ImageSensing systems

Case Study

Hawaii DOT Uses RTMS Echo for Traffic Volume Data

Overview

In early 2020, Hawaii Department of Transportation (HDOT) wanted to track and share traffic volume data for major state routes during the COVID-19 public health emergency. Using the RTMS Echo to collect and analyze this data, HDOT was able to compare Annual Average Daily Traffic (AADT) counts from 2019 to the data collected with the RTMS Echo in 2020.

During this time, weekly data gathering showed an opportunity to help confirm the capabilities of major state routes to accommodate extended lane closure hours. The data also helped to provide an economic indicator for the state.

Receiving quality traffic data is important for optimizing the safety and efficiency of our roadways. With RTMS Echo, agencies such as HDOT are provided with meaningful results to make their cities safer and more efficient.

Results

Using industry-leading technology, the RTMS Echo collected highly accurate traffic data which as a result, gained HDOT valuable information to implement improvements for operations across the state of Hawaii.

The following data was received from the RTMS Echo.

- As shown in the table below, mid-month counts and the last two weeks of available data were recorded to show an increase or decrease in traffic percentages from the 2019 AADT
- March of 2020 marked a significant reduction in traffic volume across the state due to the Governor's stay-at-home order
- By the end of 2021, traffic volumes largely returned to 2019 numbers

COVID-19 Traffic Volume Comparison

No.	Route	M Marker	2019 AADT	2020 Dec	2021 Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	12/1	12/8	12/15
1	H-1	3.43	99,210	-7%	-12%	-12%	-6%	-3%	-2%	0%	0%	-4%	-6%	-6%	-3%	-3%	-6%	-1%
2	H-1	11.74	263,152	-8%	-14%	-14%	-10%	-8%	-8%	-4%	-5%	-7%	-9%	-11%	-6%	-8%	-7%	-4%
3	H-1	13.54	120,008	-18%	-21%	-23%	-16%	-15%	-14%	-9%	-10%	-11%	-13%	-13%	-10%	-9%	-12%	-6%
4	H-1	16.22	106,504	-22%	-25%	-24%	-18%	-17%	-16%	-14%	-5%	-13%	-19%	-19%	-18%	-16%	-18%	-12%
5	H-1	17.09	96,377	-22%	-31%	-34%	-29%	-30%	-28%	-18%	-19%	-21%	-22%	-25%	-26%	-18%	-23%	-21%
6	H-1	21.07	200,936	-12%	-17%	-17%	-13%	-11%	-8%	-5%	-3%	-7%	-10%	-10%	-8%	-9%	-6%	-5%
7	H-1	22.1	180,747	-12%	-15%	-15%	-11%	-8%	-5%	-1%	1%	-3%	-5%	-5%	-2%	-4%	-1%	0%
8	H-1	22.94	196,163	-13%	-16%	-15%	-11%	-9%	-6%	-4%	-3%	-5%	-7%	-8%	-5%	-8%	-5%	-3%
9	H-1	23.55	144,848	-14%	-16%	-16%	-11%	-9%	-7%	-5%	-4%	-6%	-8%	-8%	-5%	-8%	-6%	---
10	H-1	24.58	114,355	-10%	-13%	-14%	-9%	-7%	-3%	-2%	-4%	-4%	-6%	-6%	-2%	-4%	-4%	-1%
11	H-2	4.02	102,551	-16%	-15%	-14%	-10%	-7%	-5%	-3%	-4%	-6%	-8%	-8%	-8%	---	---	-2%
12	H-201	0.2	52,285	-4%	-10%	-11%	-3%	-1%	1%	2%	4%	1%	-1%	0%	4%	5%	5%	8%
13	H-201	3.19	113,439	---	---	---	-20%	-20%	-18%	-19%	-20%	-25%	-22%	-17%	-14%	-19%	-20%	-7%
14	H-3	1.28	55,524	-12%	-18%	-17%	-11%	-10%	-8%	-6%	-7%	-11%	-13%	-12%	-11%	-11%	-14%	-7%
15	H-3	10.37	32,627	-17%	-20%	-20%	-14%	-13%	-11%	-9%	-11%	-15%	-16%	-16%	-12%	-14%	-15%	-11%

	station	route	mp
1	C10K	H-1	3.43
2	C7L	H-1	11.74
3	H13	H-1	13.54
4	Radar01	H-1	16.22
5	Radar02	H-1	17.09
6	SL36LF	H-1	21.07
7	00SL71	H-1	22.1
8	Radar03	H-1	22.94
9	724A	H-1	23.55
10	SL58	H-1	24.58
11	H13P	H-2	4.02
12	C6-U	H-201	0.2
13	C4K	H-201	3.19
14	H41W	H-3	1.28
15	41T	H-3	10.37