00	375.0	0.071	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
16	2U	75+00.00	78+06.90	306.9	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false					
17	2U	78+06.90	79+50.00	143.1	0.027	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
18	2U	79+50.00	82+00.00	250.0	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.20	30.0	4	false	0	false	false	false	955.37	9.0	false	50	

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
19	2U	82+00.00	82+84.70	84.70	0.0160	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	955.37	9.0	false	50	
20	2U	82+84.70	83+88.90	104.20	0.0197	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
21	2U	83+88.90	89+09.30	520.40	0.0986	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	716.78	10.0	false	50	
22	2U	89+09.30	89+75.00	65.70	0.0124	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
23	2U	89+75.00	90+65.40	90.40	0.0171	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
24	2U	90+65.40	94+07.60	342.20	0.0648	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false	1,910.08	6.0	false	50	
25	2U	94+07.60	94+25.00	17.40	0.0033	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
26	2U	94+25.00	99+50.00	525.00	0.0994	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
27	2U	99+50.00	103+50.00	400.00	0.0758	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.40	30.0	4	false	0	false	false	false					
28	2U	103+50.00	106+50.00	300.00	0.0568	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.48	30.0	4	false	0	false	false	false					
29	2U	106+50.00	108+50.20	200.20	0.0379	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
30	2U	108+50.20	109+00.00	49.80	0.0094	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
31	2U	109+00.00	111+75.00	275.00	0.0521	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	6.60	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
32	2U	111+75.00	113+79.90	204.90	0.0388	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
33	2U	113+79.90	118+50.00	470.10	0.0890	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false					
34	2U	118+50.00	125+25.00	675.00	0.1278	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	1.52	30.0	4	false	0	false	false	false					
35	2U	125+25.00	126+56.00	131.00	0.0248	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
36	2U	126+56.00	127+50.00	94.00	0.0178	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
37	2U	127+50.00	129+50.00	200.00	0.0379	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.25	30.0	4	false	0	false	false	false					

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
38	2U	129+50.00	131+26.100	176.10	0.0333	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.57	30.0	4	false	0	false	false	false				
39	2U	131+26.100	132+00.000	73.90	0.0140	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.57	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
40	2U	132+00.000	135+00.000	300.00	0.0568	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
41	2U	135+00.000	136+31.400	131.40	0.0249	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
42	2U	136+31.400	140+75.500	444.10	0.0841	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
43	2U	140+75.500	141+00.000	24.50	0.0046	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
44	2U	141+00.000	143+50.000	250.00	0.0474	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.36	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
45	2U	143+50.000	145+48.000	198.00	0.0375	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.50	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
46	2U	145+48.000	148+00.000	252.00	0.0477	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.50	30.0	4	false	0	false	false	false				
47	2U	148+00.000	155+50.000	750.00	0.1421	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.00	30.0	4	false	0	false	false	false				
48	2U	155+50.000	157+45.700	195.70	0.0371	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false				
49	2U	157+45.700	160+54.000	308.30	0.0584	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false	2,864.93	4.0	false	50
50	2U	160+54.000	162+00.000	146.00	0.0277	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false				
51	2U	162+00.000	166+00.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
52	2U	166+00.000	170+50.000	450.00	0.0852	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.40	30.0	4	false	0	false	false	false				
53	2U	170+50.000	172+52.500	202.50	0.0384	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
54	2U	172+52.500	174+28.000	175.50	0.0322	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false	1,910.08	6.0	false	50
55	2U	174+28.000	174+50.000	22.00	0.0042	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.60	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
56	2U	174+50.000	176+02.500	152.50	0.0289	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.60	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)		
57	2U	176+02.500	179+00.000	297.50	0.0563	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.60	15.0	4	false	0	false	false	false						
58	2U	179+00.000	180+37.800	137.80	0.0261	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.26	15.0	4	false	0	false	false	false						
59	2U	180+37.800	182+50.000	212.20	0.0402	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.26	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50		
60	2U	182+50.000	184+50.000	200.00	0.0379	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.80	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50		
61	2U	184+50.000	187+82.200	332.20	0.0629	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50		
62	2U	187+82.200	188+75.000	92.80	0.0176	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false						
63	2U	188+75.000	192+00.000	325.00	0.0616	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.60	15.0	4	false	0	false	false	false						
64	2U	192+00.000	194+18.600	218.60	0.0414	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false						
65	2U	194+18.600	198+18.600	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false	1,432.69	7.0	false	50		
66	2U	198+18.600	198+25.000	6.40	0.0012	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false						
67	2U	198+25.000	202+00.000	375.00	0.0710	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.20	15.0	4	false	0	false	false	false						
68	2U	202+00.000	206+00.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	4.84	15.0	4	false	0	false	false	false						
69	2U	206+00.000	207+83.300	183.30	0.0347	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
70	2U	207+83.300	213+64.300	581.00	0.1100	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	579.69	10.0	false	50		
71	2U	213+64.300	214+00.000	35.70	0.0068	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
72	2U	214+00.000	217+50.000	350.00	0.0663	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.91	15.0	4	false	0	false	false	false						
73	2U	217+50.000	219+74.300	224.30	0.0425	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
74	2U	219+74.300	221+00.000	125.70	0.0238	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50		
75	2U	221+00.000	223+59.700	259.70	0.0492	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false	716.78	10.0	false	50		

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)		
76	2U	223+59.700	225+50.000	190.30	0.0360	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false						
77	2U	225+50.000	229+50.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.68	15.0	4	false	0	false	false	false						
78	2U	229+50.000	232+81.100	331.10	0.0627	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false						
79	2U	232+81.100	236+92.200	411.10	0.0779	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false	955.37		9.0	false	50	
80	2U	236+92.200	237+50.000	57.80	0.0109	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false						
81	2U	237+50.000	239+48.700	198.70	0.0376	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false						
82	2U	239+48.700	244+86.300	537.60	0.1018	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false	319.62		10.0	false	50	
83	2U	244+86.300	246+00.000	113.70	0.0215	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false						
84	2U	246+00.000	246+90.200	90.20	0.0171	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
85	2U	246+90.200	251+29.900	439.70	0.0833	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	478.34		10.0	false	50	
86	2U	251+29.900	254+96.700	366.80	0.0695	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	427.50		10.0	false	50	
87	2U	254+96.700	262+25.000	728.30	0.1379	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
88	2U	262+25.000	266+14.700	389.70	0.0738	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false						
89	2U	266+14.700	267+25.000	110.30	0.0209	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false	716.78		10.0	false	50	
90	2U	267+25.000	272+25.000	500.00	0.0947	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.44	15.0	4	false	0	false	false	false	716.78		10.0	false	50	
91	2U	272+25.000	272+55.500	30.50	0.0058	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.97	15.0	4	false	0	false	false	false	716.78		10.0	false	50	
92	2U	272+55.500	275+50.000	294.50	0.0558	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	6.97	15.0	4	false	0	false	false	false						
93	2U	275+50.000	279+21.000	371.00	0.0703	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	716.78		10.0	false	50	
94	2U	279+21.000	283+92.500	471.50	0.0893	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	637.28		10.0	false	50	

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
95	2U	283+92.500	286+08.900	216.40	0.0410	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false				
96	2U	286+08.900	286+25.000	16.10	0.0031	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	1,348.14	7.0	false	50
97	2U	286+25.000	289+81.500	356.50	0.0675	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	1,348.14	7.0	false	50
98	2U	289+81.500	290+84.700	103.20	0.0196	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
99	2U	290+84.700	291+84.700	100.00	0.0189	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
100	2U	291+84.700	293+34.700	150.00	0.0284	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
101	2U	293+34.700	301+49.400	814.70	0.1543	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
102	2U	301+49.400	303+31.900	182.50	0.0346	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
103	2U	303+31.900	303+99.400	67.50	0.0128	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
104	2U	303+99.400	304+31.900	32.50	0.0062	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	1.00	15.0	4	false	0	false	false	false				

Table 3. Crash History Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWLT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	2U	23+65.000	30+30.000	665.00	0.1260	2012-2016: 4,400	10.50	10.50	0.00	0.00	3.00	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50
2	2U	30+30.000	33+19.000	289.00	0.0547	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.62	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50
3	2U	33+19.000	38+40.000	521.00	0.0987	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.62	30.0	4	false	0	false	false	false				
4	2U	38+40.000	40+24.500	184.50	0.0349	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.60	30.0	4	false	0	false	false	false				
5	2U	40+24.500	42+75.000	250.50	0.0474	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.60	30.0	4	false	0	false	false	false	955.37	9.0	false	50
6	2U	42+75.000	45+86.200	311.20	0.0589	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false	955.37	9.0	false	50
7	2U	45+86.200	50+25.000	438.80	0.0831	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
8	2U	50+25.000	50+42.900	17.90	0.0034	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.29	30.0	4	false	0	false	false	false				
9	2U	50+42.900	53+25.000	282.10	0.0534	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.29	30.0	4	false	0	false	false	false	955.37	9.0	false	50
10	2U	53+25.000	55+20.700	195.70	0.0371	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.80	30.0	4	false	0	false	false	false	955.37	9.0	false	50
11	2U	55+20.700	58+00.000	279.30	0.0529	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.80	30.0	4	false	0	false	false	false				
12	2U	58+00.000	62+50.000	450.00	0.0852	2012-2016: 4,400	10.50	10.50	0.00	0.00	6.00	30.0	4	false	0	false	false	false				
13	2U	62+50.000	65+50.000	300.00	0.0568	2012-2016: 4,400	10.50	10.50	0.00	0.00	1.00	30.0	4	false	0	false	false	false				
14	2U	65+50.000	71+25.000	575.00	0.1089	2012-2016: 4,400	10.50	10.50	0.00	0.00	7.60	30.0	4	false	0	false	false	false				
15	2U	71+25.000	75+00.000	375.00	0.0710	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
16	2U	75+00.000	78+06.900	306.90	0.0581	2012-2016: 4,400	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false				
17	2U	78+06.900	79+50.000	143.10	0.0271	2012-2016: 4,400	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false	955.37	9.0	false	50
18	2U	79+50.000	82+00.000	250.00	0.0474	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.20	30.0	4	false	0	false	false	false	955.37	9.0	false	50
19	2U	82+00.000	82+84.700	84.70	0.0160	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	955.37	9.0	false	50
20	2U	82+84.700	83+88.900	104.20	0.0197	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false				
21	2U	83+88.900	89+09.300	520.40	0.0986	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	716.78	10.0	false	50
22	2U	89+09.300	89+75.000	65.70	0.0124	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false				
23	2U	89+75.000	90+65.400	90.40	0.0171	2012-2016: 4,400	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false				
24	2U	90+65.400	94+07.600	342.20	0.0648	2012-2016: 4,400	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false	1,910.08	6.0	false	50
25	2U	94+07.600	94+25.000	17.40	0.0033	2012-2016: 4,400	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false				
26	2U	94+25.000	99+50.000	525.00	0.0994	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
27	2U	99+50.000	103+50.000	400.00	0.0758	2012-2016: 4,400	10.50	10.50	0.00	0.00	3.40	30.0	4	false	0	false	false	false				
28	2U	103+50.000	106+50.000	300.00	0.0568	2012-2016: 4,400	10.50	10.50	0.00	0.00	3.48	30.0	4	false	0	false	false	false				
29	2U	106+50.000	108+50.200	200.20	0.0379	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
30	2U	108+50.200	109+00.000	49.80	0.0094	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	573.69	10.0	false	50
31	2U	109+00.000	111+75.000	275.00	0.0521	2012-2016: 4,400	10.50	10.50	0.00	0.00	6.60	30.0	4	false	0	false	false	false	573.69	10.0	false	50
32	2U	111+75.000	113+79.900	204.90	0.0388	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false	573.69	10.0	false	50
33	2U	113+79.900	118+50.000	470.10	0.0890	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false				
34	2U	118+50.000	125+25.000	675.00	0.1278	2012-2016: 4,400	10.50	10.50	0.00	0.00	1.52	30.0	4	false	0	false	false	false				
35	2U	125+25.000	126+56.000	131.00	0.0248	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
36	2U	126+56.000	127+50.000	94.00	0.0178	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
37	2U	127+50.000	129+50.000	200.00	0.0379	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.25	30.0	4	false	0	false	false	false				
38	2U	129+50.000	131+26.100	176.10	0.0333	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.57	30.0	4	false	0	false	false	false				
39	2U	131+26.100	132+00.000	73.90	0.0140	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.57	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
40	2U	132+00.000	135+00.000	300.00	0.0568	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWLT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
41	2U	135+00.000	136+31.400	131.40	0.0249	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	1,146.28	8.0	false	50
42	2U	136+31.400	140+75.500	444.10	0.0841	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
43	2U	140+75.500	141+00.000	24.50	0.0046	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
44	2U	141+00.000	143+50.000	250.00	0.0474	2012-2016: 3,800	10.50	10.50	0.00	0.00	6.36	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
45	2U	143+50.000	145+48.000	198.00	0.0375	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.50	30.0	4	false	0	false	false	false	1,432.69	7.0	false	50
46	2U	145+48.000	148+00.000	252.00	0.0477	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.50	30.0	4	false	0	false	false	false				
47	2U	148+00.000	155+50.000	750.00	0.1421	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.00	30.0	4	false	0	false	false	false				
48	2U	155+50.000	157+45.700	195.70	0.0371	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false				
49	2U	157+45.700	160+54.000	308.30	0.0584	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false	2,864.93	4.0	false	50
50	2U	160+54.000	162+00.000	146.00	0.0277	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.40	30.0	4	false	0	false	false	false				
51	2U	162+00.000	166+00.000	400.00	0.0758	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
52	2U	166+00.000	170+50.000	450.00	0.0852	2012-2016: 3,800	10.50	10.50	0.00	0.00	2.40	30.0	4	false	0	false	false	false				
53	2U	170+50.000	172+52.500	202.50	0.0384	2012-2016: 3,800	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
54	2U	172+52.500	174+28.000	175.50	0.0332	2012-2016: 3,800	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false	1,910.08	6.0	false	50
55	2U	174+28.000	174+50.000	22.00	0.0042	2012-2016: 3,800	10.50	10.50	0.00	0.00	4.60	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
56	2U	174+50.000	176+02.500	152.50	0.0289	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.60	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
57	2U	176+02.500	179+00.000	297.50	0.0563	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.60	15.0	4	false	0	false	false	false				
58	2U	179+00.000	180+37.800	137.80	0.0261	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.26	15.0	4	false	0	false	false	false				
59	2U	180+37.800	182+50.000	212.20	0.0402	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.26	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
60	2U	182+50.000	184+50.000	200.00	0.0379	2012-2016: 3,800	10.50	10.50	0.00	0.00	4.80	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
61	2U	184+50.000	187+82.200	332.20	0.0629	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false	1,910.08	6.0	false	50
62	2U	187+82.200	188+75.000	92.80	0.0176	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false				
63	2U	188+75.000	192+00.000	325.00	0.0616	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.60	15.0	4	false	0	false	false	false				
64	2U	192+00.000	194+18.600	218.60	0.0414	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false				
65	2U	194+18.600	198+18.600	400.00	0.0758	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false	1,432.69	7.0	false	50
66	2U	198+18.600	198+25.000	6.40	0.0012	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.48	15.0	4	false	0	false	false	false				
67	2U	198+25.000	202+00.000	375.00	0.0710	2012-2016: 3,800	10.50	10.50	0.00	0.00	6.20	15.0	4	false	0	false	false	false				
68	2U	202+00.000	206+00.000	400.00	0.0758	2012-2016: 3,800	10.50	10.50	0.00	0.00	4.84	15.0	4	false	0	false	false	false				
69	2U	206+00.000	207+83.300	183.30	0.0347	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
70	2U	207+83.300	213+64.300	581.00	0.1100	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	579.69	10.0	false	50
71	2U	213+64.300	214+00.000	35.70	0.0068	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
72	2U	214+00.000	217+50.000	350.00	0.0663	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.91	15.0	4	false	0	false	false	false				
73	2U	217+50.000	219+74.300	224.30	0.0425	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
74	2U	219+74.300	221+00.000	125.70	0.0238	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50
75	2U	221+00.000	223+59.700	259.70	0.0492	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false	716.78	10.0	false	50
76	2U	223+59.700	225+50.000	190.30	0.0360	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false				
77	2U	225+50.000	229+50.000	400.00	0.0758	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.68	15.0	4	false	0	false	false	false				
78	2U	229+50.000	232+81.100	331.10	0.0627	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false				
79	2U	232+81.100	236+92.200	411.10	0.0779	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false	955.37	9.0	false	50
80	2U	236+92.200	237+50.000	57.80	0.0109	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false				
81	2U	237+50.000	239+48.700	198.70	0.0376	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false				
82	2U	239+48.700	244+86.300	537.60	0.1018	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false	319.62	10.0	false	50
83	2U	244+86.300	246+00.000	113.70	0.0215	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false				

