

Oahu Civilian E9-1-1 Status Report

April 1, 2020 – April 30, 2020

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1. PSAP OPERATIONS

9-1-1 CALL VOLUME CIVILIAN PSAPS – APRIL 2020

Source: Intrado Viper system

(*) Totals are based on calls to Primary PSAP.

9-1-1 Primary PSAP Call Volume																	
Honolulu City & County PSAPs		Wireline		Wireless				VOIP		Calls With No ALI		Admin Calls		Abandoned Calls		Other Calls	
2020	Total 9-1-1 Calls Processed	No. of Wireline Calls	% of Total Calls	No. of Wireless Calls	% of Total Calls	% of Wireless WPH1 Calls	% of Wireless WPH2 Calls	No. of VoIP Calls	% of Total Calls	No. of Calls with No ALI	% of Total Calls	No. of Admin Calls	% of Total Calls	No. of 9-1-1 Abandoned	% of Total Calls	No. of Other Calls	% of Total Calls
April	74,480	12,014	16.13%	59,770	80.25%	37.45%	42.80%	2,681	3.60%	15	0.02%	1,530	2.05%	10,298	13.83%	787	1.06%

9-1-1 CALL VOLUME CIVILIAN PSAPS – CALENDAR YEAR 2020

9-1-1 Primary PSAP Call Volume																	
Honolulu City & County PSAPs		Wireline		Wireless				VOIP Calls		Calls with No ALI		Admin Calls		Abandoned Calls		Other Calls	
2020	Total 9-1-1 Calls Processed	No. of Wireline Calls	% of Total Calls	No. of Wireless Calls	% of Total Calls	% of Wireless WPH1 Calls	% of Wireless WPH2 Calls	No. of VoIP Calls	% of Total Calls	No. of Calls with No ALI	% of Total Calls	No. of Admin Calls	% of Total Calls	No. of 9-1-1 Abandoned	% of Total Calls	No. of Total Call Received	% of Total Calls
JAN	88,552	16,967	19.16%	68,441	77.29%	38.46%	38.83%	3,117	3.52%	27	0.03%	559	0.63%	13,536	15.29%	848	0.96%
FEB	83,690	15,164	18.12%	65,655	78.45%	37.55%	40.90%	2,854	3.41%	17	0.02%	606	0.72%	12,540	14.98%	575	0.69%
MAR	84,544	14,863	17.58%	66,663	78.85%	36.41%	42.44%	3,001	3.55%	17	0.02%	2,816	3.33%	12,790	15.13%	654	0.77%
APR	74,480	12,014	16.13%	59,770	80.25%	37.45%	42.80%	2,681	3.60%	15	0.02%	1,530	2.05%	10,298	13.83%	787	1.06%
MAY																	
JUNE																	
JULY																	
AUG																	
SEPT																	
OCT																	
NOV																	
DEC																	
YTD	331,266	59,008		260,529				11,653		76		5,511		49,164		2,864	
MON AVG	82,817	14,752	17.75%	65,132	78.71%	37.47%	41.24%	2,913	3.52%	19	0.02%	1,378	1.68%	12,291	14.81%	716	0.87%

NOTE:

- *911 Calls with No ALI for April 2020 = 0.02% - Statewide average for 2019 = 0.04%
- Total call volumes does not include Administrative Calls. Administrative calls = Calls originating on Administrative lines that required 911 service.
- Abandoned Calls represent the number of incoming 9-1-1 calls for which the caller had hung up before a call-taker answered. Dropped Calls are hang ups after transfers.
- Abandoned Calls are **not** included in the Wireline and Wireless total counts respectively.
- All VoIP (Voice over Internet Protocol) types of 911 calls are combined in the Call Volume statistic.

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9-1-1 CALL VOLUME BY AGENCY – APRIL 2020

2020	9-1-1 Call Volume by Agency									
	Honolulu Police Department						Honolulu Fire Department			
	No. of Total Calls Received	% of Total Calls	Number of Emergency Calls	Number of Non Emergency Calls	Number of Admin Calls	Number of Dropped Calls	No. of Total Calls Received	% of Total Calls	Number of Admin Calls	Number of Dropped Calls
April	65,078	87.38%	16,386	37,061	1,333	10,298	2,443	3.28%	117	112

2020	9-1-1 Call Volume by Agency							
	Emergency Medical Services				Ocean Safety			
	Number of Total Calls Received	% of Total Calls	Number of Admin Calls	Number of Dropped Calls	Number of Total Calls Received	% of Total Calls	Number of Admin Calls	Number of Dropped Calls
April	6,140	8.24%	48	76	32	0.04%	32	0

9-1-1 CALL VOLUME BY AGENCY – CALENDAR YEAR 2020

2020	9-1-1 Call Volume by Agency																	
	Honolulu Police Department						Honolulu Fire Department				Emergency Medical Services				Ocean Safety			
	Number of Total Calls Received	% of Total Calls	No. of Emergency Calls	No. of Non Emergency Calls	No. of Admin Calls	No. of Dropped Calls	No. of Total Calls Received	% of Total Calls	No. of Admin Calls	No. of Dropped Calls	No. of Total Calls Received	% of Total Calls	No. of Admin Calls	No. of Dropped Calls	No. of Total Calls Received	% of Total Calls	No. of Admin Calls	No. of Dropped Calls
JAN	76,472	86.36%	20,721	41,842	373	13,536	2,808	3.17%	149	70	8,385	9.47%	1	95	39	0.04%	36	0
FEB	70,086	83.74%	19,486	37,631	429	12,540	2,605	3.11%	119	32	10,356	12.37%	1	104	68	0.08%	57	0
MAR	73,390	86.81%	19,272	38,900	2,428	12,790	2,540	3.00%	142	47	7,918	9.37%	205	107	42	0.05%	41	0
APR	65,078	87.38%	16,386	37,061	1,333	10,298	2,443	3.28%	117	112	6,140	8.24%	48	76	32	0.04%	32	0
MAY																		
JUNE																		
JULY																		
AUG																		
SEPT																		
OCT																		
NOV																		
DEC																		
YTD	285,026		75,865	155,434	4,563	49,164	10,396		527	261	32,799		255	382	181		166	0
MON AVG	71,257	86.07%	18,966	38,859	1,141	12,291	2,599	3.14%	132	65	8,200	9.86%	64	96	45	0.05%	42	0

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PSAP OPERATION NOTES:

- Total call volumes does not include Administrative Calls. Administrative calls = Calls originating on Administrative lines that required 911 service.
- Abandoned Calls represent the number of incoming 9-1-1 calls for which the caller had hung up before a call-taker answered. Dropped Calls are hang ups after transfers.
- Abandoned Calls **are** included in the Wireline and Wireless total counts respectively.
- All VoIP (Voice over Internet Protocol) types of 911 calls are combined in the Call Volume statistic.

FOR YOUR INFORMATION

FYI.....For Your Information										
PSAP Operations										
Statewide 911 Call Volumes										
PSAP	2019		2018		2017		2016		2015	
Oahu Civilian	1,075,726	69.67%	1,034,190	70.62%	1,022,818	72.16%	1,009,059	71.93%	1,019,402	70.94%
RDC Pearl Harbor	37,905	2.45%	37,068	2.53%	27,916	1.97%	N/A	N/A	N/A	N/A
Hawaii County	211,611	13.70%	206,648	14.11%	193,166	13.62%	205,412	14.64%	217,768	15.15%
Maui County	157,127	10.18%	133,869	9.14%	123,685	8.73%	137,333	9.80%	142,952	9.95%
Kauai County	61,754	4.00%	52,623	3.60%	49,902	3.52%	50,955	3.63%	56,874	3.96%
Total	1,544,123	100.00%	1,464,398	100.00%	1,417,487	100.00%	1,402,759	100.00%	1,436,996	100.00%

*2016 & 2015 Statewide average does not include Military 911 calls

911 Call Volume % increase from 2018 to 2019	
Oahu	4.02%
RDC	2.25%
Hawaii	2.40%
Maui	17.37%
Kauai	17.35%
State of Hawaii average	8.68%

911 Calls with No ALL % average for 2019	
Oahu	0.03%
RDC	0.01%
Hawaii	0.10%
Maui	0.05%
Kauai	0.03%
State of Hawaii average	0.04%

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TEXT TO 911 OAHU CIVILIAN PSAPS – CURRENT MONTH – APRIL 2020

NOTE:

- Although there is a “Text to 911” plot on the MapFlex, the location of the plot is not reliable. Text to 911 Dispatchers should use their skills to ascertain the exact location of the emergency response.

