

# **2023 Statewide (83-County) Direct Observation Survey of Safety Belt and Mobile Device Use**



## **FINAL REPORT**

**Prepared for:  
Michigan Office of Highway Safety Planning  
Lansing, MI**

**Prepared by:  
Michigan State University  
East Lansing, MI**

**Date: September 25, 2023**

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The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Michigan Office of Highway Safety Planning, the U.S. Department of Transportation, or the National Highway Traffic Safety Administration. This report was prepared in cooperation with the Michigan Office of Highway Safety Planning and the U.S. Department of Transportation, and the National Highway Traffic Safety Administration.

## **2023 Michigan Statewide (83-County) Safety Belt and Driver Mobile Device Use Survey Results**

Observations were recorded at 152 unique sites across all 83 counties in Michigan in May, June, and July of 2023. To provide consistency in the sampling methods between the counties, data were only collected on secondary roadways and during weekdays between the hours of 7:00 AM and 8:00 PM. Secondary roads are classified by the MAF/TIGER Feature Class Code (MTFCC) S1200 as arterials that typically fall within the U.S., state, or county highway system. Each of these roadways had one or more lanes of traffic in each direction, were undivided or divided, and had at-grade intersections with other roads and driveways. Limited access freeways, local neighborhood streets, and rural local roadways were not included in the sample. At least one roadway site per county was observed and data were collected for at least 60 minutes and at least 30 observations per site. Multiple approaches were observed at study locations where conditions and human resources allowed, as long as the observed roadways were classified as secondary. Data collected by the research team during the 2023 annual NHTSA safety belt surveys were utilized for the 35 applicable counties as long as the roadway and day-of-week criteria were met. Table 1 presents the results of the statewide sample including county, number of observation sites, number of driver observations, driver percent belt use, number of passenger observations, passenger percent belt use, total observations, total percent belt use, and percent driver mobile device use. Overall statewide use rates were computed for each statistic, weighted by the total county vehicle miles traveled in 2021 (VMT). Appendix I provides the list of the 83-county statewide observation survey locations, including belt use and mobile device observation data. The 2021 county VMT data used in the data weighting process for the statewide use-rate calculations are presented in Appendix II.

**Table 1. Statewide (83-County) Survey Results by County and Occupant Type**

<b>County</b>	<b>No. of Sites</b>	<b>No. of Driver Obs.</b>	<b>Driver % Belt Use</b>	<b>No. of Psgr Obs.</b>	<b>Psgr. % Belt Use</b>	<b>Number of Total Obs.</b>	<b>Total % Belt Use</b>	<b>Driver % Mobile Device Use</b>
Alcona	1	35	88.6%	15	93.3%	50	90.0%	8.6%
Alger	1	39	89.7%	10	90.0%	49	<b>89.8%</b>	5.1%
Allegan	1	140	91.4%	30	90.0%	170	91.2%	<b>11.4%</b>
Alpena	1	94	92.6%	34	91.2%	128	92.2%	1.1%
Antrim	1	130	93.1%	37	94.6%	167	93.4%	7.7%
Arenac	1	100	88.0%	15	73.3%	115	<b>86.1%</b>	7.0%
Baraga	1	124	79.0%	35	80.0%	159	<b>79.2%</b>	2.4%
Barry	1	120	90.0%	12	91.7%	132	90.2%	5.8%
Bay	3	359	94.4%	79	98.7%	438	95.2%	7.5%
Benzie	1	138	96.4%	45	97.8%	183	96.7%	4.3%
Berrien	1	127	88.2%	17	94.1%	144	<b>88.9%</b>	<b>10.2%</b>
Branch	1	127	85.8%	18	100.0%	145	<b>87.6%</b>	6.3%
Calhoun	4	542	89.9%	131	87.8%	673	<b>89.5%</b>	6.5%
Cass	1	94	91.5%	28	96.4%	122	92.6%	<b>10.6%</b>
Charlevoix	1	124	92.7%	38	97.4%	162	93.8%	5.6%