Seg. No.	Type	Start Location	End Location	Length (ft)	Length(mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWLT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
84	2U	246+00.000	246+90.200	90.20	0.0171	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
85	2U	246+90.200	251+29.900	439.70	0.0833	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	478.34	10.0	false	50
86	2U	251+29.900	254+96.700	366.80	0.0695	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	427.50	10.0	false	50
87	2U	254+96.700	262+25.000	728.30	0.1379	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
88	2U	262+25.000	266+14.700	389.70	0.0738	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false				
89	2U	266+14.700	267+25.000	110.30	0.0209	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50
90	2U	267+25.000	272+25.000	500.00	0.0947	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.44	15.0	4	false	0	false	false	false	716.78	10.0	false	50
91	2U	272+25.000	272+55.500	30.50	0.0058	2012-2016: 3,800	10.50	10.50	0.00	0.00	6.97	15.0	4	false	0	false	false	false	716.78	10.0	false	50
92	2U	272+55.500	275+50.000	294.50	0.0558	2012-2016: 3,800	10.50	10.50	0.00	0.00	6.97	15.0	4	false	0	false	false	false				
93	2U	275+50.000	279+21.000	371.00	0.0703	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	716.78	10.0	false	50
94	2U	279+21.000	283+92.500	471.50	0.0893	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	637.28	10.0	false	50
95	2U	283+92.500	286+08.900	216.40	0.0410	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false				
96	2U	286+08.900	286+25.000	16.10	0.0031	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.80	15.0	4	false	0	false	false	false	1,348.14	7.0	false	50
97	2U	286+25.000	289+81.500	356.50	0.0675	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	1,348.14	7.0	false	50
98	2U	289+81.500	290+84.700	103.20	0.0196	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
99	2U	290+84.700	291+84.700	100.00	0.0189	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
100	2U	291+84.700	293+34.700	150.00	0.0284	2012-2016: 3,800	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
101	2U	293+34.700	301+49.400	814.70	0.1543	2012-2016: 3,800	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
102	2U	301+49.400	303+31.900	182.50	0.0346	2012-2016: 3,800	10.50	10.50	0.00	0.00	2.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
103	2U	303+31.900	303+99.400	67.50	0.0128	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.00	15.0	4	false	0	false	false	false	674.07	10.0	false	50
104	2U	303+99.400	304+31.900	32.50	0.0062	2012-2016: 3,800	10.50	10.50	0.00	0.00	1.00	15.0	4	false	0	false	false	false				

Table 4. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	5.3157
Average Future Road AADT (vpd)	5,446
Expected Crashes	
Total Crashes	448.04
Fatal and Injury Crashes	150.20
Property-Damage-Only Crashes	297.85
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	34
Percent Property-Damage-Only Crashes (%)	66
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	4.2143
Fatal and Injury Crash Rate (crashes/mi/yr)	1.4128
Property-Damage-Only Crash Rate (crashes/mi/yr)	2.8016
Expected Travel Crash Rate	
Total Travel (million veh-mi)	211.31
Travel Crash Rate (crashes/million veh-mi)	2.12
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.71
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	1.41

Table 5. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	23+65.000	30+30.000	0.1259	2.077	0.8246	0.40
2	30+30.000	33+19.000	0.0547	8.687	7.9354	3.80
3	33+19.000	38+40.000	0.0987	16.630	8.4266	4.04
4	38+40.000	40+24.500	0.0349	0.569	0.8148	0.39
5	40+24.500	42+75.000	0.0474	9.136	9.6282	4.61
6	42+75.000	45+86.200	0.0589	13.489	11.4429	5.48
7	45+86.200	50+25.000	0.0831	12.892	7.7564	3.72
8	50+25.000	50+42.900	0.0034	0.055	0.8148	0.39
9	50+42.900	53+25.000	0.0534	5.135	4.8056	2.30
10	53+25.000	55+20.700	0.0371	0.648	0.8742	0.42
11	55+20.700	58+00.000	0.0529	0.844	0.7975	0.38

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
12	58+00.000	62+50.000	0.0852	5.235	3.0711	1.47
13	62+50.000	65+50.000	0.0568	0.906	0.7975	0.38
14	65+50.000	71+25.000	0.1089	1.795	0.8241	0.40
15	71+25.000	75+00.000	0.0710	1.133	0.7975	0.38
16	75+00.000	78+06.900	0.0581	0.958	0.8241	0.40
17	78+06.900	79+50.000	0.0271	0.485	0.8940	0.43
18	79+50.000	82+00.000	0.0473	9.214	9.7304	4.66
19	82+00.000	82+84.700	0.0160	8.659	26.9889	12.93
20	82+84.700	83+88.900	0.0197	0.322	0.8148	0.39
21	83+88.900	89+09.300	0.0986	14.476	7.3437	3.52
22	89+09.300	89+75.000	0.0124	0.203	0.8148	0.39
23	89+75.000	90+65.400	0.0171	0.282	0.8241	0.40
24	90+65.400	94+07.600	0.0648	1.138	0.8781	0.42
25	94+07.600	94+25.000	0.0033	0.054	0.8241	0.40
26	94+25.000	99+50.000	0.0994	1.620	0.8148	0.39
27	99+50.000	103+50.000	0.0758	8.926	5.8914	2.82
28	103+50.000	106+50.000	0.0568	0.926	0.8148	0.39
29	106+50.000	108+50.200	0.0379	0.605	0.7975	0.38
30	108+50.200	109+00.000	0.0094	0.169	0.8970	0.43
31	109+00.000	111+75.000	0.0521	26.850	25.7762	12.35
32	111+75.000	113+79.900	0.0388	9.281	11.9574	5.73
33	113+79.900	118+50.000	0.0890	5.297	2.9746	1.43
34	118+50.000	125+25.000	0.1278	2.039	0.7975	0.38
35	125+25.000	126+56.000	0.0248	0.396	0.7975	0.38
36	126+56.000	127+50.000	0.0178	0.292	0.8196	0.42
37	127+50.000	129+50.000	0.0379	0.636	0.8391	0.43
38	129+50.000	131+26.100	0.0334	8.283	12.4180	6.43
39	131+26.100	132+00.000	0.0140	0.250	0.8929	0.46
40	132+00.000	135+00.000	0.0568	5.370	4.7252	2.45
41	135+00.000	136+31.400	0.0249	13.088	26.2949	13.62
42	136+31.400	140+75.500	0.0841	5.247	3.1191	1.62
43	140+75.500	141+00.000	0.0046	0.082	0.8847	0.46
44	141+00.000	143+50.000	0.0473	9.447	9.9756	5.17
45	143+50.000	145+48.000	0.0375	9.015	12.0207	6.23
46	145+48.000	148+00.000	0.0477	0.782	0.8196	0.42
47	148+00.000	155+50.000	0.1420	2.328	0.8196	0.42
48	155+50.000	157+45.700	0.0371	0.608	0.8196	0.42
49	157+45.700	160+54.000	0.0584	1.019	0.8724	0.45
50	160+54.000	162+00.000	0.0277	4.322	7.8143	4.05
51	162+00.000	166+00.000	0.0758	1.242	0.8196	0.42
52	166+00.000	170+50.000	0.0852	1.397	0.8196	0.42
53	170+50.000	172+52.500	0.0384	0.644	0.8391	0.43
54	172+52.500	174+28.000	0.0332	0.599	0.9015	0.47
55	174+28.000	174+50.000	0.0042	0.074	0.8854	0.46
56	174+50.000	176+02.500	0.0289	4.588	7.9428	4.12
57	176+02.500	179+00.000	0.0563	4.612	4.0925	2.12
58	179+00.000	180+37.800	0.0261	4.135	7.9213	4.10
59	180+37.800	182+50.000	0.0402	4.584	5.7034	2.96
60	182+50.000	184+50.000	0.0379	0.645	0.8509	0.44
61	184+50.000	187+82.200	0.0629	4.962	3.9430	2.04
62	187+82.200	188+75.000	0.0176	0.277	0.7888	0.41

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
63	188+75.000	192+00.000	0.0616	0.999	0.8115	0.42
64	192+00.000	194+18.600	0.0414	4.502	5.4370	2.82
65	194+18.600	198+18.600	0.0758	1.355	0.8946	0.46
66	198+18.600	198+25.000	0.0012	0.020	0.8115	0.42
67	198+25.000	202+00.000	0.0710	5.058	3.5609	1.84
68	202+00.000	206+00.000	0.0758	5.060	3.3393	1.73
69	206+00.000	207+83.300	0.0347	4.460	6.4234	3.33
70	207+83.300	213+64.300	0.1100	15.386	6.9912	3.62
71	213+64.300	214+00.000	0.0068	0.111	0.8237	0.43
72	214+00.000	217+50.000	0.0663	1.076	0.8115	0.42
73	217+50.000	219+74.300	0.0425	0.700	0.8237	0.43
74	219+74.300	221+00.000	0.0238	0.455	0.9553	0.50
75	221+00.000	223+59.700	0.0492	5.312	5.3996	2.80
76	223+59.700	225+50.000	0.0360	0.569	0.7888	0.41
77	225+50.000	229+50.000	0.0758	5.060	3.3393	1.73
78	229+50.000	232+81.100	0.0627	8.678	6.9193	3.58
79	232+81.100	236+92.200	0.0779	5.776	3.7090	1.92
80	236+92.200	237+50.000	0.0109	0.178	0.8115	0.42
81	237+50.000	239+48.700	0.0376	0.620	0.8237	0.43
82	239+48.700	244+86.300	0.1018	25.445	12.4954	6.47
83	244+86.300	246+00.000	0.0215	0.355	0.8237	0.43
84	246+00.000	246+90.200	0.0171	0.281	0.8237	0.43
85	246+90.200	251+29.900	0.0833	15.455	9.2795	4.81
86	251+29.900	254+96.700	0.0695	24.982	17.9803	9.31
87	254+96.700	262+25.000	0.1379	6.160	2.2331	1.16
88	262+25.000	266+14.700	0.0738	1.164	0.7888	0.41
89	266+14.700	267+25.000	0.0209	0.372	0.8910	0.46
90	267+25.000	272+25.000	0.0947	14.305	7.5528	3.91
91	272+25.000	272+55.500	0.0058	0.106	0.9186	0.48
92	272+55.500	275+50.000	0.0558	0.919	0.8237	0.43
93	275+50.000	279+21.000	0.0703	1.226	0.8722	0.45
94	279+21.000	283+92.500	0.0893	5.725	3.2055	1.66
95	283+92.500	286+08.900	0.0410	0.646	0.7888	0.41
96	286+08.900	286+25.000	0.0030	0.054	0.8847	0.46
97	286+25.000	289+81.500	0.0675	1.233	0.9128	0.47
98	289+81.500	290+84.700	0.0195	0.322	0.8237	0.43
99	290+84.700	291+84.700	0.0189	0.332	0.8764	0.45
100	291+84.700	293+34.700	0.0284	0.480	0.8452	0.44
101	293+34.700	301+49.400	0.1543	18.566	6.0162	3.12
102	301+49.400	303+31.900	0.0346	4.574	6.6162	3.43
103	303+31.900	303+99.400	0.0128	0.216	0.8452	0.44
104	303+99.400	304+31.900	0.0062	0.097	0.7888	0.41

Table 6. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	23+65.000	33+19.000	0.1807	10.764	2.9787	1.43
Tangent	33+19.000	40+24.500	0.1336	17.199	6.4360	3.08
Simple Curve 2	40+24.500	45+86.200	0.1064	22.625	10.6336	5.10
Tangent	45+86.200	50+42.900	0.0865	12.947	7.4844	3.59
Simple Curve 3	50+42.900	55+20.700	0.0905	5.783	3.1953	1.53
Tangent	55+20.700	78+06.900	0.4330	10.870	1.2553	0.60
Simple Curve 4	78+06.900	82+84.700	0.0905	18.358	10.1433	4.86
Tangent	82+84.700	83+88.900	0.0197	0.322	0.8148	0.39
Simple Curve 5	83+88.900	89+09.300	0.0986	14.476	7.3437	3.52
Tangent	89+09.300	90+65.400	0.0296	0.485	0.8202	0.39
Simple Curve 6	90+65.400	94+07.600	0.0648	1.138	0.8781	0.42
Tangent	94+07.600	108+50.200	0.2732	12.132	2.2202	1.06
Simple Curve 7	108+50.200	113+79.900	0.1003	36.300	18.0918	8.67
Tangent	113+79.900	131+26.100	0.3307	16.942	2.5614	1.28
Simple Curve 8	131+26.100	136+31.400	0.0957	18.707	9.7738	5.06
Tangent	136+31.400	140+75.500	0.0841	5.247	3.1191	1.62
Simple Curve 9	140+75.500	145+48.000	0.0895	18.544	10.3612	5.37
Tangent	145+48.000	157+45.700	0.2268	3.718	0.8196	0.42
Simple Curve 10	157+45.700	160+54.000	0.0584	1.019	0.8724	0.45
Tangent	160+54.000	172+52.500	0.2270	7.604	1.6750	0.87
Simple Curve 11	172+52.500	176+02.500	0.0663	5.261	3.9685	2.06
Tangent	176+02.500	180+37.800	0.0824	8.746	5.3045	2.75
Simple Curve 12	180+37.800	187+82.200	0.1410	10.191	3.6141	1.87
Tangent	187+82.200	194+18.600	0.1205	5.778	2.3970	1.24
Simple Curve 13	194+18.600	198+18.600	0.0758	1.355	0.8946	0.46
Tangent	198+18.600	207+83.300	0.1827	14.597	3.9947	2.07
Simple Curve 14	207+83.300	213+64.300	0.1100	15.386	6.9912	3.62
Tangent	213+64.300	219+74.300	0.1155	1.887	0.8167	0.42
Simple Curve 15	219+74.300	223+59.700	0.0730	5.766	3.9501	2.05
Tangent	223+59.700	232+81.100	0.1745	14.306	4.0990	2.12
Simple Curve 16	232+81.100	236+92.200	0.0779	5.776	3.7090	1.92
Tangent	236+92.200	239+48.700	0.0486	0.798	0.8210	0.42
Simple Curve 17	239+48.700	244+86.300	0.1018	25.445	12.4954	6.47
Tangent	244+86.300	246+90.200	0.0386	0.636	0.8237	0.43
Simple Curve 18	246+90.200	251+29.900	0.0833	15.455	9.2795	4.81
Simple Curve 19	251+29.900	254+96.700	0.0695	24.982	17.9803	9.31
Tangent	254+96.700	266+14.700	0.2117	7.325	1.7296	0.90
Simple Curve 20	266+14.700	272+55.500	0.1214	14.783	6.0903	3.15
Tangent	272+55.500	275+48.100	0.0554	0.913	0.8237	0.43
Simple Curve 21	275+48.100	279+21.000	0.0706	1.232	0.8720	0.45
Simple Curve 22	279+21.000	283+92.500	0.0893	5.725	3.2055	1.66
Tangent	283+92.500	286+08.900	0.0410	0.646	0.7888	0.41
Simple Curve 23	286+08.900	289+81.500	0.0706	1.287	0.9116	0.47
Tangent	289+81.500	290+84.700	0.0195	0.322	0.8237	0.43
Spiral Curve 24	290+84.700	293+34.700	0.0473	0.812	0.8577	0.44
Simple Curve 25	293+34.700	301+49.400	0.1543	18.566	6.0162	3.12
Spiral Curve 26	301+49.400	303+99.400	0.0473	4.790	5.0580	2.62
Tangent	303+99.400	304+31.900	0.0062	0.097	0.7888	0.41

Table 7. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	5.71	1.3	54.80	12.2	54.21	12.1
Highway Segment	Collision with Bicycle	0.60	0.1	0.30	0.1	0.90	0.2
Highway Segment	Other Single-vehicle Collision	1.05	0.2	8.64	1.9	9.41	2.1
Highway Segment	Overtaken	5.56	1.2	4.47	1.0	11.20	2.5
Highway Segment	Collision with Pedestrian	1.05	0.2	0.30	0.1	1.34	0.3
Highway Segment	Run Off Road	81.86	18.3	150.41	33.6	233.43	52.1
Highway Segment	Total Single Vehicle Crashes	95.83	21.4	218.92	48.9	310.50	69.3
Highway Segment	Angle Collision	15.17	3.4	21.45	4.8	38.08	8.5
Highway Segment	Head-on Collision	5.11	1.1	0.89	0.2	7.17	1.6
Highway Segment	Other Multiple-vehicle Collision	3.90	0.9	8.94	2.0	12.10	2.7
Highway Segment	Rear-end Collision	24.78	5.5	36.34	8.1	63.62	14.2
Highway Segment	Sideswipe	5.71	1.3	11.32	2.5	16.58	3.7
Highway Segment	Total Multiple Vehicle Crashes	54.67	12.2	78.93	17.6	137.55	30.7
Highway Segment	Total Highway Segment Crashes	150.50	33.6	297.85	66.5	448.04	100.0
	Total Crashes	150.50	33.6	297.85	66.5	448.04	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

KY 185 IHSDM Evaluation: Proposed Corridor



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

February 9, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview **1**
Section 1 Evaluation **1**

List of Tables

Table Evaluation Highway - Homogeneous Segments (Section 1) 3
Table Expected Highway Crash Rates and Frequencies (Section 1) 6
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1) 7
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1) 8
Table Expected Segment Crash Type Distribution (Section 1) 9

List of Figures

Figure Crash Prediction Summary (Section 1) 2

Report Overview

Report Generated: Feb 9, 2018 9:04 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Fri Feb 09 09:04:27 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Proposed KY 185

Project Comment: Created Fri Jan 12 13:46:30 EST 2018

Project Unit System: U.S. Customary

Highway Title: KY 185 Proposed

Highway Comment: Created Fri Jan 12 14:20:14 EST 2018

Highway Version: 1

Evaluation Title: KY 185 proposed evaluation

Evaluation Comment: Created Fri Feb 09 09:04:01 EST 2018

Minimum Station: 1504+00.000

Maximum Station: 1805+65.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: None