TEXT TO 911 Oahu Civilian PSAPs 2020						
Month	Total	HPD	HFD	EMS	OS	911 (handled)
January	119	69	2	2	0	46
February	116	29	14	14	0	59
March	178	144	13	7	0	14
April	200	169	4	6	0	21
May						
June						
July						
August						
September						
October						
November						
December						
YTD	613	411	33	29	0	140
Monthly Avg.	153.3	102.8	8.3	7.3	0.0	35.0

NOTE:

The 9-1-1 handled texts were incidents in which the Division conducted testing or the texter texted 911 in error.

FYI...

State of Hawaii 2019	
TEXT TO 911	
Oahu Civilian	1,629
RDC Pearl Harbor	43
Hawaii County	275
Maui County	228
Kauai County	103
*Total	2,278
*Totals may include PSAP training, testing, and 911 Texting errors	

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911 WIRELESS OAHU CIVILIAN PSAP TESTING – APRIL 2020

OAHU CIVILIAN - APRIL 2020						
Date	WSP	Sites Tested	Sectors Tested	Tested By:	Test Pass/Fail	Comments:
4/9/2020	Verizon	6	6	Oahu PSAP	Pass	
4/16/2020	Verizon	1	1	Oahu PSAP	Pass	
4/23/2020	Verizon	2	2	Oahu PSAP	Pass	

NOTES:

- There were nine (9) scheduled Wireless 911 Tests for the Oahu Civilian PSAP in April 2020.
- Verizon Wireless has completed migrating their Wireless network database from Intrado to ComTech.
- During the 4th quarter of 2018, there was an increasing amount of “MOBL” class of service type of 911 calls delivered to the State of Hawaii PSAPs. On January 15th, 2019, Intrado completed the position source mapping for ComTech which appears to have resolved this issue.

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2. MSAG (MASTER STREET ADDRESS GUIDE)

OAHU CIVILIAN MSAG TRANSACTIONS CURRENT MONTH/YEAR – APRIL 2020

OAHU CIVILIAN	9-1-1 TRANSACTIONS								
	Total	MSAG	ALI Submitted			Open ALI Discrepancy Records			Customer Addresses Affected
2020		MSAG (A)	TN CR (B)	ALI DR (C)	VoIP (D)	TNCR	ALI DR	VoIP DR	
JANUARY	232	116	115	0	1	638	0	0	4,128
FEBRUARY	293	113	180	0	0	468	0	0	7,748
MARCH	172	106	65	0	1	1,125	0	0	13,965
APRIL	284	18	266	0	0	789	0	0	1,419
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL YTD	981	353	626	0	2				27,260
AVG PER MONTH	245	88	157	0	1				6,815

Definitions

(A) **Master Street Address Guide** - Represents corrections made to street records including, street names, address ranges, MSAG Communities and ESNs.

(B) **Telephone Number Change Request** - Represents address corrections on a specific TN or group of TNs. These "invalid" TNs usually have an associated ESN 199 attached to them which indicates the need for validation.

(C) **Automatic Location Information Discrepancy Record** - Represents an address discrepancy discovered during a live 9-1-1 call, from a landline. These record corrections are treated with a higher priority and should be processed within 48 hours as a general guideline.

(D) **Voice over Internet Protocol Discrepancy Record** - Represents an address discrepancy discovered during a live 9-1-1 call, from a VoIP phone. These record corrections are treated with a higher priority and should be processed within 72 hours as a general guideline per Time Warner Operations Center. MSR tracking effective April 2014.

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OAHU CIVILIAN MSAG CURRENT MONTH NOTES:

A total of **284** MSAG transactions were processed in 9-1-1 Net during the current reporting month. Eighteen (**18**) requests were processed relating to the MSAG database which include: changes to high – low street ranges, combining street records, deletion of invalid records, splitting street records to align with Police, Fire, EMS and Military response areas, and inserting new MSAG records.

There were **1,419** customer ANI/ALI (telephone/address) records updated as a direct result.

OAHU CIVILIAN TELEPHONE RECORD (ALI) TRANSACTIONS CURRENT MONTH NOTES:

266 Telephone Number Change Requests (TN CR) transactions were processed in 9-1-1 Net with valid MSAG addresses, and a result of the Dispatchable Location Project. TN CRs must be validated against HT records and approved by the end user Hawaiian Telcom customer before updating the ALI record.

OAHU CIVILIAN OPEN TELEPHONE RECORD (ALI) DISCREPANCY STATUS:

- **There are currently 789 Open TN CR Transactions as April 30, 2020**
- **Refer to chart in the next section “TNCR Current Status”**

789 Open TN CR transactions are a direct result of the Dispatchable Location Project clean-up and are awaiting approval from Hawaiian Telcom, Inc. Akimeka continues to monitor and track the progress of the Referred records. Once a telephone number is submitted to Intrado for correction, it must be verified against HT records and/or approved by the customer. Intrado's internal process requires calling each telephone customer individually for approval to update an address in the 9-1-1 database.

- **There are no Open ALI-DRs as of April 30, 2020**
- **There is no Open VoIP DRs as of April 30, 2020**

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TNCR (TELEPHONE NUMBER CHANGE REQUEST) CURRENT STATUS – APRIL, 2020

NOTE:

- 9-1-1 NET is a secure web-based application that provides access to request changes to the MSAG, ALI, TN, and ESN/ELT data supported and maintained by Intrado for the Telephone Company (TelCo).
- TNCRs are not requests to change Telephone Numbers (TNs); however, it is a corrective process within 9-1-1 NET to modify location information associated with an Automatic Location Identification (ALI) record to a valid MSAG address for 9-1-1 purposes.

PSAP 9-1-1 Telephone Number Location Change Request (Telephone Number Change Request (TNCR) Status)				
PSAP	TOTAL TNCR RECORDS SUBMITTED BY AKIMEKA	OPENED TNCRS PENDING FURTHER ACTION BY INTRADO	OPENED TNCRS REFERRED TO TELCO BY INTRADO	TOTAL UNOPENED TNCR RECORDS
OAHU CIVILIAN	789	1	527	261

STATUS
<u>TOTAL TNCRs SUBMITTED</u> - The total number of TNCR requests for modification that have been submitted in 9-1-1
<u>PENDING STATUS</u> - TNCRs assigned this status are requests which have been reviewed by the 9-1-1 Database Service Provider Data Analyst, and are pending investigation whether the request is valid or invalid, and/or whether the request requires additional information to validate.
<u>REFERRED STATUS</u> - TNCRs assigned this status are requests which have been reviewed by the 9-1-1 Database Service Provider Data Analyst, and the request requires additional information to validate. The Intrado Data Analysts assigns this status to a TNCR and the request is referred to the telephone service providers for further research.
<u>TOTAL UNOPENED TNCR RECORDS STATUS</u> - The request is submitted by Akimeka on behalf the PSAP; however, processing by the 9-1-1 Database Service Provider Data Analyst has not begun.

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DISPATCHABLE LOCATION – STATUS AS OF – APRIL 2020

NARRATIVE:

During the August 2015 State of Hawaii 911 Board meeting, Akimeka provided a “State of Hawaii PSAPs Proposed ALI Compliancy with FCC 15-9” presentation. Based on the 9-1-1 Board’s confirmation to add the “Dispatchable Location” information into the ALI database, Akimeka researched the format standards of each pertinent field, and tested the delivery of the data to the PSAP. After a few configuration adjustments (eliminating the TelCo comments field from appearing on the ALI Screen), Akimeka standardized an additional information data format to proceed with this project.

The “Dispatchable Location” data is entered into the “Driving Directions” field in the 9-1-1 Net system, and will display on the Viper Power 911 ALI Screen in the “Exact” field should a 911 call be received from that telephone number. The Windward Mall will be the pilot location starting in March 2018. There were 373 transactions submitted and 260 processed in April 2020.