County	No. of Sites	No. of Driver Obs.	Driver % Belt Use	No. of Psgr Obs.	Psgr. % Belt Use	Number of Total Obs.	Total % Belt Use	Driver % Mobile Device Use
Cheboygan	2	246	86.2%	54	94.4%	300	<b>87.7%</b>	4.5%
Chippewa	1	43	97.7%	15	100.0%	58	98.3%	9.3%
Clare	1	126	90.5%	18	88.9%	144	90.3%	<b>11.9%</b>
Clinton	1	120	92.5%	7	100.0%	127	92.9%	<b>12.5%</b>
Crawford	1	124	93.5%	35	97.1%	159	94.3%	1.6%
Delta	1	100	89.0%	9	100.0%	109	<b>89.9%</b>	10.0%
Dickinson	1	124	93.5%	26	88.5%	150	92.7%	5.6%
Eaton	2	246	94.3%	55	100.0%	301	95.3%	5.7%
Emmet	1	125	90.4%	43	93.0%	168	91.1%	6.4%
Genesee	3	172	91.3%	24	91.7%	196	91.3%	8.1%
Gladwin	1	119	84.0%	13	76.9%	132	<b>83.3%</b>	<b>11.8%</b>
Gogebic	1	42	83.3%	11	81.8%	53	<b>83.0%</b>	0.0%
Grand Traverse	4	525	95.4%	115	99.1%	640	96.1%	6.5%
Gratiot	1	100	92.0%	10	90.0%	110	91.8%	7.0%
Hillsdale	1	124	96.0%	15	100.0%	139	96.4%	6.5%
Houghton	1	131	89.3%	34	88.2%	165	<b>89.1%</b>	7.6%
Huron	2	192	90.6%	39	94.9%	231	91.3%	5.7%
Ingham	8	806	94.9%	131	93.9%	937	94.8%	8.6%
Ionia	2	241	90.5%	34	97.1%	275	91.3%	8.7%
Iosco	1	125	96.8%	46	93.5%	171	95.9%	1.6%
Iron	1	151	83.4%	40	82.5%	191	<b>83.2%</b>	5.3%
Isabella	1	100	87.0%	7	85.7%	107	<b>86.9%</b>	10.0%
Jackson	2	270	91.5%	42	88.1%	312	91.0%	7.0%
Kalamazoo	7	875	92.5%	174	89.1%	1049	91.9%	5.1%
Kalkaska	1	131	96.2%	39	94.9%	170	95.9%	7.6%
Kent	1	131	87.8%	19	94.7%	150	<b>88.7%</b>	<b>16.0%</b>
Keweenaw	1	36	72.2%	8	87.5%	44	<b>75.0%</b>	0.0%
Lake	1	81	93.8%	30	93.3%	111	93.7%	2.5%
Lapeer	1	129	96.1%	15	100.0%	144	96.5%	<b>18.6%</b>
Leelanau	1	57	93.0%	20	100.0%	77	94.8%	5.3%
Lenawee	2	249	93.2%	34	100.0%	283	94.0%	6.8%
Livingston	1	132	97.0%	25	96.0%	157	96.8%	<b>15.2%</b>
Luce	1	67	88.1%	13	100.0%	80	90.0%	3.0%
Mackinac	1	40	87.5%	15	93.3%	55	<b>89.1%</b>	7.5%
Macomb	8	1039	92.2%	145	91.7%	1184	92.1%	<b>11.1%</b>
Manistee	1	128	95.3%	30	100.0%	158	96.2%	2.3%
Marquette	3	244	90.6%	31	96.8%	275	91.3%	7.4%
Mason	1	132	96.2%	30	96.7%	162	96.3%	1.5%

County	No. of Sites	No. of Driver Obs.	Driver % Belt Use	No. of Psgr Obs.	Psgr. % Belt Use	Number of Total Obs.	Total % Belt Use	Driver % Mobile Device Use
Mecosta	2	131	90.1%	18	94.4%	149	90.6%	6.1%
Menominee	1	89	88.8%	21	95.2%	110	90.0%	4.5%
Midland	1	90	86.7%	12	91.7%	102	<b>87.3%</b>	10.0%
Missaukee	1	116	96.6%	21	95.2%	137	96.4%	5.2%
Monroe	1	120	92.5%	25	96.0%	145	93.1%	5.8%
Montcalm	1	117	92.3%	27	88.9%	144	91.7%	6.8%
Montmorency	1	98	88.8%	39	89.7%	137	<b>89.1%</b>	8.2%
Muskegon	2	267	89.1%	35	85.7%	302	<b>88.7%</b>	8.6%
Newaygo	2	164	89.6%	55	92.7%	219	90.4%	7.3%
Oakland	9	1248	93.3%	154	94.8%	1402	93.4%	8.9%
Oceana	1	85	92.9%	27	92.6%	112	92.9%	4.7%
Ogemaw	1	121	96.7%	44	95.5%	165	96.4%	<b>10.7%</b>
Ontonagon	1	67	79.1%	17	100.0%	84	<b>83.3%</b>	4.5%
Osceola	1	45	88.9%	9	66.7%	54	<b>85.2%</b>	<b>13.3%</b>
Oscoda	1	121	84.3%	45	93.3%	166	<b>86.7%</b>	6.6%
Otsego	1	137	86.9%	37	83.8%	174	<b>86.2%</b>	3.6%
Ottawa	6	778	94.9%	161	94.4%	939	94.8%	7.5%
Presque Isle	1	96	90.6%	29	93.1%	125	91.2%	5.2%
Roscommon	1	133	93.2%	29	100.0%	162	94.4%	9.0%
Saginaw	1	107	91.6%	28	100.0%	135	93.3%	8.4%
Sanilac	1	116	86.2%	23	95.7%	139	<b>87.8%</b>	6.9%
Schoolcraft	2	63	84.1%	13	84.6%	76	<b>84.2%</b>	4.8%
Shiawassee	1	114	92.1%	13	92.3%	127	92.1%	<b>14.9%</b>
St Clair	1	120	90.0%	20	100.0%	140	91.4%	8.3%
St Joseph	1	133	86.5%	32	93.8%	165	<b>87.9%</b>	3.8%
Tuscola	5	499	89.2%	119	93.3%	618	90.0%	8.0%
Van Buren	1	95	89.5%	16	93.8%	111	90.1%	3.2%
Washtenaw	3	386	91.5%	71	87.3%	457	90.8%	6.7%
Wayne	10	1276	84.2%	203	84.2%	1479	<b>84.2%</b>	<b>11.2%</b>
Wexford	2	250	93.6%	67	100.0%	317	95.0%	8.4%
Statewide Average (VMT-Weighted)	154	17,928	90.6%	3,405	92.1%	20,703	90.8%	9.2%