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 1504+00.000

Evaluation End Location: 1805+65.000

Area Type: Rural

Functional Class: Local

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

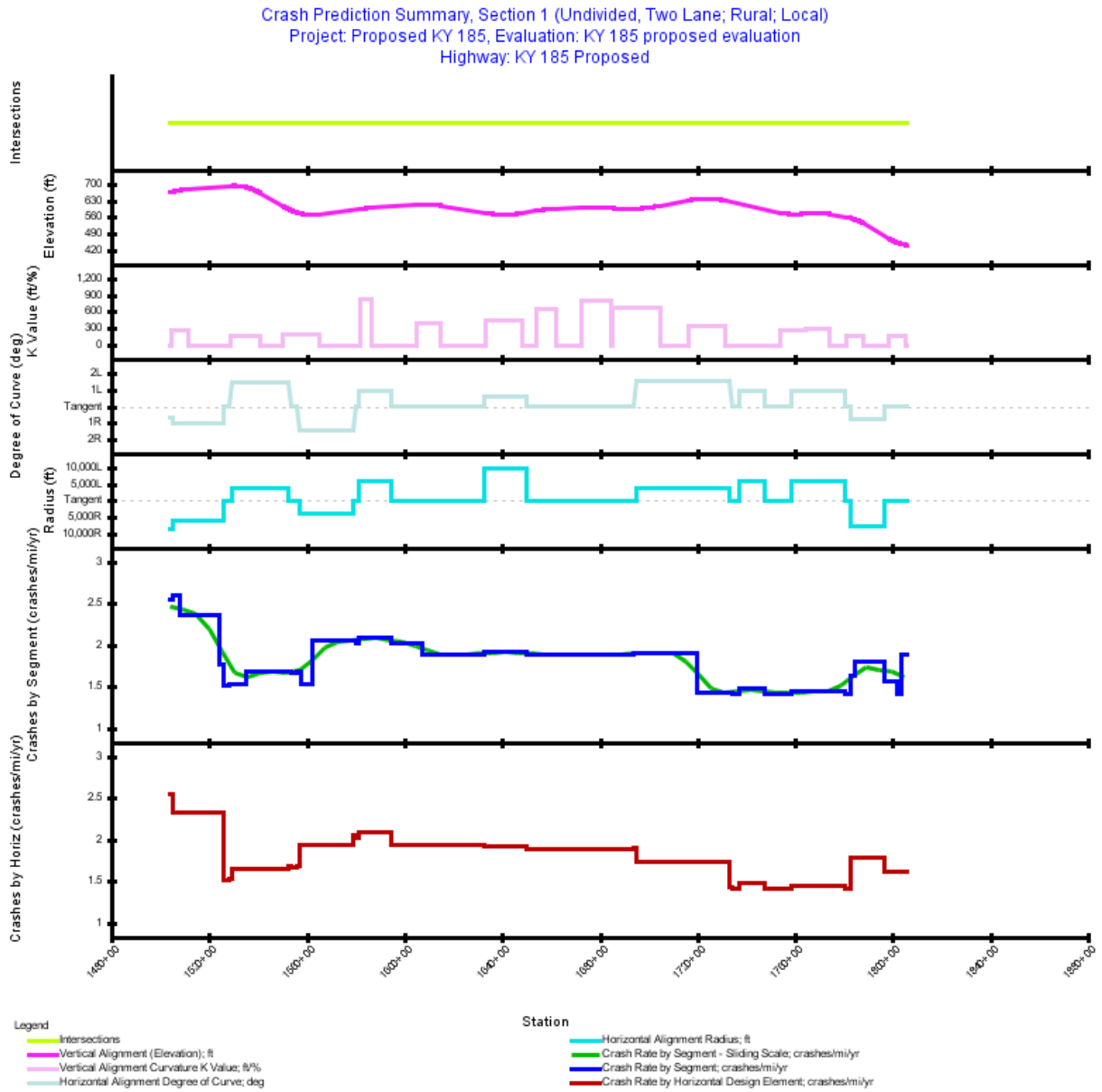


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveway/s/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	2U	1504+00.000	1504+99.260	99.26	0.0188	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	3.25	15.0	3	false	0	false	false	false	8,618.57	2.0	true	55
2	2U	1504+99.260	1508+09.100	309.84	0.0587	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	3.25	15.0	3	false	0	false	false	false	5,800.00	2.0	true	55
3	2U	1508+09.100	1524+00.000	1,590.90	0.3013	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	0	false	false	false	5,800.00	2.0	true	55
4	2U	1524+00.000	1525+94.910	194.91	0.0369	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false	5,800.00	2.0	true	55
5	2U	1525+94.910	1528+27.160	232.25	0.0440	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false				
6	2U	1528+27.160	1529+62.160	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false	4,000.00	2.6	false	55
7	2U	1529+62.160	1535+00.000	537.84	0.1019	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false	4,000.00	2.6	false	55
8	2U	1535+00.000	1552+50.640	1,750.64	0.3316	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	2.6	false	55
9	2U	1552+50.640	1553+85.640	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	2.6	false	55
10	2U	1553+85.640	1555+62.690	177.05	0.0335	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false				
11	2U	1555+62.690	1556+97.690	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55
12	2U	1556+97.690	1557+50.000	52.31	0.0099	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55
13	2U	1557+50.000	1562+00.000	450.00	0.0852	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55
14	2U	1562+00.000	1578+89.590	1,689.59	0.3200	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false	4,000.00	3.4	false	55
15	2U	1578+89.590	1580+24.590	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false	4,000.00	3.4	false	55
16	2U	1580+24.590	1581+33.110	108.52	0.0205	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false				
17	2U	1581+33.110	1584+25.000	291.89	0.0553	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false	6,000.00	2.4	false	55
18	2U	1584+25.000	1594+62.570	1,037.57	0.1965	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	0	false	false	false	6,000.00	2.4	false	55

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)		
19	2U	1594+62.570	1607+26.410	1,263.84	0.2394	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	0	false	false	false						
20	2U	1607+26.410	1610+00.000	273.59	0.0518	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	0.75	15.0	3	false	0	false	false	false						
21	2U	1610+00.000	1632+88.100	2,288.10	0.4334	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.70	15.0	3	false	0	false	false	false						
22	2U	1632+88.100	1641+00.000	811.90	0.1538	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.70	15.0	3	false	0	false	false	false	10,000.00		2.0	false	55	
23	2U	1641+00.000	1649+79.330	879.33	0.1665	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.75	15.0	3	false	0	false	false	false	10,000.00		2.0	false	55	
24	2U	1649+79.330	1658+00.000	820.67	0.1554	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.75	15.0	3	false	0	false	false	false						
25	2U	1658+00.000	1678+75.000	2,075.00	0.3930	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	0.50	15.0	3	false	0	false	false	false						
26	2U	1678+75.000	1693+56.600	1,481.60	0.2806	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.00	15.0	3	false	0	false	false	false						
27	2U	1693+56.600	1694+96.600	140.00	0.0265	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.00	15.0	3	false	0	false	false	false	3,800.00		3.6	false	55	
28	2U	1694+96.600	1695+00.000	3.40	0.0006	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.00	15.0	3	false	0	false	false	false	3,800.00		3.6	false	55	
29	2U	1695+00.000	1719+90.000	2,490.00	0.4716	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.00	15.0	3	false	0	false	false	false	3,800.00		3.6	false	55	
30	2U	1719+90.000	1724+00.000	410.00	0.0776	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.00	15.0	3	false	1	false	false	false	3,800.00		3.6	false	55	
31	2U	1724+00.000	1733+12.990	912.99	0.1729	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.25	15.0	3	false	1	false	false	false	3,800.00		3.6	false	55	
32	2U	1733+12.990	1734+52.990	140.00	0.0265	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.25	15.0	3	false	1	false	false	false	3,800.00		3.6	false	55	
33	2U	1734+52.990	1737+33.980	280.99	0.0532	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.25	15.0	3	false	1	false	false	false						
34	2U	1737+33.980	1747+77.220	1,043.24	0.1976	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.25	15.0	3	false	1	false	false	false	6,000.00		2.4	false	55	
35	2U	1747+77.220	1758+75.160	1,097.94	0.2079	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.25	15.0	3	false	1	false	false	false						
36	2U	1758+75.160	1759+00.000	24.84	0.0047	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	2.25	15.0	3	false	1	false	false	false	6,000.00		2.4	false	55	
37	2U	1759+00.000	1769+00.000	1,000.00	0.1894	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.50	15.0	3	false	1	false	false	false	6,000.00		2.4	false	55	

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
38	2U	1769+00.000	1780+61.240	1,161.24	0.2199	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.81	15.0	3	false	1	false	false	false	6,000.00	2.4	false	55
39	2U	1780+61.240	1782+55.690	194.45	0.0368	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.81	15.0	3	false	1	false	false	false				
40	2U	1782+55.690	1784+24.290	168.60	0.0319	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.81	15.0	3	false	1	false	false	false	7,500.00	2.0	true	55
41	2U	1784+24.290	1796+53.150	1,228.86	0.2327	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	7,500.00	2.0	true	55
42	2U	1796+53.150	1802+00.000	546.85	0.1036	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false				
43	2U	1802+00.000	1803+50.000	150.00	0.0284	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.80	15.0	3	false	1	false	false	false				
44	2U	1803+50.000	1805+65.000	215.00	0.0407	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	1.80	15.0	3	false	0	false	false	false				

Table 2. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	5.7131
Average Future Road AADT (vpd)	5,435
Expected Crashes	
Total Crashes	207.34
Fatal and Injury Crashes	66.56
Property-Damage-Only Crashes	140.78
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	1.8146
Fatal and Injury Crash Rate (crashes/mi/yr)	0.5825
Property-Damage-Only Crash Rate (crashes/mi/yr)	1.2321
Expected Travel Crash Rate	
Total Travel (million veh-mi)	226.67
Travel Crash Rate (crashes/million veh-mi)	0.92
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.29
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	0.62

Table 3. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	1504+00.000	1504+99.260	0.0188	0.958	2.5486	1.22
2	1504+99.260	1508+09.100	0.0587	3.044	2.5936	1.24
3	1508+09.100	1524+00.000	0.3013	14.209	2.3578	1.13
4	1524+00.000	1525+94.910	0.0369	1.306	1.7684	0.85
5	1525+94.910	1528+27.160	0.0440	1.338	1.5213	0.73
6	1528+27.160	1529+62.160	0.0256	0.786	1.5376	0.74
7	1529+62.160	1535+00.000	0.1019	3.132	1.5376	0.74
8	1535+00.000	1552+50.640	0.3316	11.216	1.6914	0.81
9	1552+50.640	1553+85.640	0.0256	0.865	1.6914	0.81
10	1553+85.640	1555+62.690	0.0335	1.122	1.6734	0.80
11	1555+62.690	1556+97.690	0.0256	0.865	1.6921	0.81
12	1556+97.690	1557+50.000	0.0099	0.335	1.6921	0.81
13	1557+50.000	1562+00.000	0.0852	2.622	1.5382	0.74
14	1562+00.000	1578+89.590	0.3200	13.126	2.0510	0.98
15	1578+89.590	1580+24.590	0.0256	1.049	2.0510	0.98
16	1580+24.590	1581+33.110	0.0206	0.834	2.0284	0.97
17	1581+33.110	1584+25.000	0.0553	2.320	2.0979	1.00
18	1584+25.000	1594+62.570	0.1965	8.245	2.0979	1.00
19	1594+62.570	1607+26.410	0.2394	9.710	2.0284	0.97
20	1607+26.410	1610+00.000	0.0518	1.960	1.8913	0.98
21	1610+00.000	1632+88.100	0.4334	16.392	1.8913	0.98
22	1632+88.100	1641+00.000	0.1538	5.910	1.9218	1.00
23	1641+00.000	1649+79.330	0.1665	6.401	1.9218	1.00
24	1649+79.330	1658+00.000	0.1554	5.879	1.8913	0.98
25	1658+00.000	1678+75.000	0.3930	14.865	1.8913	0.98
26	1678+75.000	1693+56.600	0.2806	10.614	1.8913	0.98
27	1693+56.600	1694+96.600	0.0265	1.010	1.9056	0.99
28	1694+96.600	1695+00.000	0.0006	0.025	1.9056	0.99
29	1695+00.000	1719+90.000	0.4716	17.973	1.9056	0.99
30	1719+90.000	1724+00.000	0.0777	2.220	1.4292	0.74
31	1724+00.000	1733+12.990	0.1729	4.943	1.4292	0.74
32	1733+12.990	1734+52.990	0.0265	0.758	1.4292	0.74
33	1734+52.990	1737+33.980	0.0532	1.510	1.4185	0.73
34	1737+33.980	1747+77.220	0.1976	5.850	1.4804	0.77
35	1747+77.220	1758+75.160	0.2079	5.899	1.4185	0.73
36	1758+75.160	1759+00.000	0.0047	0.136	1.4480	0.75
37	1759+00.000	1769+00.000	0.1894	5.485	1.4480	0.75
38	1769+00.000	1780+61.240	0.2199	6.369	1.4480	0.75
39	1780+61.240	1782+55.690	0.0368	1.045	1.4185	0.73
40	1782+55.690	1784+24.290	0.0319	1.047	1.6388	0.85
41	1784+24.290	1796+53.150	0.2327	8.391	1.8027	0.93
42	1796+53.150	1802+00.000	0.1036	3.232	1.5603	0.81
43	1802+00.000	1803+50.000	0.0284	0.806	1.4185	0.73
44	1803+50.000	1805+65.000	0.0407	1.540	1.8913	0.98

Table 4. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	1504+00.000	1504+99.260	0.0188	0.958	2.5486	1.22
Simple Curve 2	1504+99.260	1525+94.910	0.3969	18.558	2.3379	1.12
Tangent	1525+94.910	1528+27.160	0.0440	1.338	1.5213	0.73
Spiral Curve 3	1528+27.160	1529+62.160	0.0256	0.786	1.5376	0.74
Simple Curve 4	1529+62.160	1552+50.640	0.4334	14.348	1.6552	0.79
Spiral Curve 5	1552+50.640	1553+85.640	0.0256	0.865	1.6914	0.81
Tangent	1553+85.640	1555+62.690	0.0335	1.122	1.6734	0.80
Spiral Curve 6	1555+62.690	1556+97.690	0.0256	0.865	1.6921	0.81
Simple Curve 7	1556+97.690	1578+89.590	0.4151	16.084	1.9371	0.93
Spiral Curve 8	1578+89.590	1580+24.590	0.0256	1.049	2.0510	0.98
Tangent	1580+24.590	1581+33.110	0.0206	0.834	2.0284	0.97
Simple Curve 9	1581+33.110	1594+62.570	0.2518	10.565	2.0979	1.00
Tangent	1594+62.570	1632+88.100	0.7245	28.062	1.9366	0.98
Simple Curve 10	1632+88.100	1649+79.330	0.3203	12.312	1.9218	1.00
Tangent	1649+79.330	1693+56.600	0.8290	31.358	1.8913	0.98
Spiral Curve 11	1693+56.600	1694+96.600	0.0265	1.010	1.9056	0.99
Simple Curve 12	1694+96.600	1733+12.990	0.7228	25.160	1.7404	0.90
Spiral Curve 13	1733+12.990	1734+52.990	0.0265	0.758	1.4292	0.74
Tangent	1734+52.990	1737+33.980	0.0532	1.510	1.4185	0.73
Simple Curve 14	1737+33.980	1747+77.220	0.1976	5.850	1.4804	0.77
Tangent	1747+77.220	1758+75.160	0.2079	5.899	1.4185	0.73
Simple Curve 15	1758+75.160	1780+61.240	0.4140	11.990	1.4480	0.75
Tangent	1780+61.240	1782+55.690	0.0368	1.045	1.4185	0.73
Simple Curve 16	1782+55.690	1796+53.150	0.2647	9.438	1.7829	0.92
Tangent	1796+53.150	1805+65.000	0.1727	5.578	1.6150	0.84

Table 5. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	2.53	1.2	25.91	12.5	25.09	12.1
Highway Segment	Collision with Bicycle	0.27	0.1	0.14	0.1	0.41	0.2
Highway Segment	Other Single-vehicle Collision	0.47	0.2	4.08	2.0	4.35	2.1
Highway Segment	Overtaken	2.46	1.2	2.11	1.0	5.18	2.5
Highway Segment	Collision with Pedestrian	0.47	0.2	0.14	0.1	0.62	0.3
Highway Segment	Run Off Road	36.27	17.5	71.10	34.3	108.03	52.1
Highway Segment	Total Single Vehicle Crashes	42.46	20.5	103.48	49.9	143.69	69.3
Highway Segment	Angle Collision	6.72	3.2	10.14	4.9	17.62	8.5
Highway Segment	Head-on Collision	2.26	1.1	0.42	0.2	3.32	1.6
Highway Segment	Other Multiple-vehicle Collision	1.73	0.8	4.22	2.0	5.60	2.7
Highway Segment	Rear-end Collision	10.98	5.3	17.18	8.3	29.44	14.2
Highway Segment	Sideswipe	2.53	1.2	5.35	2.6	7.67	3.7
Highway Segment	Total Multiple Vehicle Crashes	24.23	11.7	37.31	18.0	63.65	30.7
Highway Segment	Total Highway Segment Crashes	66.69	32.2	140.78	67.9	207.34	100.0
	Total Crashes	66.69	32.2	140.78	67.9	207.34	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