Dispatchable Location			
2020	Common Name Place MSAG Address	TNCR*	Transactions
Quarter 2		Transactions Submitted	Processed**
Quarter 1 Carryover		6,676	5,244
April	Scandia Towers, 155 Paoakalani Ave, Waikiki	0	12
	Paoakalani APT, 207 Paoakalani Ave, Waikiki	0	4
	Waikiki Sunset, 229 Paoakalani Ave, Waikiki	0	109
	Canal House, 2611 Ala Wai Ave, Waikiki	42	14
	Waikiki Community Center, 310 Paoakalani Ave, Waikiki	0	11
	Leisure Heritage Condo, 311 Ohua Ave, Waikiki	33	9
	Ohualani Condo, 320 Ohua Ave, Waikiki	8	4
	Liliuokalani Gardens, 300 Wai Nani Way, Waikiki	99	5
	Waikiki Health, 277 Ohua Ave, Waikiki	191	92
May			
June			
Q2		373	260
Total		7,049	5,504

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SPECTRUM (CHARTER) 9-1-1 VOIP DATABASE VERIFICATION PROJECT – APRIL 2020

Akimeka received the Automatic Location Identification (ALI) records from Spectrum (formally known as Charter Communications) which is the predominant Voice over Internet Protocol (VoIP) provider in the State of Hawaii. As Akimeka has access to these ALI Records, Akimeka is researching and verifying the VoIP records against an MSAG valid address and the GIS data. This research is a validation of the ALI Record to ensure that the location as provided by the VoIP provider matches the GIS Information utilized by the Public Safety Agencies within their specific County 9-1-1 Service Area. This validation reduces the potential of address or location dispute during a 9-1-1 call.

The analysis of the database records indicates that there are invalid MSAG addresses utilized by the VoIP Provider. These records are being identified, and will be sent back to Spectrum for corrective action.

*Spectrum (Charter) 9-1-1 VoIP Database Verification Project					
PSAP	TOTAL RECORDS SUBMITTED BY SPECTRUM (A)	TOTAL RECORDS MATCHING & VERIFIED WITH 911 DATABASES (B)	TOTAL RECORDS NOT MATCHING	NON MATCHING RECORDS CORRECTED BY AKIMEKA (C)	PERCENT COMPLETED
HAWAII County	22,044	21,638 (98%)	406	406	100.00%
KAUAI County	8,936	8,695 (97%)	241	241	100.00%
MAUI County	18,256	17,517 (96%)	739	739	100.00%
OAHU Civilian	87,414	85,329 (98%)	2,085	2,085	100.00%
OAHU Military	3,663	710 (19%)	2,953	2,953	100.00%
TOTAL	140,313	**133,889	6,424	6,424	100.00%

* Spectrum VoIP Database received on June 21st, 2017

** Akimeka provided VoIP Records with Latitude/Longitude coordinates

(A)	VoIP Database records submitted by Spectrum to Akimeka for research and MSAG address validation.
(B)	Akimeka has researched and verified the VoIP record against an MSAG valid address and GIS data. Akimeka is tracking corrections needed to be performed by Spectrum. Addressing data will be updated or added in the GIS if the VoIP record is determined to be valid.
(C)	Verification Process Completed.

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BANDWIDTH 9-1-1 VOIP DATABASE VERIFICATION PROJECT – APRIL 2020

Akimeka received the Automatic Location Identification (ALI) records from Bandwidth which is a Voice over Internet Protocol (VoIP) provider in the State of Hawaii. As Akimeka has access to these ALI Records, Akimeka researched and verified the VoIP records against an MSAG valid address and the GIS data. This research is a validation of the ALI Record to ensure that the location as provided by the VoIP provider matches the GIS Information utilized by the Public Safety Agencies within their specific County 9-1-1 Service Area. This validation reduces the potential of address or location dispute during a 9-1-1 call.

The analysis of the database records indicates that there were invalid MSAG addresses utilized by the VoIP Provider. These records were identified, and sent back to Bandwidth for corrective action.

Akimeka will update the chart below as we receive updated ALI records from Bandwidth.

*Bandwidth 9-1-1 VoIP Database Verification Project **(Updated)					
PSAP	TOTAL RECORDS SUBMITTED BY BANDWIDTH (A)	TOTAL NEW RECORDS VERIFIED WITH 911 DATABASES (B)	TOTAL RECORDS NOT MATCHING	NON MATCHING RECORDS CORRECTED BY AKIMEKA (C)	PERCENT COMPLETED
HAWAII County	545	85	0	0	100.00%
KAUAI County	306	41	0	0	100.00%
MAUI County	914	222	1	1	100.00%
OAHU Civilian	4,065	888	1	1	100.00%
OAHU Military	56	7	0	0	100.00%
TOTAL	5,886	1,243	2	2	100.00%

***Bandwidth VoIP Database received on April 5th, 2018**

****Updated Bandwidth VoIP Database received on September 6th, 2018**

(A)	VoIP Database records submitted by Bandwidth to Akimeka for research and MSAG address validation.
(B)	Akimeka has researched and verified the VoIP record against an MSAG valid address and GIS data. Akimeka is tracking corrections needed to be performed by Bandwidth. Addressing data will be updated or added in the GIS if the VoIP record is determined to be valid.
(C)	Verification Process Completed.

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3. GEOGRAPHIC INFORMATION SYSTEM (GIS) – APRIL 2020

MAPPING LAYERS UPDATED (PART I)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Address Points	4/24/2020 To 4/30/2020	Next Delivery 5/5/2020
		Corrected spatial for three (3) records in Kapolei
		Corrected spatial for one (1) record in Aina Haina
		Added routingID, new AP for one (1) record in Kahuku
		Added routingID, corrected spatial for one (1) record in Aina Haina
		Added new address point for one (1) record in Manoa
		Corrected location name for one (1) record in Kapolei
		Added new address point for one (1) record in Kapolei
		Corrected location name for one (1) record in Hawaii Kai
		Added new address point for one (1) record in Aina Haina
		Corrected routingID for one (1) record in Kapolei
	4/10/2020 To 4/23/2020	Delivered 4/24/2020
		Added new address point for one (1) record in Nuuanu
		Corrected location name for one (1) record in Waimanalo
		Added location name for one (1) record in Punchbowl
		Corrected location name for one (1) record in Kaneohe
		Added location name for four (4) records in Kaneohe
		Added new address point for one (1) record in Moanalua I
		Corrected location name for one (1) record in Wahiawa
		Added new address point for one (1) record in Kalihi
		Corrected location type for one (1) record in Hauula
		Corrected location name for one (1) record in Maili
		Added location name for three (3) records in Wahiawa
		Corrected location name for one (1) record in Moanalua
		Added location name for one (1) record in Manoa
		Corrected location name for four (4) records in Kailua
		Added location name for one (1) record in Waikiki
		Added location name for two (2) records in Kaimuki
		Added new address point for one (1) record in Kaneohe
		Added new address point for one (1) record in Makakilo
		Added location name for one (1) record in Kahala
		Added new address point for one (1) record in Mokuleia
Added location name for one (1) record in Kapolei		
Added location name for two (2) records in Downtown		