Table 1 presents several interesting findings. First, the 2023 weighted 83-county safety belt use rate was 90.8 percent, which was 1.6 percentage points lower than the weighted 35-county 2023 Annual NHTSA Survey (which was 92.4 percent). This decrease from the Annual Survey rate is likely due to the inclusion of the addition of 48 generally rural counties in Michigan. Such counties have historically shown the lowest belt use rates, particularly by young males in pick-up trucks, which are commonly observed in

these areas. The 2023 weighted 83-county rate was 1.2 percentage points lower than the 92.0 percent observed during the most recent 83-county survey in 2022. Twenty-seven (27) counties had total safety belt use rates that were below 90 percent, which are indicated in boldface in Table 1. The counties with the lowest belt use rates were generally rural counties in northern Michigan. The 10 counties with the lowest safety belt use rates in 2023 are as follows, in ascending order:

- Keweenaw (75.0%)
- Baraga (79.2%)
- Gogebic (83.0%)
- Iron (83.2%)
- Gladwin (83.3%)
- Ontonagon (83.3%)
- Schoolcraft (84.2%)
- Wayne (84.2%)
- Osceola (85.2%)
- Arenac (86.1%)

Driver mobile device use in the 83-county survey was found to be 9.2 percent, which is 0.9 percentage points higher than the weighted 35-county 2023 Annual survey (which was 8.3 percent) and 1.8 percentage points higher than the 7.4 percent rate of driver mobile device use observed in the 2022 83-county survey. Fourteen (14) counties showed driver mobile device use rates that were at or above 10 percent, which are also indicated in boldface in Table 1. The counties with the highest mobile device use rates included both rural and urban/suburban counties in the lower peninsula and did not show a clear regional or demographic pattern. The 10 counties with the highest driver mobile device use rates in 2023 are as follows, in descending order:

- Lapeer (18.6%)
- Kent (16.0%)
- Livingston (15.2%)
- Shiawassee (14.9%)
- Osceola (13.3%)
- Clinton (12.5%)
- Clare (11.9%)
- Gladwin (11.8%)
- Allegan (11.4%)
- Wayne (11.2%)

## APPENDIX I

### List of 83-County Statewide Observation Survey Locations by County, Including Belt Use and Mobile Device Use Observation Data