**KY 185 IHSDM Evaluation:
Existing Conditions for Spot Improvement 1 Without Crash Data (Predicted
Crash Frequency)**



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

January 23, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview **1**
Section 1 Evaluation **1**

List of Tables

Table Evaluation Highway - Homogeneous Segments (Section 1) 3
Table Expected Highway Crash Rates and Frequencies (Section 1) 5
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1) 6
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1) 7
Table Expected Segment Crash Type Distribution (Section 1) 8

List of Figures

Figure Crash Prediction Summary (Section 1) 2

Report Overview

Report Generated: Jan 23, 2018 8:32 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Tue Jan 23 08:32:19 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Spot Improvement 1

Project Comment: Created Wed Jan 17 14:34:28 EST 2018

Project Unit System: U.S. Customary

Highway Title: Spot 1 - Existing

Highway Comment: Created Wed Jan 17 15:45:22 EST 2018

Highway Version: 1

Evaluation Title: Spot 1 existing without crash data 18-37

Evaluation Comment: Created Tue Jan 23 08:31:55 EST 2018

Minimum Station: 23+65.000

Maximum Station: 117+55.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: None

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 23+65.000

Evaluation End Location: 117+55.000

Area Type: Rural

Functional Class: Local

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

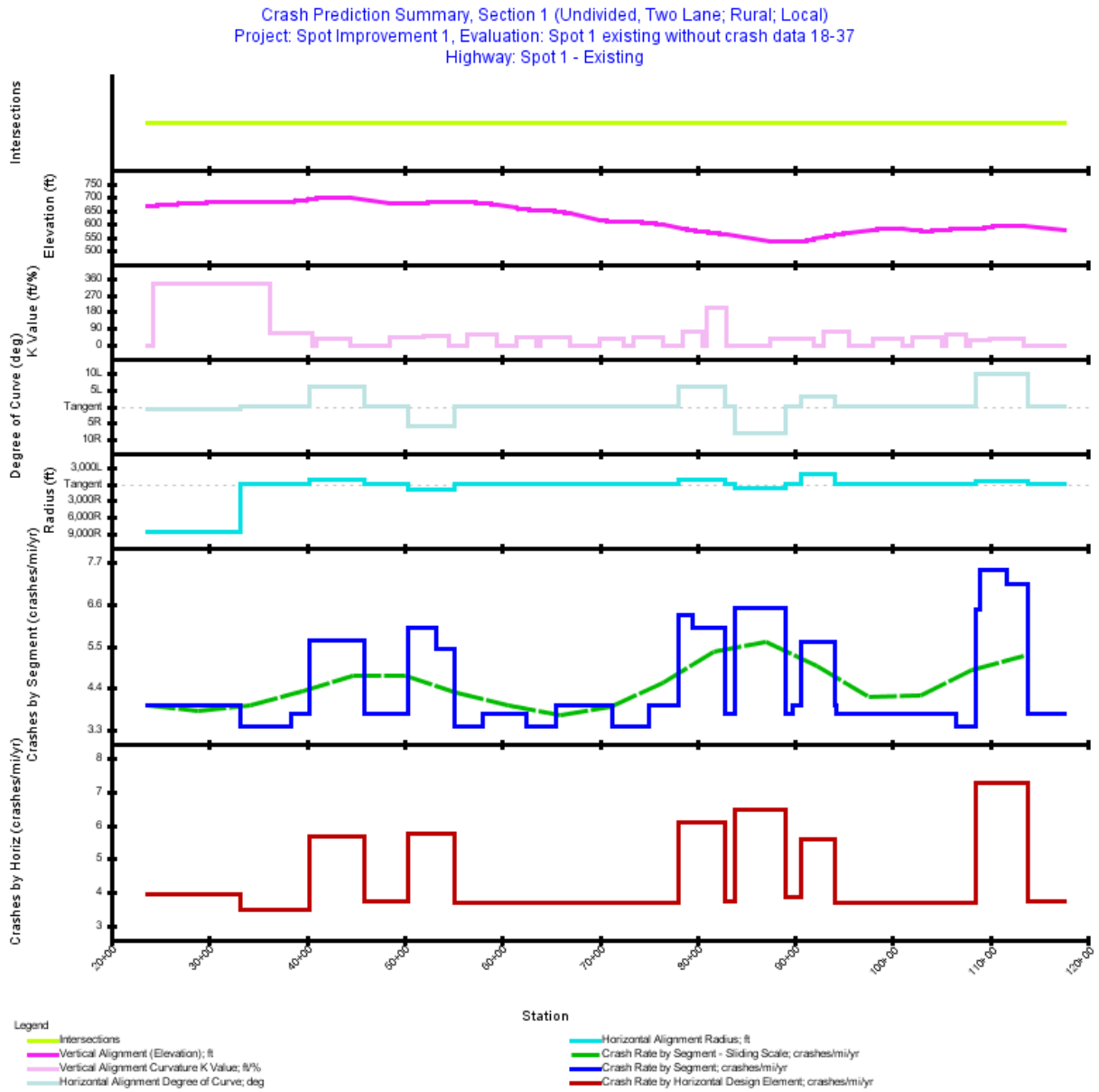


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
1	2U	23+65.00	30+30.00	665.0	0.126	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	3.00	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
2	2U	30+30.00	33+19.00	289.0	0.054	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
3	2U	33+19.00	38+40.00	521.0	0.098	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false					
4	2U	38+40.00	40+24.50	184.5	0.034	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false					
5	2U	40+24.50	42+75.00	250.5	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
6	2U	42+75.00	45+86.20	311.2	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
7	2U	45+86.20	50+25.00	438.8	0.083	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
8	2U	50+25.00	50+42.90	17.90	0.003	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false					
9	2U	50+42.90	53+25.00	282.1	0.053	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
10	2U	53+25.00	55+20.70	195.7	0.037	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
11	2U	55+20.70	58+00.00	279.3	0.052	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false					
12	2U	58+00.00	62+50.00	450.0	0.085	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	6.00	30.0	4	false	0	false	false	false					
13	2U	62+50.00	65+50.00	300.0	0.056	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	1.00	30.0	4	false	0	false	false	false					
14	2U	65+50.00	71+25.00	575.0	0.108	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.60	30.0	4	false	0	false	false	false					
15	2U	71+25.00	75+00.00	375.0	0.071	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
16	2U	75+00.00	78+06.90	306.9	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false					
17	2U	78+06.90	79+50.00	143.1	0.027	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
18	2U	79+50.00	82+00.00	250.0	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.20	30.0	4	false	0	false	false	false	955.37	9.2	false	50	

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
19	2U	82+00.00	82+84.70	84.70	0.0160	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
20	2U	82+84.70	83+88.90	104.20	0.0197	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
21	2U	83+88.90	89+09.30	520.40	0.0986	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	716.78	10.0	false	50	
22	2U	89+09.30	89+75.00	65.70	0.0124	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
23	2U	89+75.00	90+65.40	90.40	0.0171	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
24	2U	90+65.40	94+07.60	342.20	0.0648	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false	1,910.08	5.9	false	50	
25	2U	94+07.60	94+25.00	17.40	0.0033	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
26	2U	94+25.00	99+50.00	525.00	0.0994	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
27	2U	99+50.00	103+50.00	400.00	0.0758	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.40	30.0	4	false	0	false	false	false					
28	2U	103+50.00	106+50.00	300.00	0.0568	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.48	30.0	4	false	0	false	false	false					
29	2U	106+50.00	108+50.20	200.20	0.0379	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
30	2U	108+50.20	109+00.00	49.80	0.0094	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
31	2U	109+00.00	111+75.00	275.00	0.0521	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	6.60	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
32	2U	111+75.00	113+79.90	204.90	0.0388	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
33	2U	113+79.90	117+55.00	375.10	0.0710	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false					

Table 2. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	1.7784
Average Future Road AADT (vpd)	5,717
Expected Crashes	
Total Crashes	159.32
Fatal and Injury Crashes	51.14
Property-Damage-Only Crashes	108.18
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	4.4792
Fatal and Injury Crash Rate (crashes/mi/yr)	1.4378
Property-Damage-Only Crash Rate (crashes/mi/yr)	3.0414
Expected Travel Crash Rate	
Total Travel (million veh-mi)	74.22
Travel Crash Rate (crashes/million veh-mi)	2.15
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.69
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	1.46

Table 3. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	23+65.000	30+30.000	0.1259	9.973	3.9594	1.90
2	30+30.000	33+19.000	0.0547	4.334	3.9594	1.90
3	33+19.000	38+40.000	0.0987	6.716	3.4032	1.63
4	38+40.000	40+24.500	0.0349	2.616	3.7435	1.79
5	40+24.500	42+75.000	0.0474	5.361	5.6494	2.71
6	42+75.000	45+86.200	0.0589	6.659	5.6494	2.71
7	45+86.200	50+25.000	0.0831	6.222	3.7435	1.79
8	50+25.000	50+42.900	0.0034	0.254	3.7435	1.79
9	50+42.900	53+25.000	0.0534	6.394	5.9840	2.87
10	53+25.000	55+20.700	0.0371	4.033	5.4400	2.61
11	55+20.700	58+00.000	0.0529	3.600	3.4032	1.63
12	58+00.000	62+50.000	0.0852	6.381	3.7435	1.79
13	62+50.000	65+50.000	0.0568	3.867	3.4032	1.63
14	65+50.000	71+25.000	0.1089	8.598	3.9477	1.89
15	71+25.000	75+00.000	0.0710	4.834	3.4032	1.63
16	75+00.000	78+06.900	0.0581	4.589	3.9477	1.89
17	78+06.900	79+50.000	0.0271	3.421	6.3104	3.02
18	79+50.000	82+00.000	0.0473	5.667	5.9840	2.87
19	82+00.000	82+84.700	0.0160	1.920	5.9840	2.87
20	82+84.700	83+88.900	0.0197	1.478	3.7435	1.79
21	83+88.900	89+09.300	0.0986	12.784	6.4854	3.11
22	89+09.300	89+75.000	0.0124	0.932	3.7435	1.79
23	89+75.000	90+65.400	0.0171	1.352	3.9477	1.89
24	90+65.400	94+07.600	0.0648	7.256	5.5978	2.68
25	94+07.600	94+25.000	0.0033	0.260	3.9477	1.89
26	94+25.000	99+50.000	0.0994	7.445	3.7435	1.79
27	99+50.000	103+50.000	0.0758	5.672	3.7435	1.79
28	103+50.000	106+50.000	0.0568	4.254	3.7435	1.79
29	106+50.000	108+50.200	0.0379	2.581	3.4032	1.63
30	108+50.200	109+00.000	0.0094	1.219	6.4628	3.10
31	109+00.000	111+75.000	0.0521	7.809	7.4968	3.59
32	111+75.000	113+79.900	0.0388	5.518	7.1091	3.41
33	113+79.900	117+55.000	0.0710	5.319	3.7435	1.79

Table 4. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	23+65.000	33+19.000	0.1807	14.308	3.9594	1.90
Tangent	33+19.000	40+24.500	0.1336	9.332	3.4922	1.67
Simple Curve 2	40+24.500	45+86.200	0.1064	12.020	5.6494	2.71
Tangent	45+86.200	50+42.900	0.0865	6.476	3.7435	1.79
Simple Curve 3	50+42.900	55+20.700	0.0905	10.427	5.7612	2.76
Tangent	55+20.700	78+06.900	0.4330	31.870	3.6803	1.76
Simple Curve 4	78+06.900	82+84.700	0.0905	11.007	6.0818	2.92
Tangent	82+84.700	83+88.900	0.0197	1.478	3.7435	1.79
Simple Curve 5	83+88.900	89+09.300	0.0986	12.784	6.4854	3.11
Tangent	89+09.300	90+65.400	0.0296	2.283	3.8618	1.85
Simple Curve 6	90+65.400	94+07.600	0.0648	7.256	5.5978	2.68
Tangent	94+07.600	108+50.200	0.2732	20.212	3.6988	1.77
Simple Curve 7	108+50.200	113+79.900	0.1003	14.546	7.2496	3.47
Tangent	113+79.900	117+55.000	0.0710	5.319	3.7435	1.79

Table 5. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	1.94	1.2	19.91	12.5	19.28	12.1
Highway Segment	Collision with Bicycle	0.20	0.1	0.11	0.1	0.32	0.2
Highway Segment	Other Single-vehicle Collision	0.36	0.2	3.14	2.0	3.35	2.1
Highway Segment	Overtaken	1.89	1.2	1.62	1.0	3.98	2.5
Highway Segment	Collision with Pedestrian	0.36	0.2	0.11	0.1	0.48	0.3
Highway Segment	Run Off Road	27.87	17.5	54.63	34.3	83.00	52.1
Highway Segment	Total Single Vehicle Crashes	32.63	20.5	79.51	49.9	110.41	69.3
Highway Segment	Angle Collision	5.17	3.2	7.79	4.9	13.54	8.5
Highway Segment	Head-on Collision	1.74	1.1	0.33	0.2	2.55	1.6
Highway Segment	Other Multiple-vehicle Collision	1.33	0.8	3.25	2.0	4.30	2.7
Highway Segment	Rear-end Collision	8.44	5.3	13.20	8.3	22.62	14.2
Highway Segment	Sideswipe	1.94	1.2	4.11	2.6	5.89	3.7
Highway Segment	Total Multiple Vehicle Crashes	18.61	11.7	28.67	18.0	48.91	30.7
Highway Segment	Total Highway Segment Crashes	51.24	32.2	108.18	67.9	159.32	100.0
	Total Crashes	51.24	32.2	108.18	67.9	159.32	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

**KY 185 IHSDM Evaluation:
Existing Conditions for Spot Improvement 1 With Crash Data (Expected Crash
Frequency)**



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

January 23, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview	1
Section 1 Evaluation	2

List of Tables

Table Observed Crashes Used in the Evaluation (Section 1)	3
Table Evaluation Highway - Homogeneous Segments (Section 1)	4
Table Crash History Highway - Homogeneous Segments (Section 1)	6
Table Expected Highway Crash Rates and Frequencies (Section 1)	7
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1)	8
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)	9
Table Expected Segment Crash Type Distribution (Section 1)	10

List of Figures

Figure Crash Prediction Summary (Section 1)	2
---	---

Report Overview

Report Generated: Jan 23, 2018 8:34 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Tue Jan 23 08:33:52 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Spot Improvement 1

Project Comment: Created Wed Jan 17 14:34:28 EST 2018

Project Unit System: U.S. Customary

Highway Title: Spot 1 - Existing

Highway Comment: Created Wed Jan 17 15:45:22 EST 2018

Highway Version: 1

Evaluation Title: Spot 1 existing with crash data 18-37

Evaluation Comment: Created Tue Jan 23 08:33:18 EST 2018

Minimum Station: 23+65.000

Maximum Station: 117+55.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: Spot 1 - Existing

Highway with Crash History Comment: Created Wed Jan 17 15:45:22 EST 2018

Highway with Crash History Version: 1

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1
Evaluation Start Location: 23+65.000
Evaluation End Location: 117+55.000
Area Type: Rural
Functional Class: Local
Type of Alignment: Undivided, Two Lane
Model Category: Rural, Two Lane
Calibration Factor: 2U=1.0;

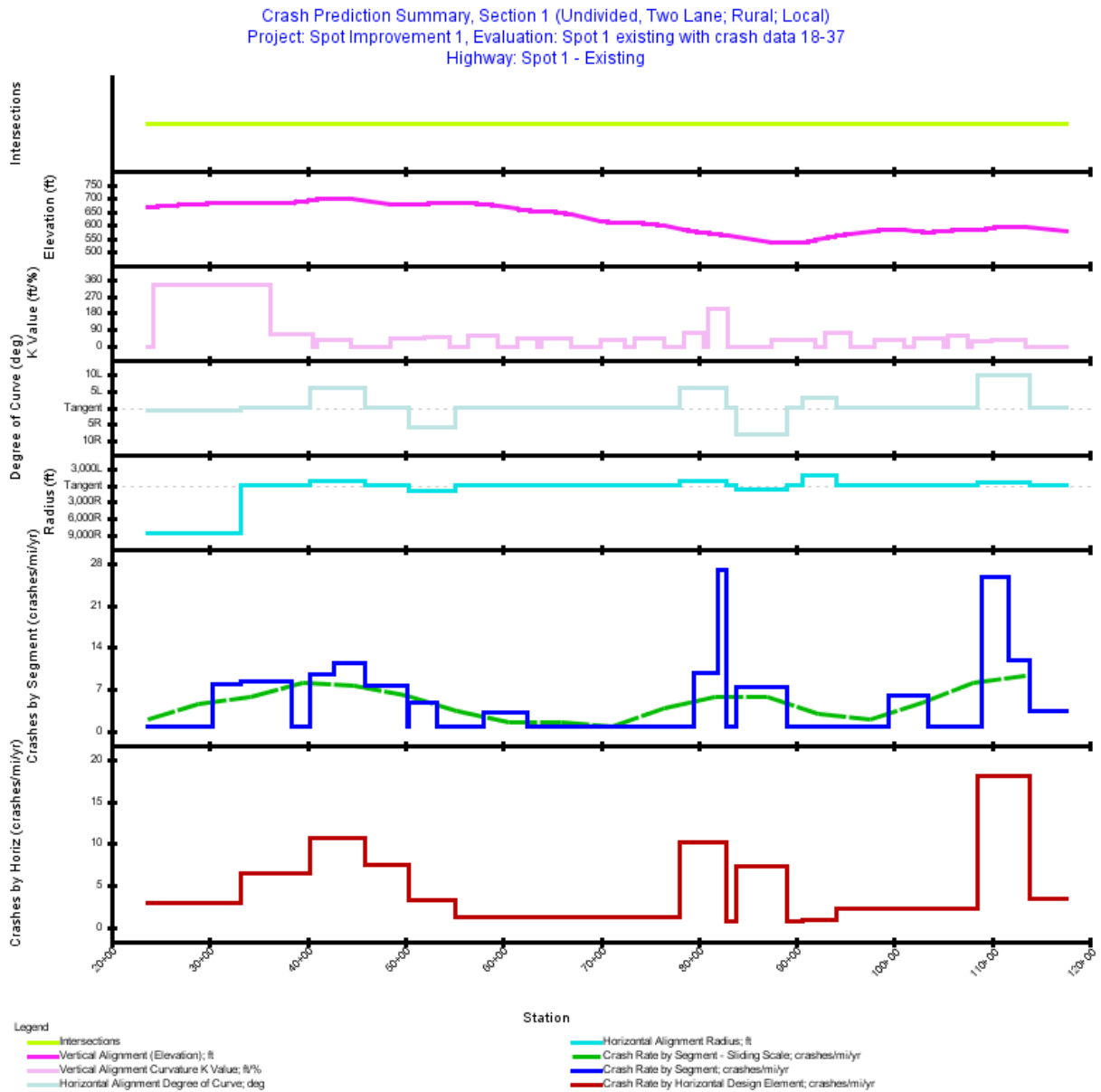


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Observed Crashes Used in the Evaluation (Section 1)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2012	12	12	3	0	9
2013	8	8	1	0	7
2014	6	6	3	0	3
2015	4	4	3	0	1
2016	4	4	1	0	3
All Years	34 ^[1]	34	11	0	23