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MAPPING LAYERS UPDATED (PART II)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Address Points	4/10/2020 To 4/23/2020	Added location name for one (1) record in Pearl City
		Added location name for two (2) records in Nanakuli
		Added building for one hundred and twenty-eight (128) records in Kapolei
		Added location name for one (1) record in Kalihi
		Added location name for three (3) records in Kailua
		Corrected street name for ninety-two (92) records in Ewa Beach
		Added location name for two (2) records in Ewa Beach
		Added location name for one (1) record in Hauula
		Corrected location name for one (1) record in Waikiki
		Delivered 4/10/2020
	4/1/2020 To 4/9/2020	Added new address point for one (1) record in Kunia
		Removed location name for one (1) record in Haleiwa
		Corrected spatial for one (1) record in Haleiwa
		Corrected name for one (1) record in Honolulu
		Removed apartment for one (1) record in Honolulu
		Added apartment for three (3) records in Waikiki
		Corrected name for one (1) record in Ala Moana
		Removed building for one (1) record in Kahala
		Removed building for two (2) records in Kahuku
		Added building for twenty-one (21) records in Kalihi
		Added apartment for three (3) records in Pearl City
		Corrected routingID for two (2) records in Waiialua
		Added new address point for two (2) records in Ewa Beach
		Corrected location name for one (1) record in Kalihi
		Added apartment for two (2) records in Waipio
		Added apartment for two (2) records in Aiea
		Added location name for one (1) record in Kalaeloa
		Added building for fifteen (15) records in Kalaeloa
		Corrected location name for twenty-three (23) records in Waipahu
		Added building for thirty-three (33) records in Kaimuki
		Removed apartment for one (1) record in Moanalua V
		Removed building for three (3) records in Waipahu
Added apartment for two (2) records in Honolulu		
Added apartment for one (1) record in Ala Moana		

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MAPPING LAYERS UPDATED (PART III)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/ Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Airports		
AMR Response Areas		
Bridges		
Building Footprints		
Bus Stops		
Churches		
Coastal Names		
Coastline		
Common Places		
Correctional Facilities		
Emergency Callboxes		
Emergency Operation Centers		
Emergency Shelters		
ESZ/ESN		
Fire Beats		
Fire Districts		
Fire Response Areas		
Fire Stations		
Food & Beverage		
Gas Stations		
Gate Codes		
Government Buildings		
Harbors		
Helipads		
Hiking Trails		
Hospitals		
Hydrants		
Hyrdology Layers		
Incident Response Areas		
Lodging		
Major Roads		
Medic Beats		
Medic Districts		

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MAPPING LAYERS UPDATED (PART IV)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/ Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Medic Response Areas		
Medic Stations		
Medical Facilities		
Milepost Markers		
Military Response Areas		
MSAG Communities		
Net Junctions		
Ocean Rescue Boundaries		
Ocean Safety		
Parcels		
Parks		
Parks Polygon		
Points of Interest	4/24/2020 To 4/30/2020	Next Delivery 5/5/2020
		Added new address point for two (2) records in Laie
		Added new address point for four (4) records in Kaneohe
		Added new common place point for eleven (11) records in Kapolei
		Added new common place point for one (1) record in Aiea
		Corrected spatial for two (2) records in Kapolei
		Added new address point for one (1) record in Kahaluu
		Added new address point for one (1) record in Kahuku
		Corrected spatial for one (1) record in Waikiki
		Added new address point for two (2) records in Haleiwa
		Added new common place point for one (1) record in Honolulu
		Added new common place point for one (1) record in Pearl City
		Added new common place point for one (1) record in Mililani
		4/10/2020 To 4/23/2020
	Added new common place point for five (5) records in Waipahu	
	Added new common place point for twenty-two (22) records in Kapolei	
	Added new common place point for one (1) record in Kahala	
	Corrected name for four (4) records in Kapolei	
	Corrected spatial, added routingID for two (2) records in McCully	
	Added new common place point for twelve (12) records in Kailua	
Corrected spatial for one (1) record in Ewa Beach		
Corrected spatial for two (2) records in Pearl City		

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MAPPING LAYERS UPDATED (PART V)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/ Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Points of Interest	4/10/2020 To 4/23/2020	Added new common place point for four (4) records in Nanakuli
		Corrected spatial for one (1) record in Nanakuli
		Added new common place point for one (1) record in Waimanalo
		Added new common place point for one (1) record in Iroquois
		Added new common place point for thirteen (13) records in Waikiki
		Added new common place point for one (1) record in Downtown
		Corrected spatial for one (1) record in Kaneohe
		Corrected name for one (1) record in Waikiki
		Corrected spatial, added routingID for two (2) records in Kalihi
		Added new common place point for four (4) records in Pearl City
		Added new common place point for one (1) record in Waialua
		Added new common place point for one (1) record in Manoa
		Corrected spatial, added routingID for seven (7) records in Honolulu
		Added new common place point for two (2) records in Aiea
		Added new common place point for nine (9) records in Kaneohe
		Added new common place point for three (3) records in Kahuku
		Corrected name for one (1) record in Waimanalo
		Corrected spatial, added routingID for one (1) record in Aiea
		Added new common place point for four (4) records in Waianae
		Corrected spatial for two (2) records in Waikiki
		Corrected spatial, added routingID for fifteen (15) records in Waikiki
		Corrected address for one (1) record in Kaneohe
		Added new common place point for two (2) records in Aina Haina
		Corrected spatial for two (2) records in Kahuku
		Corrected spatial, added routingID for one (1) record in Kapahulu
		Added new common place point for one (1) record in Maili
		Added routingID for three hundred and eighty-seven (387) records in Waikiki
		Corrected name, updated alias for one (1) record in Waimanalo
		Added new common place point for one (1) record in Hauula
		Added new common place point for one (1) record in Waipio
		Added new common place point for one (1) record in Kalihi
		Added routingID for twelve (12) records in McCully
		Added routingID for two hundred and thirty-nine (239) records in Honolulu
Added new common place point for four (4) records in Ewa Beach		

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MAPPING LAYERS UPDATED (PART VI)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS			
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks	
	Date Created/ Edits Performed		
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
Points of Interest	4/10/2020 To 4/23/2020	Added new common place point for one (1) record in Mapunapuna	
		Corrected name for one (1) record in Kaneohe	
		Added routingID for fifty-nine (59) records in Ala Moana	
		Corrected spatial, added routingID for one (1) record in Kahala	
		Added new common place point for four (4) records in Hawaii Kai	
		Delivered 4/10/2020	
		Added new common place point for one (1) record in Salt Lake	
		Corrected spatial for one (1) record in Kalihi	
		Added new common place point for three (3) records in Kalihi	
		Corrected address, routingID, spatial for one (1) record in Kalihi	
		Corrected building for one (1) record in Waikiki	
		Added new common place point for three (3) records in Kaimuki	
		Corrected spatial, corrected routingID for ten (10) records in McCully	
		Corrected routingID for one (1) record in Airport	
		Added new common place point for one (1) record in Kapolei	
		Added new common place point for one (1) record in Kakaako	
		Corrected building for fifty-five (55) records in Aiea	
		Added new common place point for two (2) records in Kalaeloa	
		Corrected routingID, corrected spatial for one (1) record in Manoa	
		Added new common place point for thirteen (13) records in Downtown	
		Corrected spatial for two (2) records in Honolulu	
		Corrected spatial, corrected routingID for one (1) record in Honolulu	
		Corrected building for twenty-one (21) records in Kalihi	
		Corrected spatial, corrected routingID for one (1) record in Sunset	
		Added routingID for two (2) records in Downtown	
		Added new common place point for ten (10) records in Ala Moana	
		Added apartment for one (1) record in Haleiwa	
		Corrected spatial for one hundred and twenty-four (124) records in Kaimuki	
		Corrected spatial, added routingID for six (6) records in Honolulu	
		Corrected building for fifty-five (55) records in Kaimuki	
		Added new common place point for one (1) record in Mililani	
		Added new common place point for two (2) records in Moanalua	
		Added new common place point for five (5) records in Manoa	
		Added routingID for forty (40) records in Kapahulu	

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MAPPING LAYERS UPDATED (PART VII)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/ Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Points of Interest	4/1/2020 To 4/9/2020	Corrected spatial for forty-nine (49) records in McCully
		Corrected spatial, corrected routingID for two (2) records in Manoa
		Corrected routingID, corrected spatial for one (1) record in McCully
		Added new common place point for one (1) record in Punchbowl
		Corrected building for twenty (20) records in Kalaeloa
		Corrected spatial for five (5) records in Manoa
		Added new common place point for two (2) records in Aiea
		Added new common place point for three (3) records in Kailua
		Added new common place point for one (1) record in Kahala
		Added routingID for one hundred and ninety-two (192) records in McCully
		Added routingID for one hundred and eleven (111) records in Honolulu
		Corrected spatial, corrected routingID for twenty-three (23) records in Kaimuki
		Corrected spatial for one (1) record in Aiea
		Added new common place point for six (6) records in Wahiawa
		Added new common place point for four (4) records in Waikiki
Corrected spatial, added routingID for one (1) record in McCully		
Police Beats		
Police Districts		
Police Response Areas		
Police Stations		
Post Offices		
Schools		
Street Centerlines	4/24/2020 To 4/30/2020	Next Delivery 5/5/2020
		Added new segment for three (3) records in Ewa Beach
		Split segment, corrected range for two (2) records in Manoa
		Corrected street name for one (1) record in Ewa Beach
		Corrected spatial for three (3) records in Manoa
		Added new segment for three (3) records in Kapolei
		Added new segment for two (2) records in Waipio
	Corrected street name for seven (7) records in Kapolei	
	4/10/2020 To 4/23/2020	Delivered 4/24/2020
		Added new segment for five (5) records in Ewa Beach
Corrected range for one (1) record in McCully		
		Corrected range for one (1) record in Waimanalo