County	Site Location	Driver Total Obs.	Driver % Belted	Passenger Total Obs.	Passenger % Belted	Total Obs.	Total % Belted	Driver % Mobile Device Use
Alcona	WB M-72 @ M-65	35	88.6%	15	93.3%	50	90.0%	8.6%
Alger	NB M-94 @ M-28	39	89.7%	10	90.0%	49	89.8%	5.1%
Allegan	WB M-43/Bridge Street @ Sherwood Ave	140	91.4%	30	90.0%	170	91.2%	11.4%
Alpena	SB M-65 @ M-32	94	92.6%	34	91.2%	128	92.2%	1.1%
Antrim	SB US-131 @ M-88	130	93.1%	37	94.6%	167	93.4%	7.7%
Arenac	NB US-23 @ M-61	100	88.0%	15	73.3%	115	86.1%	7.0%
Baraga	M-38 @ US-41	124	79.0%	35	80.0%	159	79.2%	2.4%
Barry	EB State St (M-37) @ Broadway (M-43)	120	90.0%	12	91.7%	132	90.2%	5.8%
Bay	EB M-84/E Salzburg Rd @ M-13/Euclid Ave	120	93.3%	15	100.0%	135	94.1%	11.7%
Bay	SB M-13/Broadway Street @ Fremont Ave	121	95.0%	27	100.0%	148	95.9%	9.9%
Bay	SB M-13/Huron Road @ Linwood Road	118	94.9%	37	97.3%	155	95.5%	0.8%
Benzie	SB US-31 @ M-115	138	96.4%	45	97.8%	183	96.7%	4.3%
Berrien	SWB M-139/Ferry Street @ M-139/Old 31	127	88.2%	17	94.1%	144	88.9%	10.2%
Branch	SB Athens Rd (M-66) @ Mendon Rd (M-60)	127	85.8%	18	100.0%	145	87.6%	6.3%
Calhoun	SB M-66/Capital Ave @ Burr Oak Street	140	90.7%	36	94.4%	176	91.5%	5.0%
Calhoun	EB Michigan Ave @ Eagle Street	136	88.2%	29	89.7%	165	88.5%	13.2%
Calhoun	NB M-99/Superior Street @ Erie Street	133	90.2%	45	86.7%	178	89.3%	3.0%
Calhoun	NB M-66 @ B Drive S	133	90.2%	21	76.2%	154	88.3%	4.5%
Cass	EB M-152 @ M-51	94	91.5%	28	96.4%	122	92.6%	10.6%
Charlevoix	NB M-66 @ M-32	124	92.7%	38	97.4%	162	93.8%	5.6%
Cheboygan	US-23 (State) @ US-23 (Main)	109	84.4%	18	94.4%	127	85.8%	3.7%
Cheboygan	WB M-68 @ M-68	137	87.6%	36	94.4%	173	89.0%	5.1%
Chippewa	M-28 @ M-123	43	97.7%	15	100.0%	58	98.3%	9.3%
Clare	EB M-115/5th Street @ McEwan Street	126	90.5%	18	88.9%	144	90.3%	11.9%
Clinton	EB BUS I-96/Grand River Ave @ Airport Rd	120	92.5%	7	100.0%	127	92.9%	12.5%
Crawford	M-72 @ I-75 BUS	124	93.5%	35	97.1%	159	94.3%	1.6%
Delta	US-41 @ M-35	100	89.0%	9	100.0%	109	89.9%	10.0%
Dickinson	US-2 @ US-141	124	93.5%	26	88.5%	150	92.7%	5.6%
Eaton	EB M-79/Lawrence Ave @ Lincoln Street	126	96.0%	30	100.0%	156	96.8%	4.8%
Eaton	SB M-50/N Cochran Ave @ Lawrence Ave	120	92.5%	25	100.0%	145	93.8%	6.7%
Emmet	NB US-131 @ M-68	125	90.4%	43	93.0%	168	91.1%	6.4%
Genesee	SB M-15 @ E Dodge	74	93.2%	12	91.7%	86	93.0%	8.1%