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	ADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
1	2U	23+65.00	30+30.00	665.0	0.126	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	3.00	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
2	2U	30+30.00	33+19.00	289.0	0.054	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50	
3	2U	33+19.00	38+40.00	521.0	0.098	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.62	30.0	4	false	0	false	false	false					
4	2U	38+40.00	40+24.50	184.5	0.034	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false					
5	2U	40+24.50	42+75.00	250.5	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	5.60	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
6	2U	42+75.00	45+86.20	311.2	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
7	2U	45+86.20	50+25.00	438.8	0.083	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
8	2U	50+25.00	50+42.90	17.90	0.003	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false					
9	2U	50+42.90	53+25.00	282.1	0.053	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.29	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
10	2U	53+25.00	55+20.70	195.7	0.037	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
11	2U	55+20.70	58+00.00	279.3	0.052	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.80	30.0	4	false	0	false	false	false					
12	2U	58+00.00	62+50.00	450.0	0.085	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	6.00	30.0	4	false	0	false	false	false					
13	2U	62+50.00	65+50.00	300.0	0.056	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	1.00	30.0	4	false	0	false	false	false					
14	2U	65+50.00	71+25.00	575.0	0.108	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.60	30.0	4	false	0	false	false	false					
15	2U	71+25.00	75+00.00	375.0	0.071	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
16	2U	75+00.00	78+06.90	306.9	0.058	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false					
17	2U	78+06.90	79+50.00	143.1	0.027	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	7.00	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
18	2U	79+50.00	82+00.00	250.0	0.047	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.5	10.5	0.00	0.00	4.20	30.0	4	false	0	false	false	false	955.37	9.2	false	50	

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
19	2U	82+00.00	82+84.70	84.70	0.0160	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	955.37	9.2	false	50	
20	2U	82+84.70	83+88.90	104.20	0.0197	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
21	2U	83+88.90	89+09.30	520.40	0.0986	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	716.78	10.0	false	50	
22	2U	89+09.30	89+75.00	65.70	0.0124	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false					
23	2U	89+75.00	90+65.40	90.40	0.0171	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
24	2U	90+65.40	94+07.60	342.20	0.0648	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false	1,910.08	5.9	false	50	
25	2U	94+07.60	94+25.00	17.40	0.0033	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false					
26	2U	94+25.00	99+50.00	525.00	0.0994	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false					
27	2U	99+50.00	103+50.00	400.00	0.0758	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.40	30.0	4	false	0	false	false	false					
28	2U	103+50.00	106+50.00	300.00	0.0568	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	3.48	30.0	4	false	0	false	false	false					
29	2U	106+50.00	108+50.20	200.20	0.0379	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false					
30	2U	108+50.20	109+00.00	49.80	0.0094	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
31	2U	109+00.00	111+75.00	275.00	0.0521	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	6.60	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
32	2U	111+75.00	113+79.90	204.90	0.0388	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false	573.69	10.0	false	50	
33	2U	113+79.90	117+55.00	375.10	0.0710	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false					

Table 3. Crash History Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWLT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	2U	23+65.000	30+30.000	665.00	0.1260	2012-2016: 4,400	10.50	10.50	0.00	0.00	3.00	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50
2	2U	30+30.000	33+19.000	289.00	0.0547	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.62	30.0	4	false	0	false	false	false	8,618.57	2.0	true	50
3	2U	33+19.000	38+40.000	521.00	0.0987	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.62	30.0	4	false	0	false	false	false				
4	2U	38+40.000	40+24.500	184.50	0.0349	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.60	30.0	4	false	0	false	false	false				
5	2U	40+24.500	42+75.000	250.50	0.0474	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.60	30.0	4	false	0	false	false	false	955.37	9.2	false	50
6	2U	42+75.000	45+86.200	311.20	0.0589	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false	955.37	9.2	false	50
7	2U	45+86.200	50+25.000	438.80	0.0831	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
8	2U	50+25.000	50+42.900	17.90	0.0034	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.29	30.0	4	false	0	false	false	false				
9	2U	50+42.900	53+25.000	282.10	0.0534	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.29	30.0	4	false	0	false	false	false	955.37	9.2	false	50
10	2U	53+25.000	55+20.700	195.70	0.0371	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.80	30.0	4	false	0	false	false	false	955.37	9.2	false	50
11	2U	55+20.700	58+00.000	279.30	0.0529	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.80	30.0	4	false	0	false	false	false				
12	2U	58+00.000	62+50.000	450.00	0.0852	2012-2016: 4,400	10.50	10.50	0.00	0.00	6.00	30.0	4	false	0	false	false	false				
13	2U	62+50.000	65+50.000	300.00	0.0568	2012-2016: 4,400	10.50	10.50	0.00	0.00	1.00	30.0	4	false	0	false	false	false				
14	2U	65+50.000	71+25.000	575.00	0.1089	2012-2016: 4,400	10.50	10.50	0.00	0.00	7.60	30.0	4	false	0	false	false	false				
15	2U	71+25.000	75+00.000	375.00	0.0710	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
16	2U	75+00.000	78+06.900	306.90	0.0581	2012-2016: 4,400	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false				
17	2U	78+06.900	79+50.000	143.10	0.0271	2012-2016: 4,400	10.50	10.50	0.00	0.00	7.00	30.0	4	false	0	false	false	false	955.37	9.2	false	50
18	2U	79+50.000	82+00.000	250.00	0.0474	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.20	30.0	4	false	0	false	false	false	955.37	9.2	false	50
19	2U	82+00.000	82+84.700	84.70	0.0160	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	955.37	9.2	false	50
20	2U	82+84.700	83+88.900	104.20	0.0197	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false				
21	2U	83+88.900	89+09.300	520.40	0.0986	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false	716.78	10.0	false	50
22	2U	89+09.300	89+75.000	65.70	0.0124	2012-2016: 4,400	10.50	10.50	0.00	0.00	5.20	30.0	4	false	0	false	false	false				
23	2U	89+75.000	90+65.400	90.40	0.0171	2012-2016: 4,400	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false				
24	2U	90+65.400	94+07.600	342.20	0.0648	2012-2016: 4,400	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false	1,910.08	5.9	false	50
25	2U	94+07.600	94+25.000	17.40	0.0033	2012-2016: 4,400	10.50	10.50	0.00	0.00	8.00	30.0	4	false	0	false	false	false				
26	2U	94+25.000	99+50.000	525.00	0.0994	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.60	30.0	4	false	0	false	false	false				
27	2U	99+50.000	103+50.000	400.00	0.0758	2012-2016: 4,400	10.50	10.50	0.00	0.00	3.40	30.0	4	false	0	false	false	false				
28	2U	103+50.000	106+50.000	300.00	0.0568	2012-2016: 4,400	10.50	10.50	0.00	0.00	3.48	30.0	4	false	0	false	false	false				
29	2U	106+50.000	108+50.200	200.20	0.0379	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false				
30	2U	108+50.200	109+00.000	49.80	0.0094	2012-2016: 4,400	10.50	10.50	0.00	0.00	0.00	30.0	4	false	0	false	false	false	573.69	10.0	false	50
31	2U	109+00.000	111+75.000	275.00	0.0521	2012-2016: 4,400	10.50	10.50	0.00	0.00	6.60	30.0	4	false	0	false	false	false	573.69	10.0	false	50
32	2U	111+75.000	113+79.900	204.90	0.0388	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false	573.69	10.0	false	50
33	2U	113+79.900	117+55.000	375.10	0.0710	2012-2016: 4,400	10.50	10.50	0.00	0.00	4.30	30.0	4	false	0	false	false	false				

Table 4. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	1.7784
Average Future Road AADT (vpd)	5,717
Expected Crashes	
Total Crashes	168.40
Fatal and Injury Crashes	54.66
Property-Damage-Only Crashes	113.75
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	4.7346
Fatal and Injury Crash Rate (crashes/mi/yr)	1.5367
Property-Damage-Only Crash Rate (crashes/mi/yr)	3.1980
Expected Travel Crash Rate	
Total Travel (million veh-mi)	74.22
Travel Crash Rate (crashes/million veh-mi)	2.27
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.74
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	1.53

Table 5. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	23+65.000	30+30.000	0.1259	2.077	0.8246	0.40
2	30+30.000	33+19.000	0.0547	8.687	7.9354	3.80
3	33+19.000	38+40.000	0.0987	16.630	8.4266	4.04
4	38+40.000	40+24.500	0.0349	0.569	0.8148	0.39
5	40+24.500	42+75.000	0.0474	9.136	9.6282	4.61
6	42+75.000	45+86.200	0.0589	13.489	11.4429	5.48
7	45+86.200	50+25.000	0.0831	12.892	7.7564	3.72
8	50+25.000	50+42.900	0.0034	0.055	0.8148	0.39
9	50+42.900	53+25.000	0.0534	5.135	4.8056	2.30
10	53+25.000	55+20.700	0.0371	0.648	0.8742	0.42
11	55+20.700	58+00.000	0.0529	0.844	0.7975	0.38
12	58+00.000	62+50.000	0.0852	5.235	3.0711	1.47
13	62+50.000	65+50.000	0.0568	0.906	0.7975	0.38
14	65+50.000	71+25.000	0.1089	1.795	0.8241	0.40
15	71+25.000	75+00.000	0.0710	1.133	0.7975	0.38
16	75+00.000	78+06.900	0.0581	0.958	0.8241	0.40
17	78+06.900	79+50.000	0.0271	0.485	0.8940	0.43
18	79+50.000	82+00.000	0.0473	9.214	9.7304	4.66
19	82+00.000	82+84.700	0.0160	8.659	26.9889	12.93
20	82+84.700	83+88.900	0.0197	0.322	0.8148	0.39
21	83+88.900	89+09.300	0.0986	14.476	7.3437	3.52
22	89+09.300	89+75.000	0.0124	0.203	0.8148	0.39
23	89+75.000	90+65.400	0.0171	0.282	0.8241	0.40
24	90+65.400	94+07.600	0.0648	1.138	0.8781	0.42
25	94+07.600	94+25.000	0.0033	0.054	0.8241	0.40
26	94+25.000	99+50.000	0.0994	1.620	0.8148	0.39
27	99+50.000	103+50.000	0.0758	8.926	5.8914	2.82
28	103+50.000	106+50.000	0.0568	0.926	0.8148	0.39
29	106+50.000	108+50.200	0.0379	0.605	0.7975	0.38
30	108+50.200	109+00.000	0.0094	0.169	0.8970	0.43
31	109+00.000	111+75.000	0.0521	26.850	25.7762	12.35
32	111+75.000	113+79.900	0.0388	9.281	11.9574	5.73
33	113+79.900	117+55.000	0.0710	5.004	3.5216	1.69

Table 6. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	23+65.000	33+19.000	0.1807	10.764	2.9787	1.43
Tangent	33+19.000	40+24.500	0.1336	17.199	6.4360	3.08
Simple Curve 2	40+24.500	45+86.200	0.1064	22.625	10.6336	5.10
Tangent	45+86.200	50+42.900	0.0865	12.947	7.4844	3.59
Simple Curve 3	50+42.900	55+20.700	0.0905	5.783	3.1953	1.53
Tangent	55+20.700	78+06.900	0.4330	10.870	1.2553	0.60
Simple Curve 4	78+06.900	82+84.700	0.0905	18.358	10.1433	4.86
Tangent	82+84.700	83+88.900	0.0197	0.322	0.8148	0.39
Simple Curve 5	83+88.900	89+09.300	0.0986	14.476	7.3437	3.52
Tangent	89+09.300	90+65.400	0.0296	0.485	0.8202	0.39
Simple Curve 6	90+65.400	94+07.600	0.0648	1.138	0.8781	0.42
Tangent	94+07.600	108+50.200	0.2732	12.132	2.2202	1.06
Simple Curve 7	108+50.200	113+79.900	0.1003	36.300	18.0918	8.67
Tangent	113+79.900	117+55.000	0.0710	5.004	3.5216	1.69

Table 7. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	2.08	1.2	20.93	12.4	20.38	12.1
Highway Segment	Collision with Bicycle	0.22	0.1	0.11	0.1	0.34	0.2
Highway Segment	Other Single-vehicle Collision	0.38	0.2	3.30	2.0	3.54	2.1
Highway Segment	Overturned	2.02	1.2	1.71	1.0	4.21	2.5
Highway Segment	Collision with Pedestrian	0.38	0.2	0.11	0.1	0.51	0.3
Highway Segment	Run Off Road	29.79	17.7	57.44	34.1	87.74	52.1
Highway Segment	Total Single Vehicle Crashes	34.87	20.7	83.60	49.6	116.70	69.3
Highway Segment	Angle Collision	5.52	3.3	8.19	4.9	14.31	8.5
Highway Segment	Head-on Collision	1.86	1.1	0.34	0.2	2.69	1.6
Highway Segment	Other Multiple-vehicle Collision	1.42	0.8	3.41	2.0	4.55	2.7
Highway Segment	Rear-end Collision	9.02	5.4	13.88	8.2	23.91	14.2
Highway Segment	Sideswipe	2.08	1.2	4.32	2.6	6.23	3.7
Highway Segment	Total Multiple Vehicle Crashes	19.89	11.8	30.14	17.9	51.70	30.7
Highway Segment	Total Highway Segment Crashes	54.77	32.5	113.75	67.5	168.40	100.0
	Total Crashes	54.77	32.5	113.75	67.5	168.40	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

KY 185 IHSDM Evaluation: Proposed Spot Improvement 1



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

January 23, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview **1**
Section 1 Evaluation **1**

List of Tables

Table Evaluation Highway - Homogeneous Segments (Section 1) 3
Table Expected Highway Crash Rates and Frequencies (Section 1) 4
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1) 5
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1) 6
Table Expected Segment Crash Type Distribution (Section 1) 7

List of Figures

Figure Crash Prediction Summary (Section 1) 2

Report Overview

Report Generated: Jan 23, 2018 8:30 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Tue Jan 23 08:30:25 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Spot Improvement 1

Project Comment: Created Wed Jan 17 14:34:28 EST 2018

Project Unit System: U.S. Customary

Highway Title: Spot 1 - Proposed

Highway Comment: Created Wed Jan 17 14:34:36 EST 2018

Highway Version: 1

Evaluation Title: Spot 1 Proposed 18-37

Evaluation Comment: Created Tue Jan 23 08:29:58 EST 2018

Minimum Station: 1504+00.000

Maximum Station: 1600+00.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: None