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MAPPING LAYERS UPDATED (PART VIII)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS		
Type of Layer	Akimeka GIS Server	GIS Delivery Dates/Remarks
	Date Created/ Edits Performed	
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)		
Street Centerlines	4/10/2020 To 4/23/2020	Added new segment for twelve (12) records in Waipio
		Corrected range for seven (7) records in Ewa Beach
		Corrected range for one (1) record in Kapolei
		Added range, split segment for two (2) records in Waipio
Subdivisions		
Tow Jurisdictions		
Tsunami Evacuation Zones		
Tsunami Heights		
Waste Water Plants		
WSP Cell Sectors	4/10/2020 To 4/23/2020	Delivered 4/24/2020
		Added eight (8) sectors per Verizon Wireless CRS
		Updated six (6) sectors per AT&T CRS
		Added thirty-four (34) sectors per AT&T CRS
	Updated six (6) sectors per Verizon Wireless CRS	
	4/1/2020 To 4/9/2020	Delivered 4/10/2020
Updated two (2) sectors per AT&T CRS Added eleven (11) sectors per AT&T CRS		
WSP Cell Towers	4/10/2020 To 4/23/2020	Delivered 4/24/2020
		Added one (1) tower per AT&T CRS
		Updated four (4) towers per Verizon Wireless CRS Updated eight (8) towers per AT&T CRS
	4/1/2020 To 4/9/2020	Delivered 4/10/2020
		Updated four (4) towers per AT&T CRS

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GEOGRAPHIC INFORMATION SYSTEM (GIS) NARRATIVES

GIS KEY ACTIVITIES/UPDATES

- **GIS Key activities include the events such as GIS deliverables, meetings, agreements, etc.**

Date	Key Activities/Updates
4/2/2020	Delivered data update including Streets, Police Beats, Address Points and the corresponding vector tile packages and locators to TriTech/Central Square for testing CAD and Mobile functionality.
4/10/2020	Delivered Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD.
4/10/2020	Delivered Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD.
4/10/2020	Delivered Address Points, Common Places, Street Centerlines, Police Response Areas, Fire Response Areas, Medic Response Areas, Ocean Safety Response Areas, ESN, MSAG Communities, Cell Towers, Cell Sectors to the Honolulu MapFlex system for HPD, HFD, EMS, and Ocean Safety.
4/24/2020	Delivered Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD.
4/24/2020	Delivered Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD.
4/24/2020	Delivered Address Points, Common Places, Street Centerlines, Police Response Areas, Fire Response Areas, Medic Response Areas, Ocean Safety Response Areas, ESN, MSAG Communities, Cell Towers, Cell Sectors to the Honolulu MapFlex system for HPD, HFD, EMS, and Ocean Safety.
4/28/2020	Corrected MSAG address for 468 cell towers and 3,862 cell sectors.

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HONOLULU POLICE DEPARTMENT TRITECH CAD PROJECT

On October 10, 2018, Akimeka participated along with the CAD project team of the Honolulu Police Department on a teleconference GIS kickoff meeting with the TriTech CAD Company. Items that were discussed were GIS requirements for the CAD and RMS systems.

On October 25, 2018, Akimeka's initial delivery of 11 GIS layers to the TriTech FTP site included: Address Points, Airports, Coastline, Fire Response Areas, Medic Response Areas, MSAG Communities, Parks, Police Beats, State Boundary, Streams, and Street Centerlines.

Two spreadsheets describing the layers were also provided on the FPT site.

MAPFLEX SYSTEM

Akimeka delivered GIS data to the MapFlex system on the following dates in April 2020

Hawaii County – April 7th, 2020 and April 21st, 2020

Maui County – April 8th, 2020 and April 22nd, 2020

Kauai County – April 9th, 2020, and April 23rd, 2020

Honolulu – April 10th, 2020, and April 24th, 2020

MAPFLEX ISSUES

Below is a detailed list of issues regarding the MapFlex systems throughout the State of Hawaii.

DATE	ISSUE	DESCRIPTION	STATUS
8/2016	Wireless Addresses	MapFlex system began displaying wireless information incorrectly. MapFlex system is doing a reverse query for additional information in the GIS and this is overriding the ALI information with the closest address in the GIS.	Partially Resolved (Nov 2016) The overriding ALI with updated Lat/Longs from the GIS is still occurring
11/2016	Phase I Display	Wireless Phase I calls plotting at centroid of coverage area and landing in the ocean. After installation of new MapFlex version to correct other issues, the configurations for Wireless Phase I were not set up properly by Intrado, in which the mapping did not point to the correct information in MapFlex.	Partially Resolved (Dec 2016) According to PSAPs, it's not fully resolved. The icon of the tower still doesn't plot for Phase I.
11/2016	Wireless Confidence	Sprint calls coming across with unusually high confidence. Coordination is taking place with Sprint and Intrado. Intrado provides the PDE services for Sprint.	Pending

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3/22/2017	ArcGIS Address Locator	The locators in MapFlex have a configurations which does not include ESNs. A reported issue has occurred with the Sheraton in Waikiki. The address locator does not differentiate between the Sheraton hotel and the surf break and plots on the surf break. The bigger issue is that this same issue will occur with complexes that have same primary address.	Pending A new SP 5.4 update by Intrado is aimed to correct this issue.
5/17/2017	VoIP Calls Plotting Incorrectly	Recognized in late April and early May 2017, the PSAPs have been receiving several VoIP calls which are plotting in the incorrect locations. After further research it was determined that it is because MapFlex is configured to plot the received Lat/Long. The problem is that these are not always maintained properly and that ideally the system should first choose to match with the GIS data based on the provided address. During the September 20, 2017 PSAP conference call, HT relayed there was confirmation that the Time Warner records were in fact passing through the Intrado FMCC.	Partially Resolved – the Lat/Longs are no longer being plotted in MapFlex due to a software release.
5/17/2017	Landline Calls Producing X/Y on calls	It was determined that for normal landline calls, the X/Y coordinates are being sent. The PSAPs have asked where these are being generated and why would they be sent for landline calls.	Intrado is looking into this (May - June 2017)
5/23/2018	Phase I & Phase II coverage area	Phase I calls received at the Kihei Maui PSAP are displaying a circular circumference area rather than a cone shaped directional coverage. Phase II calls are not plotting the COF meters correctly.	Pending
5/24/2018	Incorrect Addresses	MapFlex system began displaying incorrect addresses in the bubble display when an Address Point is right mouse clicked to see information by the PSAPs. However, the address in the data is still correct as shown on the left hand side.	Pending
6/27/2018	Moving Labels	It was brought up during the PSAP teleconference with Hawaiian Tel and Intrado that the Hawaii Fire Department submitted a trouble ticket regarding the parcel labels. When the base map is checked on for viewing the owner's names on the parcel layer, the names of some of the parcels will follow and leave their parcel as the map is panned following streets. This problem was also recreated at the Hawaii Police Department.	Pending

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STREET UTILITY CHECK

This is an ongoing project to correct the errors identified. A comparison of the raw CAD generated report from the Street Check Utility was performed between the Street Centerline GIS data on April 1, 2019 and April 30, 2019. There were no updates received for April, 2020.