County	Site Location	Driver Total Obs.	Driver % Belted	Passenger Total Obs.	Passenger % Belted	Total Obs.	Total % Belted	Driver % Mobile Device Use
Genesee	NB M-13 @ M-57	53	88.7%	5	80.0%	58	87.9%	11.3%
Genesee	SB M-13 @ M-21	45	91.1%	7	100.0%	52	92.3%	4.4%
Gladwin	WB M-61 @ M-18	119	84.0%	13	76.9%	132	83.3%	11.8%
Gogebic	US-2 @ US-45	42	83.3%	11	81.8%	53	83.0%	0.0%
Grand Traverse	SB US-31 @ M-72/Shores Beach Lane	129	95.3%	15	100.0%	144	95.8%	9.3%
Grand Traverse	WB US-31/M-72/Munson Ave @ Holiday Rd	125	98.4%	39	100.0%	164	98.8%	4.0%
Grand Traverse	EB US-31/Beitner Road @ US-31/M-37	134	94.0%	23	100.0%	157	94.9%	7.5%
Grand Traverse	WB M-113/Main Street @ Brownson Ave	137	94.2%	38	97.4%	175	94.9%	5.1%
Gratiot	EB Washington (M-46) @ Main (US-127 BUS)	100	92.0%	10	90.0%	110	91.8%	7.0%
Hillsdale	EB Chicago St (US-12) @ Maumee St (M-99)	124	96.0%	15	100.0%	139	96.4%	6.5%
Houghton	M-26 @ US-41	131	89.3%	34	88.2%	165	89.1%	7.6%
Huron	NB Huron (M-25) @ St@e St (M-142)	73	84.9%	19	94.7%	92	87.0%	0.0%
Huron	EB Huron (M-53) @ Port Crescent (M-53)	119	94.1%	20	95.0%	139	94.2%	9.2%
Ingham	WB E M-106/Morton Road @ N Clinton Street/M-106	92	94.6%	22	81.8%	114	92.1%	2.2%
Ingham	EB M-52/Main Street/Stockbridge Road @ N Clinton Street/M-106	136	95.6%	32	96.9%	168	95.8%	5.1%
Ingham	WB M-36/Topping Road @ M-52 (Stockbridge Road)	35	88.6%	9	77.8%	44	86.4%	5.7%
Ingham	EB M-36/Dansville Road @ M-52	35	94.3%	11	100.0%	46	95.7%	5.7%
Ingham	WB I-96 BUS LOOP/S M-43 Hwy/E Oakland Ave @ N Pennsylvania Ave	130	95.4%	11	100.0%	141	95.7%	8.5%
Ingham	WB M-143/Michigan Ave @ N Harrison Road	129	96.1%	14	100.0%	143	96.5%	12.4%
Ingham	SEB M-43/E. Grand River Ave @ Northwind	126	94.4%	16	100.0%	142	95.1%	13.5%
Ingham	WB M-43/Grand River Avenue @ Dobie Road/Central Park Drive	123	95.1%	16	93.8%	139	95.0%	9.8%
Ionia	EB Bluewater Hwy (M-21) @ N. State (M-66)	128	89.8%	20	100.0%	148	91.2%	7.0%
Ionia	NB State Rd (M-66) @ Tuttle Rd	113	91.2%	14	92.9%	127	91.3%	10.6%
Iosco	M-65 @ M-55	125	96.8%	46	93.5%	171	95.9%	1.6%
Iron	US-2 @ M-189	151	83.4%	40	82.5%	191	83.2%	5.3%
Isabella	SB Old US-27 (US-127 BUS) & E Broomfield	100	87.0%	7	85.7%	107	86.9%	10.0%
Jackson	SB M-50/Main Street @ Constitution Street	135	90.4%	23	95.7%	158	91.1%	7.4%
Jackson	EB Spring Arbor Road @ Dearing Road	135	92.6%	19	78.9%	154	90.9%	6.7%
Kalamazoo	SB US-131 @ Lyons Street	140	94.3%	28	96.4%	168	94.6%	9.3%
Kalamazoo	SWB M-96/Battle Creek Street @ Burgess Dr	126	94.4%	26	88.5%	152	93.4%	4.0%
Kalamazoo	EB M-96 (E. Michigan Ave) @ S 35th Street	122	90.2%	25	96.0%	147	91.2%	1.6%
Kalamazoo	WB BUS US-94/AmVets Mem Parkway @ S Sprinkle Rd	87	96.6%	23	91.3%	110	95.5%	2.3%
Kalamazoo	WB M-96/King Highway @ River Street	129	94.6%	24	75.0%	153	91.5%	6.2%
Kalamazoo	SWB Gull Road @ N Sprinkle Road	131	87.0%	26	84.6%	157	86.6%	3.8%