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 1504+00.000

Evaluation End Location: 1600+00.000

Area Type: Rural

Functional Class: Local

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

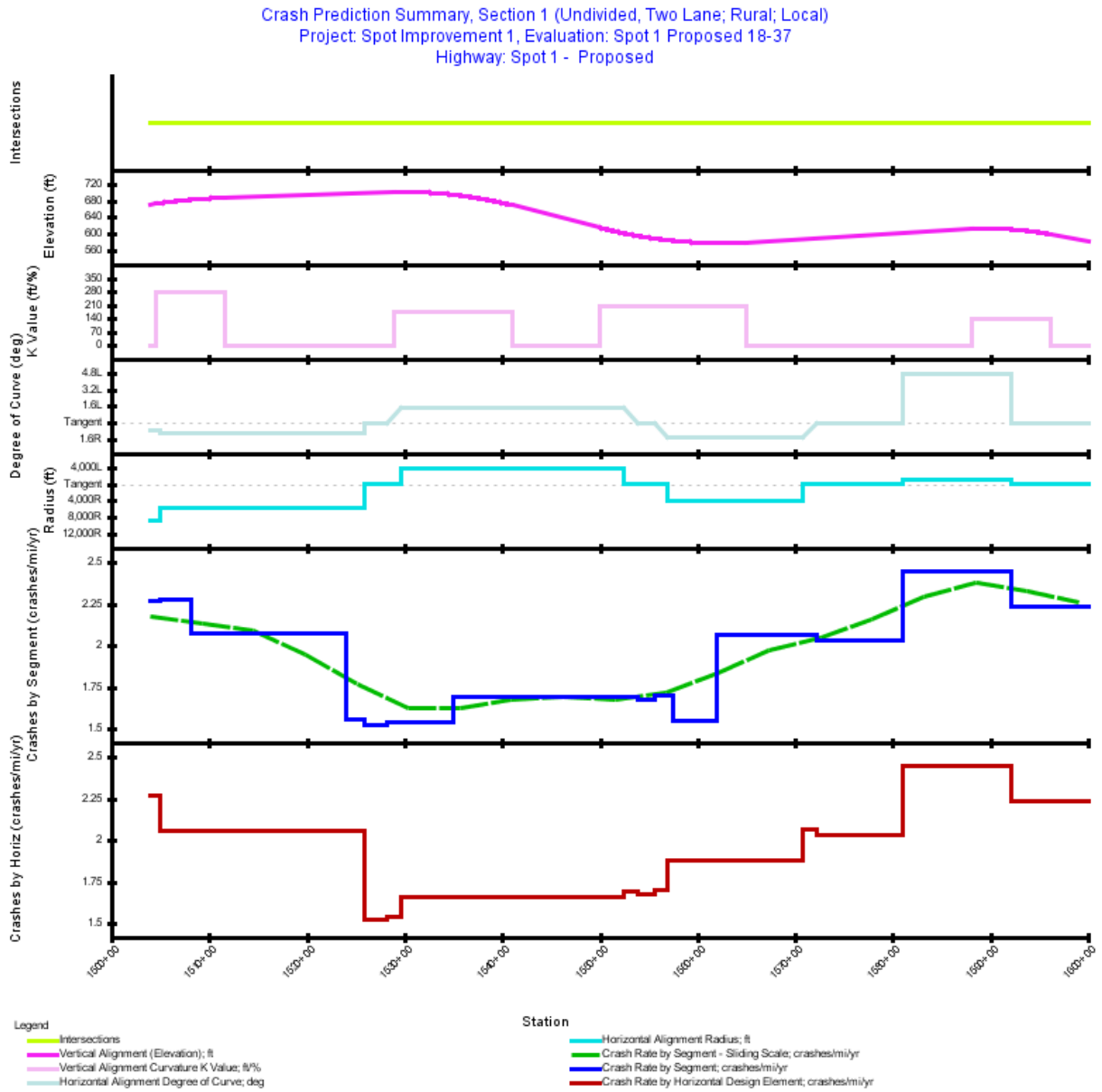


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveway/s/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
1	2U	1504+00.000	1504+99.260	99.26	0.0188	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	3.25	15.0	3	false	0	false	false	false	8,618.57	2.6	false	55	
2	2U	1504+99.260	1508+09.110	309.85	0.0587	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	3.25	15.0	3	false	0	false	false	false	5,800.00	2.6	false	55	
3	2U	1508+09.110	1524+00.000	1,590.89	0.3013	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	0	false	false	false	5,800.00	2.6	false	55	
4	2U	1524+00.000	1525+94.910	194.91	0.0369	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false	5,800.00	2.6	false	55	
5	2U	1525+94.910	1528+27.160	232.25	0.0440	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false					
6	2U	1528+27.160	1529+62.160	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
7	2U	1529+62.160	1535+00.000	537.84	0.1019	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	0.75	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
8	2U	1535+00.000	1552+50.640	1,750.64	0.3316	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
9	2U	1552+50.640	1553+85.640	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
10	2U	1553+85.640	1555+62.690	177.05	0.0335	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false					
11	2U	1555+62.690	1556+97.690	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
12	2U	1556+97.690	1557+50.000	52.31	0.0099	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	6.00	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
13	2U	1557+50.000	1562+00.000	450.00	0.0852	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	1	false	false	false	4,000.00	3.4	false	55	
14	2U	1562+00.000	1570+81.300	881.30	0.1669	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false	4,000.00	3.4	false	55	
15	2U	1570+81.300	1572+16.300	135.00	0.0256	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false	4,000.00	3.4	false	55	
16	2U	1572+16.300	1580+98.340	882.04	0.1671	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false					
17	2U	1580+98.340	1592+15.000	1,116.66	0.2115	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	1.35	15.0	3	false	0	false	false	false	1,200.00	7.7	false	55	
18	2U	1592+15.000	1600+00.000	785.00	0.1487	2018: 4,630; 2019: 4,745; 2020: 4,860; 2021: 4,975; 2022: 5,090; 2023: 5,205; 2024: 5,320; 2025: 5,435; 2026: 5,550; 2027: 5,665; 2028: 5,780; 2029: 5,895; 2030: 6,010; 2031: 6,125; 2032: 6,240; 2033: 6,355; 2034: 6,470; 2035: 6,585; 2036-2037: 6,700	11.00	11.00	4.00	4.00	4.41	15.0	3	false	0	false	false	false					

Table 2. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	1.8182
Average Future Road AADT (vpd)	5,717
Expected Crashes	
Total Crashes	71.14
Fatal and Injury Crashes	22.84
Property-Damage-Only Crashes	48.31
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	1.9564
Fatal and Injury Crash Rate (crashes/mi/yr)	0.6280
Property-Damage-Only Crash Rate (crashes/mi/yr)	1.3284
Expected Travel Crash Rate	
Total Travel (million veh-mi)	75.88
Travel Crash Rate (crashes/million veh-mi)	0.94
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.30
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	0.64

Table 3. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi /yr)	Travel Crash Rate (crashes/million veh-mi)
1	1504+00.000	1504+99.260	0.0188	0.851	2.2634	1.08
2	1504+99.260	1508+09.110	0.0587	2.675	2.2791	1.09
3	1508+09.110	1524+00.000	0.3013	12.486	2.0719	0.99
4	1524+00.000	1525+94.910	0.0369	1.147	1.5539	0.74
5	1525+94.910	1528+27.160	0.0440	1.338	1.5213	0.73
6	1528+27.160	1529+62.160	0.0256	0.786	1.5376	0.74
7	1529+62.160	1535+00.000	0.1019	3.132	1.5376	0.74
8	1535+00.000	1552+50.640	0.3316	11.216	1.6914	0.81
9	1552+50.640	1553+85.640	0.0256	0.865	1.6914	0.81
10	1553+85.640	1555+62.690	0.0335	1.122	1.6734	0.80
11	1555+62.690	1556+97.690	0.0256	0.870	1.7012	0.81
12	1556+97.690	1557+50.000	0.0099	0.337	1.7012	0.81
13	1557+50.000	1562+00.000	0.0852	2.636	1.5465	0.74
14	1562+00.000	1570+81.300	0.1669	6.884	2.0620	0.99
15	1570+81.300	1572+16.300	0.0256	1.054	2.0620	0.99
16	1572+16.300	1580+98.340	0.1671	6.777	2.0284	0.97
17	1580+98.340	1592+15.000	0.2115	10.331	2.4425	1.17
18	1592+15.000	1600+00.000	0.1487	6.635	2.2312	1.07

Table 4. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	1504+00.000	1504+99.260	0.0188	0.851	2.2634	1.08
Simple Curve 2	1504+99.260	1525+94.910	0.3969	16.308	2.0544	0.98
Tangent	1525+94.910	1528+27.160	0.0440	1.338	1.5213	0.73
Spiral Curve 3	1528+27.160	1529+62.160	0.0256	0.786	1.5376	0.74
Simple Curve 4	1529+62.160	1552+50.640	0.4334	14.348	1.6552	0.79
Spiral Curve 5	1552+50.640	1553+85.640	0.0256	0.865	1.6914	0.81
Tangent	1553+85.640	1555+62.690	0.0335	1.122	1.6734	0.80
Spiral Curve 6	1555+62.690	1556+97.690	0.0256	0.870	1.7012	0.81
Simple Curve 7	1556+97.690	1570+81.300	0.2620	9.857	1.8807	0.90
Spiral Curve 8	1570+81.300	1572+16.300	0.0256	1.054	2.0620	0.99
Tangent	1572+16.300	1580+98.340	0.1671	6.777	2.0284	0.97
Simple Curve 9	1580+98.340	1592+13.540	0.2112	10.318	2.4425	1.17
Tangent	1592+13.540	1600+00.000	0.1490	6.648	2.2316	1.07

Table 5. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	0.87	1.2	8.89	12.5	8.61	12.1
Highway Segment	Collision with Bicycle	0.09	0.1	0.05	0.1	0.14	0.2
Highway Segment	Other Single-vehicle Collision	0.16	0.2	1.40	2.0	1.49	2.1
Highway Segment	Overtaken	0.84	1.2	0.72	1.0	1.78	2.5
Highway Segment	Collision with Pedestrian	0.16	0.2	0.05	0.1	0.21	0.3
Highway Segment	Run Off Road	12.45	17.5	24.39	34.3	37.06	52.1
Highway Segment	Total Single Vehicle Crashes	14.57	20.5	35.51	49.9	49.30	69.3
Highway Segment	Angle Collision	2.31	3.2	3.48	4.9	6.05	8.5
Highway Segment	Head-on Collision	0.78	1.1	0.14	0.2	1.14	1.6
Highway Segment	Other Multiple-vehicle Collision	0.59	0.8	1.45	2.0	1.92	2.7
Highway Segment	Rear-end Collision	3.77	5.3	5.89	8.3	10.10	14.2
Highway Segment	Sideswipe	0.87	1.2	1.84	2.6	2.63	3.7
Highway Segment	Total Multiple Vehicle Crashes	8.31	11.7	12.80	18.0	21.84	30.7
Highway Segment	Total Highway Segment Crashes	22.88	32.2	48.31	67.9	71.14	100.0
	Total Crashes	22.88	32.2	48.31	67.9	71.14	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

**KY 185 IHSDM Evaluation:
Existing Conditions for Spot Improvement 5 Without Crash Data (Predicted
Crash Frequency)**



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

January 23, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview **1**
Section 1 Evaluation **1**

List of Tables

Table Evaluation Highway - Homogeneous Segments (Section 1) 3
Table Expected Highway Crash Rates and Frequencies (Section 1) 4
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1) 5
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1) 6
Table Expected Segment Crash Type Distribution (Section 1) 6

List of Figures

Figure Crash Prediction Summary (Section 1) 2

Report Overview

Report Generated: Jan 23, 2018 8:37 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Tue Jan 23 08:36:53 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Spot Improvement 5

Project Comment: Created Wed Jan 17 14:55:38 EST 2018

Project Unit System: U.S. Customary

Highway Title: Spot 5 - Existing

Highway Comment: Created Wed Jan 17 16:01:27 EST 2018

Highway Version: 1

Evaluation Title: spot 5 existing without crash data

Evaluation Comment: Created Tue Jan 23 08:36:30 EST 2018

Minimum Station: 207+83.300

Maximum Station: 258+75.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: None

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 207+83.300

Evaluation End Location: 258+75.000

Area Type: Rural

Functional Class: Local

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

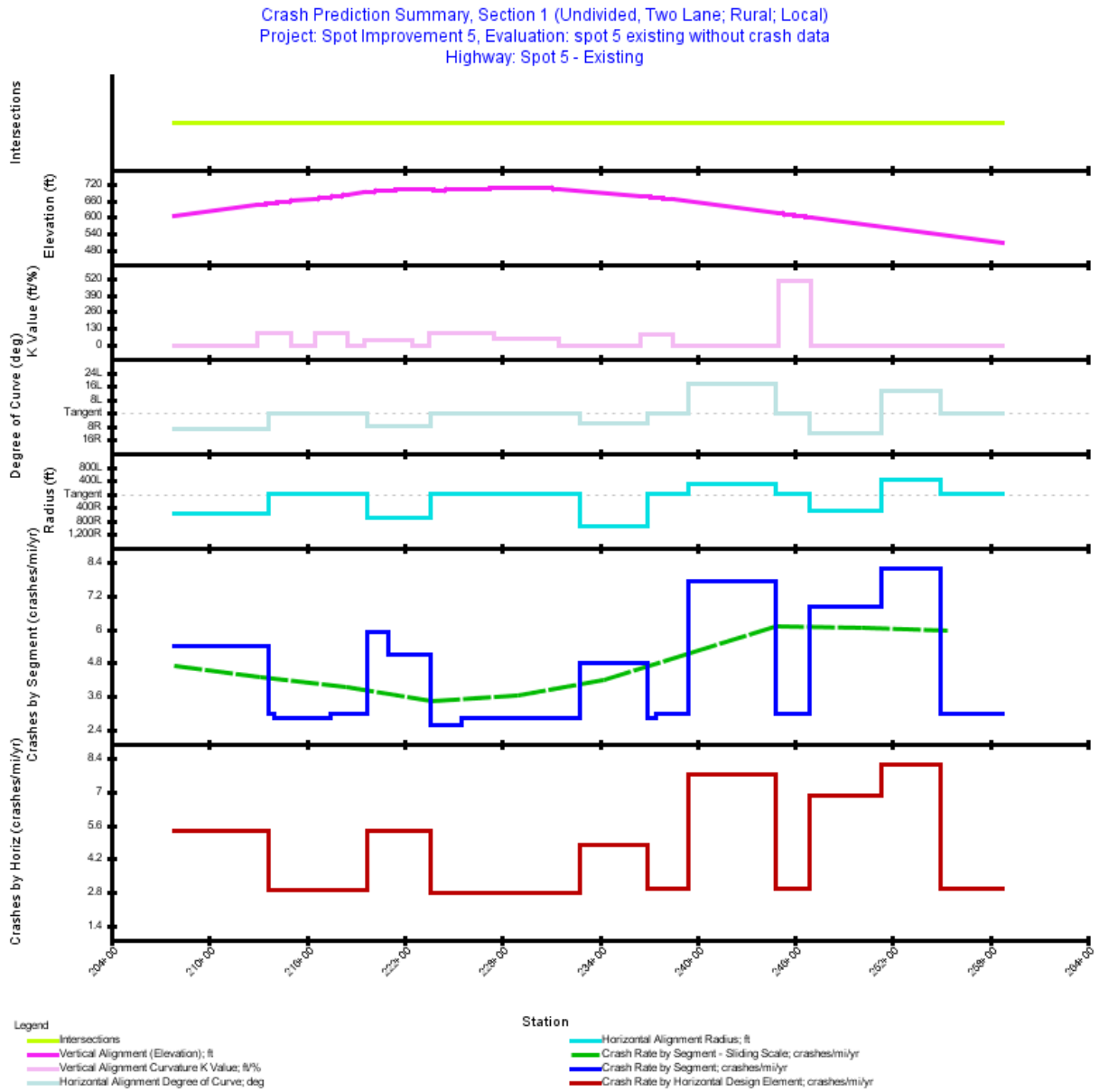


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	ADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)		
1	2U	207+83.300	213+64.300	581.00	0.1100	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	579.69	10.0	false	50		
2	2U	213+64.300	214+00.000	35.70	0.0068	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
3	2U	214+00.000	217+50.000	350.00	0.0663	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.91	15.0	4	false	0	false	false	false						
4	2U	217+50.000	219+74.300	224.30	0.0425	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
5	2U	219+74.300	221+00.000	125.70	0.0238	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50		
6	2U	221+00.000	223+59.700	259.70	0.0492	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false	716.78	10.0	false	50		
7	2U	223+59.700	225+50.000	190.30	0.0360	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false						
8	2U	225+50.000	229+50.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.68	15.0	4	false	0	false	false	false						
9	2U	229+50.000	232+81.100	331.10	0.0627	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false						
10	2U	232+81.100	236+92.200	411.10	0.0779	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false	955.37	9.2	false	50		
11	2U	236+92.200	237+50.000	57.80	0.0109	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false						
12	2U	237+50.000	239+48.700	198.70	0.0376	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false						
13	2U	239+48.700	244+86.300	537.60	0.1018	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false	319.62	10.0	false	50		
14	2U	244+86.300	246+00.000	113.70	0.0215	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false						
15	2U	246+00.000	246+90.200	90.20	0.0171	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
16	2U	246+90.200	251+29.900	439.70	0.0833	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	478.34	10.0	false	50		
17	2U	251+29.900	254+96.700	366.80	0.0695	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	427.50	10.0	false	50		
18	2U	254+96.700	258+75.000	378.30	0.0717	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						

Table 2. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	0.9643
Average Future Road AADT (vpd)	5,288
Expected Crashes	
Total Crashes	91.25
Fatal and Injury Crashes	29.29
Property-Damage-Only Crashes	61.96
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	4.7312
Fatal and Injury Crash Rate (crashes/mi/yr)	1.5187
Property-Damage-Only Crash Rate (crashes/mi/yr)	3.2125
Expected Travel Crash Rate	
Total Travel (million veh-mi)	37.23
Travel Crash Rate (crashes/million veh-mi)	2.45
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.79
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	1.66