Street Utility Check				
	First Report 06/01/13	3/31/2019	4/30/2019	Improvements/Corrections
Total Number of GIS Records	26,602	31,286	31,313	Increased by 27 records
Errors Identified				
Zero Errors	5,112	1	4	Increased by 3 records
Low > High Errors	3	0	1	Increased by 1 record
Mixed Parity Errors	1	0	0	No change
Changed Parity Errors	105	1	2	Increased by 1 record
Address Gap Errors	2,629	25	7	Decreased by 18 records
Address Overlap Errors	423	26	9	Decreased by 17 records
Flipped Link Errors	1,030	368	20	Decreased by 348 records
Total Errors	9,303	421	43	Decreased by 378 records

In addition to Akimeka's internal validation tools, Akimeka will continue to utilize the various CAD reports to further identify and correct the multitude of discrepancies in the GIS data. This is an ongoing and routine process which Akimeka has been using to improve the accuracy of the GIS data for Public Safety.

As a result of the GIS efforts within the military jurisdictional areas covered primarily by the RDC, the GIS data is undergoing several changes within the bases which will cause a fluctuation in the Street Check results, which is to be expected. Any discrepancies that are identified will be corrected in the following GIS deliverable.

TRITECH CAD ADDRESS POINT PROJECT

During the month of February 2018 after several months of discussion and testing, the Address Points were loaded into TriTech and moved into the HFD/EMS shared CAD. Since that time, HFD, EMS, and Akimeka have been working closely together to identify and update subaddress location for various complexes around Oahu. Several hundred new address points have been added to the GIS as a result of this collaboration.

During the month of March 2018, there were only a couple minor updates communicated and one issue identified with addresses within close proximity to the H1 freeway.

1. Akimeka ran an analysis and added routing information into more than 27,000 Address Points to resolve the geotolerance within TriTech.
2. During the month of April 2018, it was identified that the issue related to the H1 Fwy still remain and after investigation it was determined that a component within the SQL server for TriTech requires a potential update to allow for routing to be overridden based off of the Routing ID information.
 - a. A trouble ticket has been opened with TriTech who is further investigating the potential correction, outside of the GIS data.

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3. During the month of February 2019, HFD has requested assistance with labelling the mobile map.
 - a. Akimeka worked with HFD to develop a labeling scheme that showed complex names, addresses, and apartment numbers, without label duplication. The labeling scheme requires three additional shapefiles, which will be provided to HFD as part of every deliverable.

SPEED LIMIT UPDATES

Beginning in April 2017, and now that the Street Centerline data has achieved not only an above 98% synchronization rating but also a high degree of accuracy in the spatial accuracy, a new project to correct speed limits has begun. The project is beginning in Waimanalo and continuing in a counter-clockwise patten around the island of Oahu. The initial focus is on Highways, Freeways, and other major roads, but also not limited to additional corrections, especially those which are immediately identified to positively impact vehicle routing, etc.

All updates are shared directly with the PSAPs and the agency most affected (positively) is HFD since they actively use vehicle routing and this will assist in better CAD unit recommendations. During each GIS deliverable, a list of updates are being provided.

1. During the 2017 year, from April 2017 to December 2017, more than 4,200 street segments were updated to reflect posted speed limit restrictions from Waimanalo to Nanakuli.
2. During January 2018, 1,187 segments were updated in Maili, Nanakuli, and Kapolei.
3. Throughout the month of February 2018, 2,025 speed limits were updated in Ewa Beach, Makakilo, and Iroquois.
4. During March 2018, 3,743 street segments were updated across Makakilo, Kunia, Iroquois, Pearl Harbor, Waipahu, Wahiawa, Waialua, and Mililani.
5. During the month of April 2018, Akimeka held on the speed limit updates until HFD has had a chance to test out the TriTech and to ensure the routing is correct (see TriTech Address Points Project narrative above for further information on routing items).
6. During the month of May 2018, Akimeka continued the hold on the speed limit updates until HFD has had a chance to test out the TriTech and to ensure routing is correct (see TriTech Address Points Project narrative above for further information on routing items).
7. During the month of June 2018, Akimeka continued the hold on the speed limit updates until HFD has had a chance to test out the TriTech and to ensure routing is correct (see TriTech Address Points Project narrative above for further information on routing items).
8. During the month of July 2018, Akimeka continued the hold on the speed limit updates until HFD has had a chance to test out the TriTech and to ensure routing is correct (refer to TriTech Address Points Project narrative above for further information on routing items).
9. During the month of August 2018, Akimeka continued the hold on the speed limit updates until HFD has had a chance to test out the TriTech and to ensure routing is correct (refer to TriTech Address Points Project narrative above for further information on routing items).
10. During the month of September 2018, Akimeka resumed the speed limit updates. 1,081 street segments were updated across Waipio and Pearl City.
11. During the month of October 2018, Akimeka continued the speed limit updates. 1,094 street segments were updated across Aiea, McGrew Point (McGrew Pt) and Pearl City Peninsula (PC PEN).
12. During the month of November 2018, Akimeka continued the speed limit updates. 265 street segments were updated across Halawa and Moanalua Valley.
13. During the month of December 2018, Akimeka continued the speed limit updates. 1,978 street segments were updated across Hale Moku, Hokulani, Salt Lake, Mapunapuna, Radford Terrace, Halsey Terrace, Miller Park, Catlin Park, and Kalihi.

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14. During the month of January 2019, Akimeka continued the speed limit updates. 1,843 street segments were updated across Airport, Nuuanu, Downtown, Punchbowl, Makiki, Kakaako, Honolulu, and Ala Moana.
15. During the month of February 2019, Akimeka continued the speed limit updates. 956 street segments were updated across Manoa and McCully.
16. During the month of March 2019, Akimeka continued the speed limit updates. 518 street segments were updated across Waikiki, Fort DeRussy, and Kapahulu.
17. During the month of April 2019, Akimeka completed the speed limit updates. 2467 street segments were updated across Kaimuki, Kahala, Waialae, Aina Haina and Hawaii Kai.
18. During the month of May 2019, Akimeka updated speed limits on State highways. 453 segments were updated across Aiea, Airport, Downtown, Ewa Beach, Kalihi, Kapolei, Kunia, Nuuanu, Pearl City, Punchbowl, Waipahu and Waipio.
19. During the month of June 2019, no speed limit update requests were received. As of June 2019, the speed limit updates has been completed for all city streets that were previously 30 MPH, State streets that were previously 50 MPH, and other major roadways. If any requests for update are received in the future, Akimeka will update the speed limit(s).
20. No updates received in April 2020.

ROUTING ID UPDATES

Beginning in July 2019, all Address Points and Points of Interests will be assigned a Routing ID to ensure that routing to these addresses are correct. The project is beginning in Waimanalo and continuing in a counter-clockwise pattern around the island of Oahu.

All updates are shared directly with the PSAPs and the agency most affected (positively) is HFD since they actively use vehicle routing and this will assist in better CAD unit recommendations. During each GIS deliverable, a list of updates are being provided.

1. During the month of July, Routing IDs were assigned to seven thousand three hundred twenty eight (7328) Address Points and sixty eight (68) Points of Interests.
2. During the month of August, Routing IDs were assigned to eighteen thousand eight hundred ninety one (18,891) Address Points and one thousand two hundred twenty eight (1,228) Points of Interests across Aiea, Kaaawa, Kahaluu, Kailua, Kaneohe, MCBH and Waimanalo.
3. During the month of September, Routing IDs were assigned to fourteen thousand three hundred twenty seven (14,327) Address Points and seven hundred ninety (790) Points of Interest across Haleiwa, Kahuku, Laie, Wahiawa, Schofield, Wailua and Sunset.
4. During the month of October, Routing IDs were assigned to twenty four thousand nine hundred sixty seven (24,967) Address Points and one thousand fifty seven (1,057) Points of Interest across Waianae, Maili, Nanakuli, Kapolei, Makakilo and Ewa Beach.
5. During the month of November, Routing IDs were assigned to six thousand three hundred twenty one (6,321) Address Points and three thousand three hundred fifty four (3,354) Points of Interest across Makaha, Waianae, Nanakuli, Kapolei and Ewa Beach.
6. During the month of December, Routing IDs were assigned to seventeen thousand nine hundred thirty four (17,934) Address Points and two thousand fifty nine (2,059) Points of Interest across Kunia, Waipahu and Mililani.
7. During the month of January 2020, Routing IDs were assigned to fifteen thousand five hundred fourteen (15,514) Address Points across Waipahu and Pearl City.
8. During the month of February 2020, Routing IDs were assigned to five thousand three ninety (5,390) Address Points and one thousand five hundred ninety nine (1,599) across Aiea, Aliamanu, Airport, Hale Moku, Catlin Park, Halsey Terrace, Hokulani, Iroquois, Pearl City Peninsula and Pearl Harbor.