County	Site Location	Driver Total Obs.	Driver % Belted	Passenger Total Obs.	Passenger % Belted	Total Obs.	Total % Belted	Driver % Mobile Device Use
Kalamazoo	WB BUS US-94/AmVets Mem Parkway @ N Park Street	140	91.4%	22	90.9%	162	91.4%	7.1%
Kalkaska	EB M-72 & US-131/M-66	131	96.2%	39	94.9%	170	95.9%	7.6%
Kent	EB M-11/28th Street SW @ Ivanreset Ave SW	131	87.8%	19	94.7%	150	88.7%	16.0%
Keweenaw	US-41 @ Bumbletown Rd	36	72.2%	8	87.5%	44	75.0%	0.0%
Lake	EB US-10 @ M-37	81	93.8%	30	93.3%	111	93.7%	2.5%
Lapeer	NB M-24/Lapeer Road @ W Dryden Road	129	96.1%	15	100.0%	144	96.5%	18.6%
Leelanau	SB M-22 @ M-72	57	93.0%	20	100.0%	77	94.8%	5.3%
Lenawee	EB M-34 @ Scott Street/Red River Drive	128	91.4%	14	100.0%	142	92.3%	7.0%
Lenawee	EB US-12 @ M-52	121	95.0%	20	100.0%	141	95.7%	6.6%
Livingston	WB Grand River Ave @ National Street	132	97.0%	25	96.0%	157	96.8%	15.2%
Luce	M-123 @ M-28	67	88.1%	13	100.0%	80	90.0%	3.0%
Mackinac	M-117 @ US-2	40	87.5%	15	93.3%	55	89.1%	7.5%
Macomb	EB M-39/Southfield Road @ Lafayette Boulevard	137	87.6%	16	56.3%	153	84.3%	8.8%
Macomb	SB M-53/Van Dyke Ave @ 17 Mile Road	128	91.4%	12	83.3%	140	90.7%	10.2%
Macomb	EB M-59/Hall Road @ Van Dyke Ave	135	91.9%	11	100.0%	146	92.5%	12.6%
Macomb	WB M-59/Hall Road @ Garfield Road	138	95.7%	17	100.0%	155	96.1%	13.8%
Macomb	EB M-59/Hall Road @ Romeo Plank Road	135	93.3%	15	100.0%	150	94.0%	10.4%
Macomb	SWB M-3/Gratiot Ave @ Martin Road	116	95.7%	22	95.5%	138	95.7%	12.1%
Macomb	NEB M-3/Gratiot Ave @ 12 Mile Road	120	92.5%	30	100.0%	150	94.0%	10.0%
Macomb	SWB M-97/Groesbeck Highway @ 15 Mile Road	130	90.0%	22	90.9%	152	90.1%	10.8%
Manistee	NB M-55 @ E Parkdale Ave (US-31)	128	95.3%	30	100.0%	158	96.2%	2.3%
Marquette	NB US-41 @ Cherry Creek Road (M-28)	100	93.0%	16	93.8%	116	93.1%	6.0%
Marquette	NB M-553 @ County Road 480	99	88.9%	9	100.0%	108	89.8%	9.1%
Marquette	NB State Hwy 35 @ CR-480	45	88.9%	6	100.0%	51	90.2%	6.7%
Mason	WB US-10 (Ludington Ave) @ US-10 (James St)	132	96.2%	30	96.7%	162	96.3%	1.5%
Mecosta	SB 157th Ave (M-20) @ 15 Mile Rd (M-20)	31	93.5%	10	100.0%	41	95.1%	0.0%
Mecosta	WB E Wheatland Ave (M-20) at 30th Ave (M-66)	100	89.0%	8	87.5%	108	88.9%	8.0%
Menominee	US-2 @ US-41	89	88.8%	21	95.2%	110	90.0%	4.5%
Midland	EB Buttes (US-10 BUS) @ Jerome (M-20)	90	86.7%	12	91.7%	102	87.3%	10.0%
Missaukee	EB M-55 @ M-66 / M-55	116	96.6%	21	95.2%	137	96.4%	5.2%
Monroe	EB M-50/Tecumseh Street @ Helle Boulevard/Cabela Boulevard	120	92.5%	25	96.0%	145	93.1%	5.8%
Montcalm	WB M-46/Howard City Edmore @ Federal Road	117	92.3%	27	88.9%	144	91.7%	6.8%
Montmorency	WB M-32 (State) @ M-33 (Main St)	98	88.8%	39	89.7%	137	89.1%	8.2%
Muskegon	WB BUS US-31/Seaway Drive @ Hoyt Street	127	89.8%	10	90.0%	137	89.8%	13.4%
Muskegon	NB M-37/Maple Street @ State Road	140	88.6%	25	84.0%	165	87.9%	4.3%