Table 3. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	207+83.300	213+64.300	0.1100	11.851	5.3848	2.79
2	213+64.300	214+00.000	0.0068	0.402	2.9731	1.54
3	214+00.000	217+50.000	0.0663	3.738	2.8193	1.46
4	217+50.000	219+74.300	0.0425	2.526	2.9731	1.54
5	219+74.300	221+00.000	0.0238	2.816	5.9134	3.06
6	221+00.000	223+59.700	0.0492	5.015	5.0978	2.64
7	223+59.700	225+50.000	0.0360	1.847	2.5630	1.33
8	225+50.000	229+50.000	0.0758	4.272	2.8193	1.46
9	229+50.000	232+81.100	0.0627	3.536	2.8193	1.46
10	232+81.100	236+92.200	0.0779	7.444	4.7805	2.48
11	236+92.200	237+50.000	0.0109	0.617	2.8193	1.46
12	237+50.000	239+48.700	0.0376	2.238	2.9731	1.54
13	239+48.700	244+86.300	0.1018	15.681	7.7002	3.99
14	244+86.300	246+00.000	0.0215	1.280	2.9731	1.54
15	246+00.000	246+90.200	0.0171	1.016	2.9731	1.54
16	246+90.200	251+29.900	0.0833	11.384	6.8350	3.54
17	251+29.900	254+96.700	0.0695	11.328	8.1531	4.22
18	254+96.700	258+75.000	0.0716	4.260	2.9731	1.54

Table 4. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	207+83.300	213+64.300	0.1100	11.851	5.3848	2.79
Tangent	213+64.300	219+74.300	0.1155	6.666	2.8849	1.50
Simple Curve 2	219+74.300	223+59.700	0.0730	7.830	5.3638	2.78
Tangent	223+59.700	232+81.100	0.1745	9.655	2.7664	1.43
Simple Curve 3	232+81.100	236+92.200	0.0779	7.444	4.7805	2.48
Tangent	236+92.200	239+48.700	0.0486	2.855	2.9385	1.52
Simple Curve 4	239+48.700	244+86.300	0.1018	15.681	7.7002	3.99
Tangent	244+86.300	246+90.200	0.0386	2.296	2.9731	1.54
Simple Curve 5	246+90.200	251+29.900	0.0833	11.384	6.8350	3.54
Simple Curve 6	251+29.900	254+96.700	0.0695	11.328	8.1531	4.22
Tangent	254+96.700	258+75.000	0.0716	4.260	2.9731	1.54

Table 5. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	1.11	1.2	11.40	12.5	11.04	12.1
Highway Segment	Collision with Bicycle	0.12	0.1	0.06	0.1	0.18	0.2
Highway Segment	Other Single-vehicle Collision	0.20	0.2	1.80	2.0	1.92	2.1
Highway Segment	Overtaken	1.08	1.2	0.93	1.0	2.28	2.5
Highway Segment	Collision with Pedestrian	0.20	0.2	0.06	0.1	0.27	0.3
Highway Segment	Run Off Road	15.96	17.5	31.29	34.3	47.54	52.1
Highway Segment	Total Single Vehicle Crashes	18.69	20.5	45.54	49.9	63.24	69.3
Highway Segment	Angle Collision	2.96	3.2	4.46	4.9	7.76	8.5
Highway Segment	Head-on Collision	1.00	1.1	0.19	0.2	1.46	1.6
Highway Segment	Other Multiple-vehicle Collision	0.76	0.8	1.86	2.0	2.46	2.7
Highway Segment	Rear-end Collision	4.83	5.3	7.56	8.3	12.96	14.2
Highway Segment	Sideswipe	1.11	1.2	2.35	2.6	3.38	3.7
Highway Segment	Total Multiple Vehicle Crashes	10.66	11.7	16.42	18.0	28.01	30.7
Highway Segment	Total Highway Segment Crashes	29.35	32.2	61.96	67.9	91.25	100.0
	Total Crashes	29.35	32.2	61.96	67.9	91.25	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

**KY 185 IHSDM Evaluation:
Existing Conditions for Spot Improvement 5 With Crash Data (Expected Crash
Frequency)**



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

January 23, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview	1
Section 1 Evaluation	2

List of Tables

Table Observed Crashes Used in the Evaluation (Section 1)	3
Table Evaluation Highway - Homogeneous Segments (Section 1)	4
Table Crash History Highway - Homogeneous Segments (Section 1)	6
Table Expected Highway Crash Rates and Frequencies (Section 1)	7
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1)	8
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)	9
Table Expected Segment Crash Type Distribution (Section 1)	9

List of Figures

Figure Crash Prediction Summary (Section 1)	2
---	---

Report Overview

Report Generated: Jan 23, 2018 8:38 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Tue Jan 23 08:38:10 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Spot Improvement 5

Project Comment: Created Wed Jan 17 14:55:38 EST 2018

Project Unit System: U.S. Customary

Highway Title: Spot 5 - Existing

Highway Comment: Created Wed Jan 17 16:01:27 EST 2018

Highway Version: 1

Evaluation Title: Spot 5 existing with crash data 18-37

Evaluation Comment: Created Tue Jan 23 08:37:43 EST 2018

Minimum Station: 207+83.300

Maximum Station: 258+75.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: Spot 5 - Existing

Highway with Crash History Comment: Created Wed Jan 17 16:01:27 EST 2018

Highway with Crash History Version: 1

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1
Evaluation Start Location: 207+83.300
Evaluation End Location: 258+75.000
Area Type: Rural
Functional Class: Local
Type of Alignment: Undivided, Two Lane
Model Category: Rural, Two Lane
Calibration Factor: 2U=1.0;

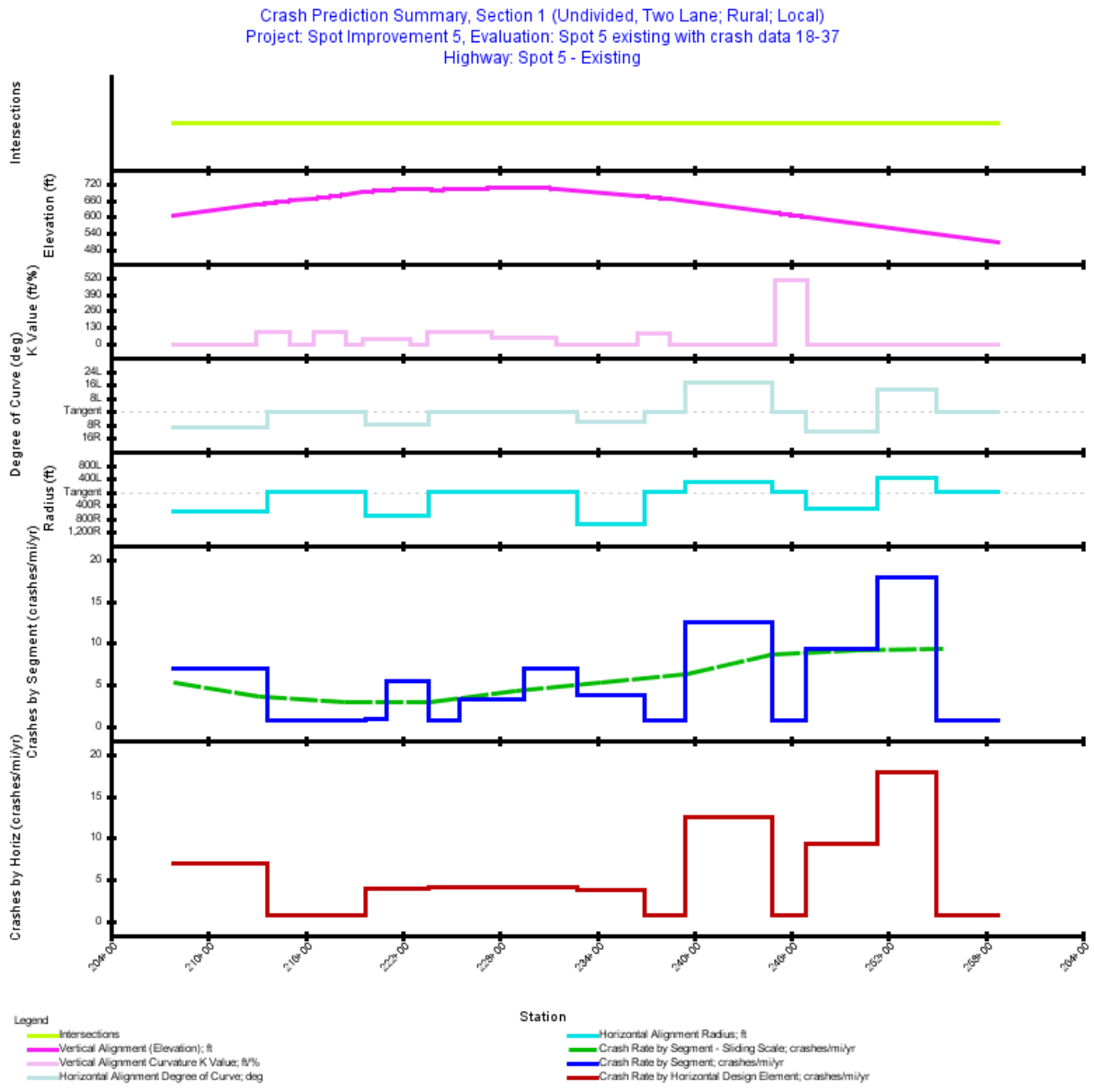


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Observed Crashes Used in the Evaluation (Section 1)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2012	3	3	2	0	1
2013	3	3	3	0	0
2014	2	2	0	0	2
2015	1	1	0	0	1
2016	12	12	5	0	7
All Years	21 ^[1]	21	10	0	11

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	ADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)		
1	2U	207+83.300	213+64.300	581.00	0.1100	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	579.69	10.0	false	50		
2	2U	213+64.300	214+00.000	35.70	0.0068	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
3	2U	214+00.000	217+50.000	350.00	0.0663	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.91	15.0	4	false	0	false	false	false						
4	2U	217+50.000	219+74.300	224.30	0.0425	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
5	2U	219+74.300	221+00.000	125.70	0.0238	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50		
6	2U	221+00.000	223+59.700	259.70	0.0492	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false	716.78	10.0	false	50		
7	2U	223+59.700	225+50.000	190.30	0.0360	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false						
8	2U	225+50.000	229+50.000	400.00	0.0758	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	3.68	15.0	4	false	0	false	false	false						
9	2U	229+50.000	232+81.100	331.10	0.0627	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false						
10	2U	232+81.100	236+92.200	411.10	0.0779	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false	955.37	9.2	false	50		
11	2U	236+92.200	237+50.000	57.80	0.0109	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false						
12	2U	237+50.000	239+48.700	198.70	0.0376	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false						
13	2U	239+48.700	244+86.300	537.60	0.1018	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false	319.62	10.0	false	50		
14	2U	244+86.300	246+00.000	113.70	0.0215	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false						
15	2U	246+00.000	246+90.200	90.20	0.0171	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						
16	2U	246+90.200	251+29.900	439.70	0.0833	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	478.34	10.0	false	50		
17	2U	251+29.900	254+96.700	366.80	0.0695	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	427.50	10.0	false	50		
18	2U	254+96.700	258+75.000	378.30	0.0717	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false						

Table 3. Crash History Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWLT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	2U	207+83.300	213+64.300	581.00	0.1100	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	579.69	10.0	false	50
2	2U	213+64.300	214+00.000	35.70	0.0068	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
3	2U	214+00.000	217+50.000	350.00	0.0663	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.91	15.0	4	false	0	false	false	false				
4	2U	217+50.000	219+74.300	224.30	0.0425	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
5	2U	219+74.300	221+00.000	125.70	0.0238	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	716.78	10.0	false	50
6	2U	221+00.000	223+59.700	259.70	0.0492	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false	716.78	10.0	false	50
7	2U	223+59.700	225+50.000	190.30	0.0360	2012-2016: 3,800	10.50	10.50	0.00	0.00	0.72	15.0	4	false	0	false	false	false				
8	2U	225+50.000	229+50.000	400.00	0.0758	2012-2016: 3,800	10.50	10.50	0.00	0.00	3.68	15.0	4	false	0	false	false	false				
9	2U	229+50.000	232+81.100	331.10	0.0627	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false				
10	2U	232+81.100	236+92.200	411.10	0.0779	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false	955.37	9.2	false	50
11	2U	236+92.200	237+50.000	57.80	0.0109	2012-2016: 3,800	10.50	10.50	0.00	0.00	5.10	15.0	4	false	0	false	false	false				
12	2U	237+50.000	239+48.700	198.70	0.0376	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false				
13	2U	239+48.700	244+86.300	537.60	0.1018	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false	319.62	10.0	false	50
14	2U	244+86.300	246+00.000	113.70	0.0215	2012-2016: 3,800	10.50	10.50	0.00	0.00	7.60	15.0	4	false	0	false	false	false				
15	2U	246+00.000	246+90.200	90.20	0.0171	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				
16	2U	246+90.200	251+29.900	439.70	0.0833	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	478.34	10.0	false	50
17	2U	251+29.900	254+96.700	366.80	0.0695	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false	427.50	10.0	false	50
18	2U	254+96.700	258+75.000	378.30	0.0717	2012-2016: 3,800	10.50	10.50	0.00	0.00	8.00	15.0	4	false	0	false	false	false				

Table 4. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	0.9643
Average Future Road AADT (vpd)	5,288
Expected Crashes	
Total Crashes	111.62
Fatal and Injury Crashes	49.41
Property-Damage-Only Crashes	62.21
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	44
Percent Property-Damage-Only Crashes (%)	56
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	5.7873
Fatal and Injury Crash Rate (crashes/mi/yr)	2.5618
Property-Damage-Only Crash Rate (crashes/mi/yr)	3.2255
Expected Travel Crash Rate	
Total Travel (million veh-mi)	37.23
Travel Crash Rate (crashes/million veh-mi)	3.00
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	1.33
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	1.67

Table 5. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	207+83.300	213+64.300	0.1100	15.386	6.9912	3.62
2	213+64.300	214+00.000	0.0068	0.111	0.8237	0.43
3	214+00.000	217+50.000	0.0663	1.076	0.8115	0.42
4	217+50.000	219+74.300	0.0425	0.700	0.8237	0.43
5	219+74.300	221+00.000	0.0238	0.455	0.9553	0.50
6	221+00.000	223+59.700	0.0492	5.312	5.3996	2.80
7	223+59.700	225+50.000	0.0360	0.569	0.7888	0.41
8	225+50.000	229+50.000	0.0758	5.060	3.3393	1.73
9	229+50.000	232+81.100	0.0627	8.678	6.9193	3.58
10	232+81.100	236+92.200	0.0779	5.776	3.7090	1.92
11	236+92.200	237+50.000	0.0109	0.178	0.8115	0.42
12	237+50.000	239+48.700	0.0376	0.620	0.8237	0.43
13	239+48.700	244+86.300	0.1018	25.445	12.4954	6.47
14	244+86.300	246+00.000	0.0215	0.355	0.8237	0.43
15	246+00.000	246+90.200	0.0171	0.281	0.8237	0.43
16	246+90.200	251+29.900	0.0833	15.455	9.2795	4.81
17	251+29.900	254+96.700	0.0695	24.982	17.9803	9.31
18	254+96.700	258+75.000	0.0716	1.180	0.8237	0.43

Table 6. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Simple Curve 1	207+83.300	213+64.300	0.1100	15.386	6.9912	3.62
Tangent	213+64.300	219+74.300	0.1155	1.887	0.8167	0.42
Simple Curve 2	219+74.300	223+59.700	0.0730	5.766	3.9501	2.05
Tangent	223+59.700	232+81.100	0.1745	14.306	4.0990	2.12
Simple Curve 3	232+81.100	236+92.200	0.0779	5.776	3.7090	1.92
Tangent	236+92.200	239+48.700	0.0486	0.798	0.8210	0.42
Simple Curve 4	239+48.700	244+86.300	0.1018	25.445	12.4954	6.47
Tangent	244+86.300	246+90.200	0.0386	0.636	0.8237	0.43
Simple Curve 5	246+90.200	251+29.900	0.0833	15.455	9.2795	4.81
Simple Curve 6	251+29.900	254+96.700	0.0695	24.982	17.9803	9.31
Tangent	254+96.700	258+75.000	0.0716	1.180	0.8237	0.43

Table 7. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	1.88	1.7	11.45	10.3	13.51	12.1
Highway Segment	Collision with Bicycle	0.20	0.2	0.06	0.1	0.22	0.2
Highway Segment	Other Single-vehicle Collision	0.35	0.3	1.80	1.6	2.34	2.1
Highway Segment	Overtaken	1.83	1.6	0.93	0.8	2.79	2.5
Highway Segment	Collision with Pedestrian	0.35	0.3	0.06	0.1	0.34	0.3
Highway Segment	Run Off Road	26.93	24.1	31.41	28.1	58.15	52.1
Highway Segment	Total Single Vehicle Crashes	31.52	28.2	45.72	41.0	77.35	69.3
Highway Segment	Angle Collision	4.99	4.5	4.48	4.0	9.49	8.5
Highway Segment	Head-on Collision	1.68	1.5	0.19	0.2	1.79	1.6
Highway Segment	Other Multiple-vehicle Collision	1.28	1.2	1.87	1.7	3.01	2.7
Highway Segment	Rear-end Collision	8.15	7.3	7.59	6.8	15.85	14.2
Highway Segment	Sideswipe	1.88	1.7	2.36	2.1	4.13	3.7
Highway Segment	Total Multiple Vehicle Crashes	17.98	16.1	16.48	14.8	34.27	30.7
Highway Segment	Total Highway Segment Crashes	49.51	44.4	62.21	55.7	111.62	100.0
	Total Crashes	49.51	44.4	62.21	55.7	111.62	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

KY 185 IHSDM Evaluation: Proposed Spot Improvement 5



Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

January 23, 2018

Disclaimer

The Interactive Highway Design Model (IHSDM) software is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof. This document does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names may appear in this software and documentation only because they are considered essential to the objective of the software.