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9. During the month of March 2020, Routing IDs were assigned to ninety eight (98) Address Points and five thousand three hundred eighteen (5,318) Points of Interest across Aiea, Salt Lake, Airport, Kalihi, Nuuanu, Punchbowl, Makiki, Manoa, Kaimuki, Waialae, Kapahulu, Kahala, Aina Haina, and Hawaii Kai.
10. During the month of April 2020, Routing IDs were assigned to seven (7) Address Points and one thousand forty two (1042) Points of Interest across Aiea, Ala Moana, Honolulu, Kaimuki, Kapahulu, McCully and Waikiki.

HONOLULU EMS RESPONSE AREA

During the month of December 2017, EMS requested a high resolution map of the Honolulu Response Area which will likely be divided into 5 separate response areas to better support the EMS operations and ambulance response times.

1. With HPD's approval, Akimeka prepared a map of the requested area and provided to EMS on December 12, 2017.
2. Considering the additional response areas will certainly require the creation of additional ESZ/ESNs; HPD, EMS, and Akimeka will be coordinating so that the project can be mapped out on a timeline so that the changes can take place while maintaining an above 99% synchronization level between GIS, MSAG, and ALI.
3. An operational consideration has already begun a discussion, in that the military ESNs will likely be reallocated to a new numbering so that both civilian and military responses will have enough ESNs to support their individual operations.
4. During the first half of 2018, there will be further discussion on the creation of the new Response Areas, allocation of military ESNs, and create of new ESZs/ESNs.

During the month of October 2019, EMS requested an updated map of the Honolulu Medic Response Area which was divided based on drive time analysis. There are now 21 (twenty one) Medic Response Areas in Oahu.

5. With EMS's approval, Akimeka prepared a map of the requested area and provided to EMS on October 24, 2019.
6. A new medic station and Response Area called Salt Lake (MED23) was added to the database.
7. The Honolulu Response Area was divided into 5 separate response areas to better support the EMS operations and ambulance response times. The 5 response areas are: Charlie 1 (MED01), Baker 1 (MED11), Makiki (MED20), Metro 1 (MED02), and Pawaa 1 (MED05).
8. The Metro 1 Response Area was divided into two separate areas using Wilder Avenue and Dole Street as the dividing line.
9. The additional response areas will require the creation of additional ESZ/ESNs; HPD, EMS, and Akimeka will be coordinating so that the project can be mapped out on a timeline so that the changes can take place while maintaining an above 99% synchronization level between GIS, MSAG, and ALI.

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AMR-H

The American Medical Response Hawaii (AMR-H) Project is a joint venture by the Honolulu Emergency Services Department (HESD) to provide accurate address and location information to its other public safety agencies. This project is to ensure AMR-H is utilizing the same address and location information as the other HESD public safety agencies, and to ensure compliance with National 9-1-1 directives such as the FCC Docket 15-9 regarding location accuracy. The intent is to provide the same accurate location information to all the HESD public safety response agencies to help reduce response times to the 9-1-1 caller.

NOTE:

This work is performed under a separate contract.

This contract has lapsed and will be removed from this report pending further developments.

AMERICAN MEDICAL RESPONSE (AMR) HAWAII PROJECT

Since the start of the GIS deliverable schedule with AMR, there have been no reported issues or concerns. In order to open up discussion on any operational improvements via the GIS data, or to identify any updates that can be made, AMR and Akimeka held a brief conference call on December 5, 2017.

1. During the discussion there was overwhelming agreement that the data provided by Akimeka is working great for the dispatchers and first responders at AMR.
2. There were some areas that were discussed where searching for certain addresses will prompt a list of invalid addresses.
 - a. Through the discussion it was identified that the CAD system is aggregating various data sources since they are dispatching throughout the State. The data that Akimeka provides for the island of Oahu is working great, however since the neighbor islands are using various sources of data in different formats, the accuracy of that data is greatly in question and is likely not fully supportive of the search requirements in the CAD.
3. A final topic of discussion was on training for the AMR dispatcher. Joe from AMR who was on the call, took this as an action item to prepare training material for searching criteria, especially intersections. Akimeka volunteered that they can make themselves available to collaborate on the training material if needed.
4. There are no follow up calls scheduled at this time, however Akimeka informed that any issues or improvements identified will be looked at immediately and to send the requests as they are identified.

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4. E9-1-1 OAHU CIVILIAN DATABASE SYNCHRONIZATION

(Reference: NENA 71-501, Version 1.1 – NENA Information Document for Synchronizing Geographic Information System databases with MSAG & ALI)

As part of Akimeka's value added services, Akimeka conducted a database synchronization audit for the Oahu Civilian PSAP on April 1, 2020.

The database synchronization effort included comparing Oahu Civilian's 9-1-1 MSAG received from the 911 Database provider, Intrado on April 1, 2020, against the PSAP's 911 GIS Street Centerline data. A total number of **8,457** 9-1-1 MSAG records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on April 1, 2020 for the Oahu Civilian PSAP are reported below.

Database synchronization should be part of an ongoing and continuous process to ensure that the databases remain current and synchronized. Since neither database is static in nature, the synchronization process will never remain at a 100 percent match rate. It can be expected that the percentage will fluctuate by a small degree. As such, NENA's recommended minimum match rate is 98%.

The database synchronization process is essential to monitor and ensure the level of accuracy of the E9-1-1 databases and prepare for Next Generation 9-1-1 (NG9-1-1). As such, Akimeka will perform database synchronization audits on a quarterly basis as part of its ongoing maintenance process. Results of the database synchronization audit will be included and reported in the Monthly Status Report (MSR) accordingly.

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AUDIT SUMMARY RESULTS – 2020

9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS	Notes	As of July 1, 2019		As of October 1, 2019		As of January 1, 2020		As of April 1, 2020	
		9-1-1 MSAG Dated 7-01-19		9-1-1 MSAG Dated 10-01-19		9-1-1 MSAG Dated 1-01-20		9-1-1 MSAG Dated 4-01-20	
		# of Records	%	# of Records	%	# of Records	%	# of Records	%
Total 9-1-1 MSAG Records Reviewed		7,834		7,845		7,920		8,457	
Less: 9-1-1 MSAG Exception Records	(1)	28	0.4%	29	0.4%	29	0.4%	29	0.3%
Net 9-1-1 MSAG Records Eligible for Comparison		7,806		7,816		7,891		8,428	
Total 9-1-1 MSAG Records Match (9-1-1 MSAG – GIS Match – No Corrections Required)		7,798	99.9%	7,794	99.7%	7,881	99.9%	8,414	99.8%
9-1-1 MSAG -- GIS No Match - Minor Correction Required	(2)	7	0.1%	22	0.3%	8	0.1%	13	0.2%
9-1-1 MSAG Record With No Matching GIS Record	(3)	1	0.0%	0	0.0%	2	0.0%	1	0.0%
Total 9-1-1 MSAG Records No Match		8	0.1%	22	0.3%	10	0.1%	14	0.2%

Objective: NENA Recommended Match Rate = 98%

The two-way (MSAG – GIS) database synchronization audit for the City & County of Honolulu (Civilian PSAPs) was completed as scheduled. The match rate remained consistent from April 2020 with a 99.8% Match Rate to a 99.9% Match Rate as of January 2020.