County	Site Location	Driver Total Obs.	Driver % Belted	Passenger Total Obs.	Passenger % Belted	Total Obs.	Total % Belted	Driver % Mobile Device Use
Newaygo	EB M-82/Curve Street/Croton Drive @ M-37/Evergreen Drive	135	90.4%	39	94.9%	174	91.4%	8.9%
Newaygo	WB Monroe Street @ M-37/Evergreen Drive	29	86.2%	16	87.5%	45	86.7%	0.0%
Oakland	SB US-24/Telegraph Road @ Voorheis Street	128	96.1%	11	100.0%	139	96.4%	4.7%
Oakland	EB M-59/E Huron Street @ Woodward Ave (NB)	135	98.5%	17	100.0%	152	98.7%	8.1%
Oakland	SEB BUS US-24/N Cass Ave @ N Johnson Street	123	82.1%	22	95.5%	145	84.1%	9.8%
Oakland	SEB M-1/Woodward Ave @ Catalpa Drive	140	92.9%	15	93.3%	155	92.9%	7.9%
Oakland	NWB M-1/Woodward Ave @ E Maple Road	139	91.4%	28	92.9%	167	91.6%	10.1%
Oakland	NWB M-1/Woodward Ave @ W Big Beaver Road	138	95.7%	26	96.2%	164	95.7%	10.1%
Oakland	EB M-59/Highland Road EB @ N. Milford Road	119	94.1%	11	90.9%	130	93.8%	12.6%
Oakland	WB M-59/Highland Road WB @ Duck Lake Road	136	95.6%	15	86.7%	151	94.7%	9.6%
Oakland	SEB M-1/Woodward Ave @ W Nine Mile Road	190	92.6%	9	100.0%	199	93.0%	7.9%
Oceana	WB M-20 @ Oceana Dr	85	92.9%	27	92.6%	112	92.9%	4.7%
Ogemaw	M-55 @ M-33	121	96.7%	44	95.5%	165	96.4%	10.7%
Ontonagon	M-28 @ US-45	67	79.1%	17	100.0%	84	83.3%	4.5%
Osceola	NB M-66 @ US-10	45	88.9%	9	66.7%	54	85.2%	13.3%
Oscoda	SB M-33 @ M-72	121	84.3%	45	93.3%	166	86.7%	6.6%
Otsego	UM-32 @ Dickerson Rd	137	86.9%	37	83.8%	174	86.2%	3.6%
Ottawa	NB US-31 NB @ Hayes Street	129	95.3%	12	100.0%	141	95.7%	7.8%
Ottawa	SB US-31 SB @ Ferris Street	125	94.4%	28	85.7%	153	92.8%	4.0%
Ottawa	EB M-45/Lake Michigan Drive @ 48th Ave	135	91.1%	26	88.5%	161	90.7%	8.9%
Ottawa	SB US-31 SB @ Port Sheldon Street	129	95.3%	37	94.6%	166	95.2%	6.2%
Ottawa	EB 9th Street @ Columbia Ave	133	96.2%	27	100.0%	160	96.9%	9.0%
Ottawa	SWB Chicago Drive @ 36th Ave	127	96.9%	31	100.0%	158	97.5%	8.7%
Presque Isle	M-33 @ M-68	96	90.6%	29	93.1%	125	91.2%	5.2%
Roscommon	M-18 @ M-55	133	93.2%	29	100.0%	162	94.4%	9.0%
Saginaw	NB M-15/Vassar Road @ M-81/Washington Road	107	91.6%	28	100.0%	135	93.3%	8.4%
Sanilac	NB M-53 @ M-46	116	86.2%	23	95.7%	139	87.8%	6.9%
Schoolcraft	M-94 @ US-2	33	75.8%	6	66.7%	39	74.4%	9.1%
Schoolcraft	SB M-77 @ M-28	30	93.3%	7	100.0%	37	94.6%	0.0%
Shiawassee	NB Shiawassee (M-52) @ Main St (M-21)	114	92.1%	13	92.3%	127	92.1%	14.9%
St. Clair	NB Kinney Rd (M-19) @ Dunnigan Road	120	90.0%	20	100.0%	140	91.4%	8.3%
St. Joseph	EB US-12/Chicago Road @ US-131	133	86.5%	32	93.8%	165	87.9%	3.8%
Tuscola	SWB M-81/State Street @ Frank Street	139	88.5%	25	92.0%	164	89.0%	6.5%
Tuscola	NB M-24/Mertz Road @ M-46/Sanilac Road	80	91.3%	14	92.9%	94	91.5%	6.3%
Tuscola	WB M-46/Sanilac Road @ M-24/Mertz Road	88	93.2%	28	96.4%	116	94.0%	6.8%
Tuscola	EB M-81/Cass City Road @ Seeger St	112	84.8%	28	89.3%	140	85.7%	8.0%

County	Site Location	Driver Total Obs.	Driver % Belted	Passenger Total Obs.	Passenger % Belted	Total Obs.	Total % Belted	Driver % Mobile Device Use
Tuscola	NWB M-153/Ford Road @ M-46/Sanilac Road	80	90.0%	24	95.8%	104	91.3%	13.8%
Van Buren	WB M-43 @ M-40	95	89.5%	16	93.8%	111	90.1%	3.2%
Washtenaw	SB M-52/Ann Arbor Street @ E Main Street	111	91.9%	19	89.5%	130	91.5%	7.2%
Washtenaw	SWB US-12/Michigan Avenue @ Munger Road/Cloverlane Drive	135	95.6%	21	90.5%	156	94.9%	9.6%
Washtenaw	NB N Huron Street @ W Cross Street	140	87.1%	31	83.9%	171	86.5%	3.6%
Wayne	SB US-24/Telegraph Road @ Van Born Road	135	82.2%	27	88.9%	162	83.3%	8.9%
Wayne	NWB M-39/Southfield Road @ Toledo Road	136	85.3%	25	88.0%	161	85.7%	4.4%
Wayne	SWB M-85/Fort Street @ Outer Drive	140	77.9%	40	70.0%	180	76.1%	10.0%
Wayne	NEB US-12/Michigan Ave @ Schlaff Street	137	83.9%	27	85.2%	164	84.1%	8.8%
Wayne	EB M-153/Ford Road @ Chase Road	138	87.0%	18	83.3%	156	86.5%	11.6%
Wayne	EB US-12/Michigan Ave @ Haggerty Road	137	88.3%	11	90.9%	148	88.5%	19.0%
Wayne	WB M-153/Ford Road @ Silvery Lane	131	88.5%	14	100.0%	145	89.7%	13.7%
Wayne	WB M-153/Ford Road @ US-24/Telegraph Road	126	77.8%	17	88.2%	143	79.0%	11.9%
Wayne	EB M-153/Ford Road @ Outer Drive	122	81.1%	13	76.9%	135	80.7%	16.4%
Wayne	NWB M-1/Woodward Ave @ 7 Mile Road	74	93.2%	11	90.9%	85	92.9%	5.4%
Wexford	EB M-55 @ M-115/M-55	128	92.2%	33	100.0%	161	93.8%	7.0%
Wexford	SB M-115 @ 13th St	122	95.1%	34	100.0%	156	96.2%	9.8%