Limited Warranty and Limitations of Remedies

This software product is provided "as-is," without warranty of any kind-either expressed or implied (but not limited to the implied warranties of merchantability and fitness for a particular purpose). The FHWA do not warrant that the functions contained in the software will meet the end-user's requirements or that the operation of the software will be uninterrupted and error-free.

Under no circumstances will the FHWA be liable to the end-user for any damages or claimed lost profits, lost savings, or other incidental or consequential damages rising out of the use or inability to use the software (even if these organizations have been advised of the possibility of such damages), or for any claim by any other party.

Notice

The use of the IHSDM software is being done strictly on a voluntary basis. In exchange for provision of IHSDM, the user agrees that the Federal Highway Administration (FHWA), U.S. Department of Transportation and any other agency of the Federal Government shall not be responsible for any errors, damage or other liability that may result from any and all use of the software, including installation and testing of the software. The user further agrees to hold the FHWA and the Federal Government harmless from any resulting liability. The user agrees that this hold harmless provision shall flow to any person to whom or any entity to which the user provides the IHSDM software. It is the user's full responsibility to inform any person to whom or any entity to which it provides the IHSDM software of this hold harmless provision.

Table of Contents

Report Overview **1**
Section 1 Evaluation **1**

List of Tables

Table Evaluation Highway - Homogeneous Segments (Section 1) 3
Table Expected Highway Crash Rates and Frequencies (Section 1) 4
Table Expected Crash Frequencies and Rates by Highway Segment (Section 1) 5
Table Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1) 5
Table Expected Segment Crash Type Distribution (Section 1) 6

List of Figures

Figure Crash Prediction Summary (Section 1) 2

Report Overview

Report Generated: Jan 23, 2018 8:35 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Jan 8, 2018 4:03 PM)

Evaluation Date: Tue Jan 23 08:35:12 EST 2018

IHSDM Version: v13.0.0 (Sep 13, 2017)

Crash Prediction Module: v8.0.0 (Sep 13, 2017)

User Name: sadholz

Organization Name:

Phone:

E-Mail:

Project Title: Spot Improvement 5

Project Comment: Created Wed Jan 17 14:55:38 EST 2018

Project Unit System: U.S. Customary

Highway Title: Spot 5 - Proposed

Highway Comment: Created Wed Jan 17 14:55:49 EST 2018

Highway Version: 1

Evaluation Title: spot 5 proposed 18-37

Evaluation Comment: Created Tue Jan 23 08:34:54 EST 2018

Minimum Station: 508+80.000

Maximum Station: 557+80.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

Empirical-Bayes Analysis: None

First Year of Analysis: 2018

Last Year of Analysis: 2037

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 508+80.000

Evaluation End Location: 557+80.000

Area Type: Rural

Functional Class: Local

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0;

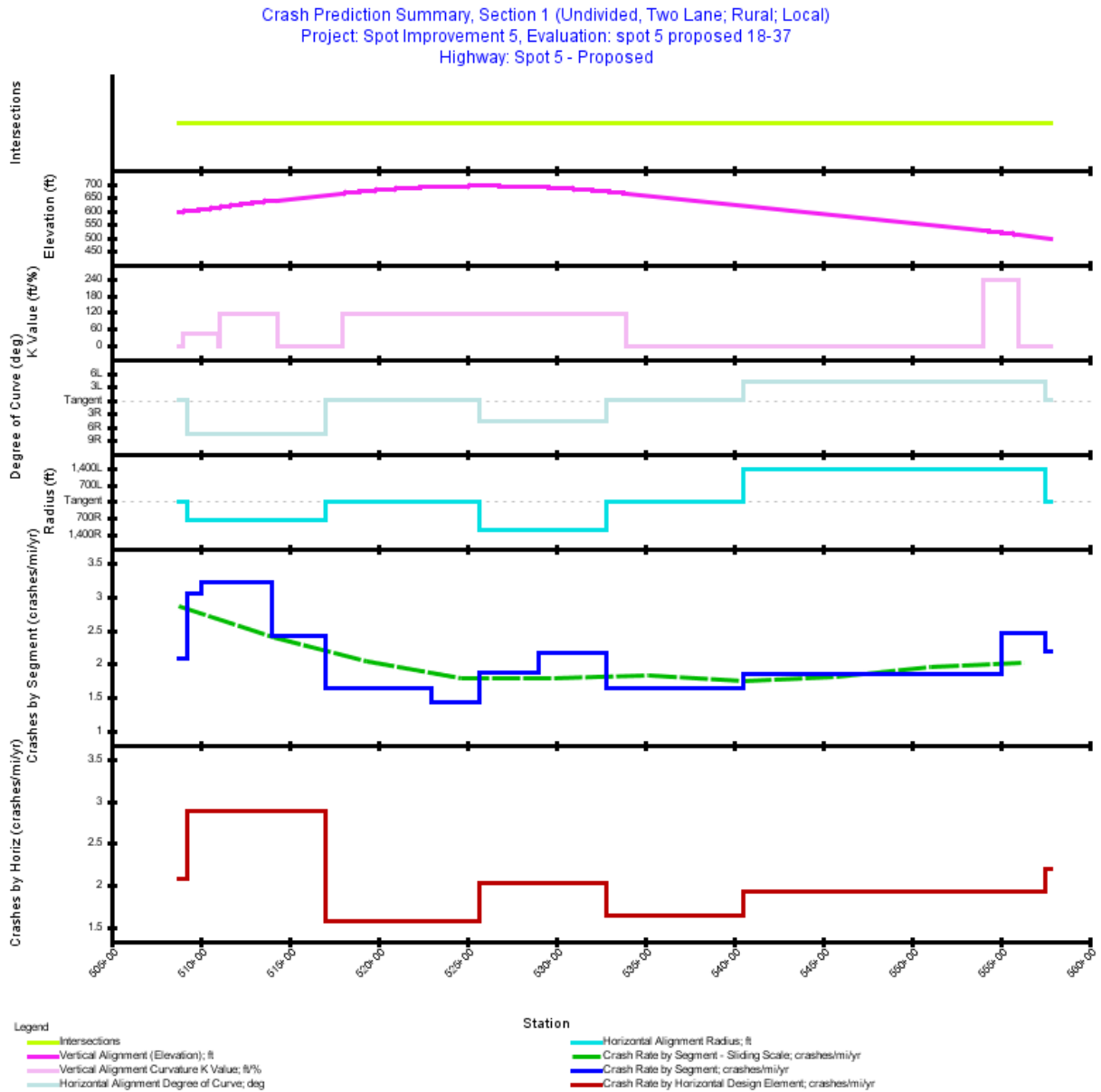


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Evaluation Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location	End Location	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)	
1	2U	508+80.00	509+27.750	47.75	0.090	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	5.17	15.0	3	false	0	false	false	false					
2	2U	509+27.750	510+00.000	72.25	0.0137	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	5.17	15.0	3	false	0	false	false	false	758.00	8.0	false	55	
3	2U	510+00.000	512+70.000	270.00	0.0511	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	9.81	15.0	3	false	0	false	false	false	758.00	8.0	false	55	
4	2U	512+70.000	514+00.000	130.00	0.0246	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	0	false	false	false	758.00	8.0	false	55	
5	2U	514+00.000	516+98.920	298.92	0.0566	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	1	false	false	false	758.00	8.0	false	55	
6	2U	516+98.920	523+00.000	601.08	0.1138	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	1	false	false	false					
7	2U	523+00.000	525+66.820	266.82	0.0505	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	2	false	false	false					
8	2U	525+66.820	525+94.630	27.81	0.0053	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	2	false	false	false	1,200.00	7.7	false	55	
9	2U	525+94.630	529+00.000	305.37	0.0578	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	2	false	false	false	1,200.00	7.7	false	55	
10	2U	529+00.000	532+79.500	379.50	0.0719	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	1	false	false	false	1,200.00	7.7	false	55	
11	2U	532+79.500	540+48.410	768.91	0.1456	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	1	false	false	false					
12	2U	540+48.410	555+00.000	1,451.59	0.2749	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.00	15.0	3	false	1	false	false	false	1,350.00	7.3	false	55	
13	2U	555+00.000	557+47.490	247.49	0.0469	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.84	15.0	3	false	0	false	false	false	1,350.00	7.3	false	55	
14	2U	557+47.490	557+80.000	32.51	0.0062	2018: 4,060; 2019: 4,190; 2020: 4,320; 2021: 4,450; 2022: 4,580; 2023: 4,710; 2024: 4,840; 2025: 4,970; 2026: 5,100; 2027: 5,230; 2028: 5,360; 2029: 5,490; 2030: 5,620; 2031: 5,750; 2032: 5,880; 2033: 6,010; 2034: 6,140; 2035: 6,270; 2036-2037: 6,400	11.00	11.00	4.00	4.00	7.84	15.0	3	false	0	false	false	false					

Table 2. Expected Highway Crash Rates and Frequencies (Section 1)

First Year of Analysis	2018
Last Year of Analysis	2037
Evaluated Length (mi)	0.9280
Average Future Road AADT (vpd)	5,289
Expected Crashes	
Total Crashes	36.99
Fatal and Injury Crashes	11.88
Property-Damage-Only Crashes	25.12
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	1.9932
Fatal and Injury Crash Rate (crashes/mi/yr)	0.6398
Property-Damage-Only Crash Rate (crashes/mi/yr)	1.3534
Expected Travel Crash Rate	
Total Travel (million veh-mi)	35.83
Travel Crash Rate (crashes/million veh-mi)	1.03
Travel Fatal and Injury Crash Rate (crashes/million veh-mi)	0.33
Travel Property-Damage-Only Crash Rate (crashes/million veh-mi)	0.70

Table 3. Expected Crash Frequencies and Rates by Highway Segment (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
1	508+80.000	509+27.750	0.0090	0.376	2.0804	1.08
2	509+27.750	510+00.000	0.0137	0.835	3.0527	1.58
3	510+00.000	512+70.000	0.0511	3.292	3.2192	1.67
4	512+70.000	514+00.000	0.0246	1.585	3.2192	1.67
5	514+00.000	516+98.920	0.0566	2.734	2.4144	1.25
6	516+98.920	523+00.000	0.1138	3.746	1.6454	0.85
7	523+00.000	525+66.820	0.0505	1.441	1.4260	0.74
8	525+66.820	525+94.630	0.0053	0.198	1.8816	0.97
9	525+94.630	529+00.000	0.0578	2.176	1.8816	0.97
10	529+00.000	532+79.500	0.0719	3.121	2.1710	1.12
11	532+79.500	540+48.410	0.1456	4.792	1.6454	0.85
12	540+48.410	555+00.000	0.2749	10.125	1.8414	0.95
13	555+00.000	557+47.490	0.0469	2.302	2.4552	1.27
14	557+47.490	557+80.000	0.0062	0.270	2.1939	1.14

Table 4. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location	End Location	Length (mi)	Expected No. Crashes for Evaluation Period	Crash Rate (crashes/mi/yr)	Travel Crash Rate (crashes/million veh-mi)
Tangent	508+80.000	509+27.750	0.0090	0.376	2.0804	1.08
Simple Curve 1	509+27.750	516+98.920	0.1461	8.447	2.8917	1.50
Tangent	516+98.920	525+66.820	0.1644	5.188	1.5780	0.82
Simple Curve 2	525+66.820	532+79.500	0.1350	5.495	2.0357	1.05
Tangent	532+79.500	540+48.410	0.1456	4.792	1.6454	0.85
Simple Curve 3	540+48.410	557+47.490	0.3218	12.426	1.9308	1.00
Tangent	557+47.490	557+80.000	0.0062	0.270	2.1939	1.14

Table 5. Expected Segment Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	0.45	1.2	4.62	12.5	4.48	12.1
Highway Segment	Collision with Bicycle	0.05	0.1	0.03	0.1	0.07	0.2
Highway Segment	Other Single-vehicle Collision	0.08	0.2	0.73	2.0	0.78	2.1
Highway Segment	Overturned	0.44	1.2	0.38	1.0	0.93	2.5
Highway Segment	Collision with Pedestrian	0.08	0.2	0.03	0.1	0.11	0.3
Highway Segment	Run Off Road	6.47	17.5	12.69	34.3	19.27	52.1
Highway Segment	Total Single Vehicle Crashes	7.58	20.5	18.46	49.9	25.64	69.3
Highway Segment	Angle Collision	1.20	3.2	1.81	4.9	3.15	8.5
Highway Segment	Head-on Collision	0.40	1.1	0.07	0.2	0.59	1.6
Highway Segment	Other Multiple-vehicle Collision	0.31	0.8	0.75	2.0	1.00	2.7
Highway Segment	Rear-end Collision	1.96	5.3	3.06	8.3	5.25	14.2
Highway Segment	Sideswipe	0.45	1.2	0.95	2.6	1.37	3.7
Highway Segment	Total Multiple Vehicle Crashes	4.32	11.7	6.66	18.0	11.36	30.7
Highway Segment	Total Highway Segment Crashes	11.90	32.2	25.12	67.9	36.99	100.0
	Total Crashes	11.90	32.2	25.12	67.9	36.99	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Economic Benefit Analysis for KY 185



KY 185 Relocation Safety Analysis
Economic Benefit Analysis

Begin Year: 2018
End Year: 2037

Year 2016

Crash Costs

KABC \$471,212.60
O \$8,500.00

Discount Rate 3%

Scenario:

KY 185 - Full Corridor

Before Condition:

KABC 137.82
O 290.94

After Condition:

KABC 66.69
O 140.78

Benefit:

KABC 71.13
O 150.16

Benefit per Year:

KABC 3.5565
O 7.508

NPV Benefit \$25,128,280.54

NPV Costs \$23,290,051.00

Estimated Benefit-to-Cost Ratio

1.078927673

KY 185 - Full Corridor
Present Value Calculations

Year	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	
KABC	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61	\$1,675,867.61
O	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00	\$63,818.00
Total Benefit	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61	\$1,739,685.61
Discount Factor	0.943	0.915	0.888	0.863	0.837	0.813	0.789	0.766	0.744	0.722	0.701	0.681	0.661	0.642	0.623	0.605	0.587	0.570	0.554	0.538	
Discounted Benefit	\$1,639,820.54	\$1,592,058.78	\$1,545,688.13	\$1,500,668.09	\$1,456,959.31	\$1,414,523.60	\$1,373,323.89	\$1,333,324.16	\$1,294,489.48	\$1,256,785.90	\$1,220,180.49	\$1,184,641.25	\$1,150,137.13	\$1,116,637.99	\$1,084,114.56	\$1,052,538.41	\$1,021,881.95	\$992,118.40	\$963,221.74	\$935,166.74	

Economic Benefit Analysis for Spot Improvement 1



KY 185 Relocation Safety Analysis
Economic Benefit Analysis

Begin Year: 2018
End Year: 2037

Year **2016**

Crash Costs

KABC \$471,212.60
O \$8,500.00

Discount Rate **3%**

Scenario:

KY 185 - Spot 1 Improvement

Before Condition:

KABC **51.24**
O **108.18**

After Condition:

KABC **22.88**
O **48.31**

Benefit:

KABC **28.36**
O **59.87**

Benefit per Year:

KABC **1.418**
O **2.9935**

NPV Benefit **\$10,018,812.47**

NPV Costs **\$8,530,064.00**

Estimated Benefit-to-Cost Ratio

1.17

KY 185 - Spot 1 Improvement
 Present Value Calculations

Year	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
KABC	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47	\$668,179.47
O	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75	\$25,444.75
Total Benefit	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22	\$693,624.22
Discount Factor	0.943	0.915	0.888	0.863	0.837	0.813	0.789	0.766	0.744	0.722	0.701	0.681	0.661	0.642	0.623	0.605	0.587	0.570	0.554	0.538
Discounted Benefit	\$653,807.35	\$634,764.42	\$616,276.13	\$598,326.34	\$580,899.36	\$563,979.96	\$547,553.36	\$531,605.21	\$516,121.56	\$501,088.89	\$486,494.07	\$472,324.34	\$458,567.32	\$445,210.99	\$432,243.68	\$419,654.06	\$407,431.12	\$395,564.20	\$384,042.91	\$372,857.20

Economic Benefit Analysis for Spot Improvement 5



KY 185 Relocation Safety Analysis

Economic Benefit Analysis

Begin Year: 2018

End Year: 2037

Year

Crash Costs

KABC \$471,212.60

O \$8,500.00

Discount Rate

Scenario:

Before Condition:

KABC

O

After Condition:

KABC

O

Benefit:

KABC

O

Benefit per Year:

KABC

O

NPV Benefit

NPV Costs

Estimated Benefit-to-Cost Ratio

KY 185 - Spot 5 Improvement
 Present Value Calculations

Year	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037		
KABC	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	\$411,132.99	
O	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00	\$15,657.00
Total Benefit	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99	\$426,789.99
Discount Factor	0.943	0.915	0.888	0.863	0.837	0.813	0.789	0.766	0.744	0.722	0.701	0.681	0.661	0.642	0.623	0.605	0.587	0.570	0.554	0.538		
Discounted Benefit	\$402,290.50	\$390,573.30	\$379,197.38	\$368,152.80	\$357,429.90	\$347,019.32	\$336,911.96	\$327,098.99	\$317,571.84	\$308,322.17	\$299,341.91	\$290,623.22	\$282,158.46	\$273,940.26	\$265,961.41	\$258,214.96	\$250,694.14	\$243,392.37	\$236,303.27	\$229,420.65		