**APPENDIX II**  
**2021 Vehicle Miles Traveled in Michigan, by County**

<b>County</b>	<b>2021 VMT in THOUSANDS (from MDOT Highway Performance Monitoring System)</b>	<b>Percent of Statewide VMT</b>
Alcona	129,472	0.13%
Alger	164,683	0.17%
Allegan	1,568,234	1.62%
Alpena	282,614	0.29%
Antrim	312,340	0.32%
Arenac	341,864	0.35%
Baraga	123,825	0.13%
Barry	416,541	0.43%
Bay	1,253,933	1.30%
Benzie	211,587	0.22%
Berrien	2,010,076	2.08%
Branch	495,119	0.51%
Calhoun	1,604,328	1.66%
Cass	481,052	0.50%
Charlevoix	273,643	0.28%
Cheboygan	465,276	0.48%
Chippewa	366,645	0.38%
Clare	418,913	0.43%
Clinton	1,090,526	1.13%
Crawford	322,051	0.33%
Delta	415,104	0.43%
Dickinson	231,585	0.24%
Eaton	1,213,500	1.25%
Emmet	380,612	0.39%
Genesee	3,947,732	4.08%
Gladwin	248,184	0.26%
Gogebic	154,389	0.16%
Gr. Traverse	991,711	1.03%
Gratiot	540,058	0.56%
Hillsdale	410,859	0.42%
Houghton	263,057	0.27%
Huron	330,446	0.34%
Ingham	2,139,071	2.21%
Ionia	773,416	0.80%

<b>County</b>	<b>2021 VMT in THOUSANDS (from MDOT Highway Performance Monitoring System)</b>	<b>Percent of Statewide VMT</b>
Iosco	268,923	0.28%
Iron	145,427	0.15%
Isabella	728,300	0.75%
Jackson	1,625,817	1.68%
Kalamazoo	2,467,969	2.55%
Kalkaska	268,920	0.28%
Kent	5,875,932	6.07%
Keweenaw	46,845	0.05%
Lake	127,280	0.13%
Lapeer	977,856	1.01%
Leelanau	277,422	0.29%
Lenawee	835,888	0.86%
Livingston	2,284,684	2.36%
Luce	91,638	0.09%
Mackinac	285,763	0.30%
Macomb	6,555,650	6.78%
Manistee	266,281	0.28%
Marquette	640,689	0.66%
Mason	307,604	0.32%
Mecosta	487,812	0.50%
Menominee	259,092	0.27%
Midland	877,858	0.91%
Missaukee	181,346	0.19%
Monroe	2,004,023	2.07%
Montcalm	658,245	0.68%
Montmorency	125,563	0.13%
Muskegon	1,469,587	1.52%
Newaygo	386,620	0.40%
Oakland	11,915,057	12.32%
Oceana	319,998	0.33%
Ogemaw	317,636	0.33%
Ontonagon	116,886	0.12%
Osceola	425,223	0.44%
Oscoda	100,367	0.10%
Otsego	410,495	0.42%
Ottawa	2,477,795	2.56%
Presque Isle	160,829	0.17%

<b>County</b>	<b>2021 VMT in THOUSANDS (from MDOT Highway Performance Monitoring System)</b>	<b>Percent of Statewide VMT</b>
Roscommon	427,612	0.44%
Saginaw	2,080,040	2.15%
Sanilac	403,126	0.42%
Schoolcraft	172,388	0.18%
Shiawassee	791,150	0.82%
St Clair	1,491,182	1.54%
St Joseph	529,363	0.55%
Tuscola	503,253	0.52%
Van Buren	1,040,427	1.08%
Washtenaw	3,592,973	3.71%
Wayne	14,110,894	14.59%
Wexford	456,316	0.47%
<b>STATEWIDE TOTAL</b>	<b>96,744,489</b>	<b>100%</b>