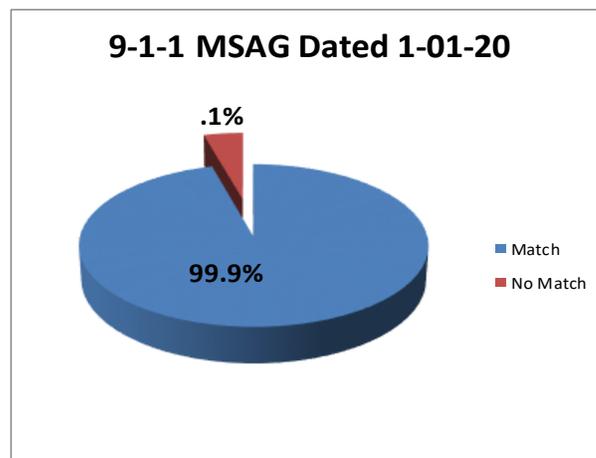
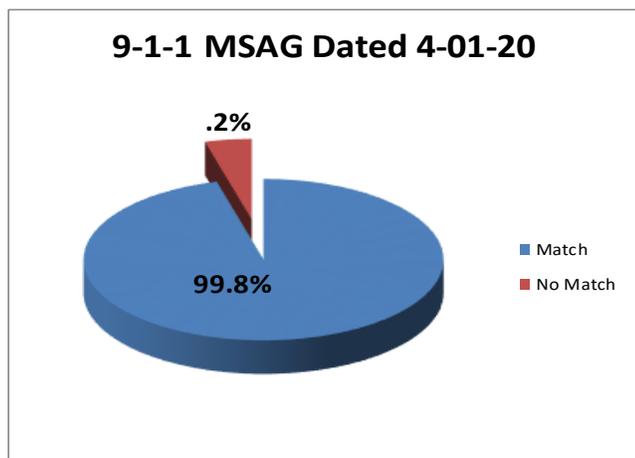
NOTES:

- (1) An MSAG Record that will not have a corresponding GIS Street Centerline Record but is required for the routing of E9-1-1 calls (i.e., Emergency Call Box, Foreign Exchange Records, Wireless Shell Records, etc.). No further action is required.
- (2) An MSAG Record that requires minor MSAG attention in 9-1-1Net to correct MSAG Records (i.e., Reassignment of an MSAG Community, modification of the Site Address Range, assignment of an ESN, performing a combine or insert of an existing MSAG Record, etc.).
- (3) An MSAG Record that does not have a corresponding GIS Record and will require additional research and validation. The GIS Section will assist with this effort.

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AUDIT SUMMARY RESULTS – APRIL 1, 2020 MSAG VS JANUARY 1, 2020 MSAG



Oahu Civilian's level of accuracy or 9-1-1 Match percentage remained consistent with a **99.8% as of April 1, 2020 compared to 99.9% as of January 1, 2020.**

- ❖ As agreed between HPD PMT and Akimeka, Akimeka would initially focus on the existing MSAG and GIS records to produce a match which will benefit the PSAP in the interim.
- ❖ This effort would not include the MSAG Communities project to implement the new MSAG Communities and associated GIS Street Centerlines. This would be handled as a separate project as identified and agreed to.
- ❖ As a result of the MSAG Community and Street Segment Sweep project, the majority of the remaining discrepancies resides in the Honolulu MSAG Community and will be addressed during the Phase V effort.
- ❖ The previously completed MSAG Communities as a result of the MSAG Community and Street Segment Sweep project are now considered part of ongoing maintenance.
- ❖ "MSAG - GIS Minor Corrections" increased (8 to 13) from January 2020 to April 2020. The non-match conditions are a result of MSAG records submitted in 9-1-1 Net not completed prior to the end of month. Low and high address ranges, odd/even combines, and street suffixes were adjusted in the MSAG to correspond with the GIS record. Although identified as a minor correction, customer telephone numbers (TNs) must be validated in 9-1-1Net prior to correcting the MSAG record to ensure the correction will not result in an orphan ALI Record or TN Fall-out.

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AUDIT SUMMARY RESULTS- APRIL 1, 2020 MSAG VS JANUARY 1, 2020 MSAG CONTINUED

- ❖ MSAG Record with No GIS Record” decreased (2 to 1) from January 2020 to April 2020. MSAG records with no matching record were due primarily to the verification of the MSAG records against multiple GIS databases to determine if the roads are existing within City and County of Honolulu.
- ❖ A constant effort to keep the databases synchronized and maintained are required to improve the level of accuracy of the E9-1-1 databases each time an MSAG or GIS record is “last modified”.
- ❖ Accurate location and GIS information will ensure proper dispatching and response in a timely manner for all Public Safety agencies.

All the hard work to maintain and synchronize the E9-1-1 databases is validated when a life and/or property is saved.

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INVALID MSAG STREETS AND ADDRESS RANGES – ESN X99 RECORDS

At the request of the Kauai County and Hawai'i County Chief of Police, Hawaiian Telcom, Inc. (HTI) provided all State of Hawai'i PSAPs and Akimeka, as the PSAP's agent, with access and visibility to the ESN x99 MSAG records which are "known" invalid streets and address ranges. Akimeka will be investigating and reporting on these ESN x99 MSAG records as a separate project and add-on to the Database Synchronization quarterly report.

Results of the Oahu Civilian data provided are as follows:

OAHU CIVILIAN	Invalid MSAG Records			
	9-1-1 MSAG Dated 01-01-20		9-1-1 MSAG Dated 04-01-20	
	Number of Records	% of Total Invalid MSAG Records	Number of Records	% of Total Invalid MSAG Records
ESN 199	0	0.0%	0	0.0%

These invalid MSAG records represent **0%** of the Total MSAG records for the City & County of Honolulu as of the April 1, 2020 MSAG. The individual ALI records associated with these records are provided below.

TN CRs are submitted by Akimeka when valid MSAG addresses are identified and validated against the GIS data. Akimeka will continue to investigate and report on these ESN 199 MSAG records as a separate project and add-on to the Database Synchronization quarterly report.

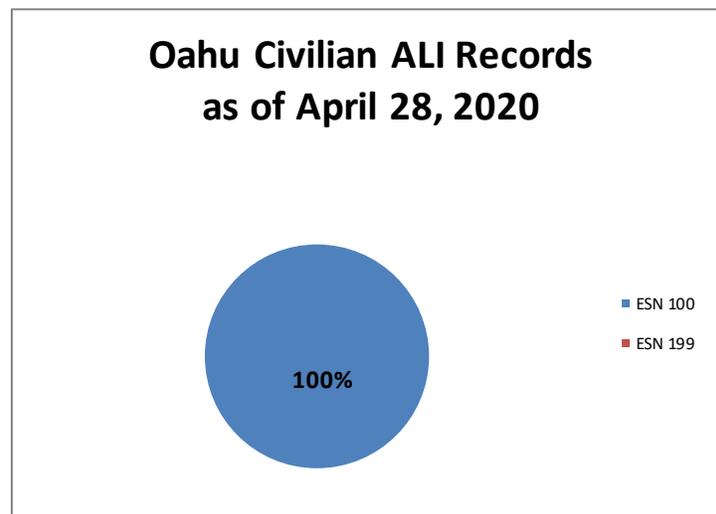
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AUTOMATIC LOCATION IDENTIFICATION (ALI) DATABASE DISCREPANCIES

As part of Akimeka's ongoing database synchronization efforts, Akimeka reviewed and summarized the ALI discrepancies by community in 9-1-1Net for the City & County of Honolulu (Oahu Civilian). As of **April 28, 2020**, there are **0** ALI records with an assigned ESN of 199, representing **0%** of the City & County of Honolulu (Oahu Civilian) total ALI records.

With Akimeka's continuing MSAG Community and Street Segment Sweep effort, the percentage of ESN 199 records may increase as low and high address ranges and new communities are verified.



The number of Ali records with an ESN 199 records remained consistent (0 to 0) from **January 2020 to April 2020**. The zero records were due primarily to Akimeka's effort to identify the invalid MSAG records and verify their correct locations against current County GIS data.

Although the ESN 199 is a "valid" MSAG utilized for overflow addressing, the voice portion of the 9-1-1 call will still be routed to the PSAP. However, the address information will present an invalid address/location to the dispatcher or a "No Record Found" condition which may affect the processing of the 9-1-1 response and/or cause confusion or delay during the dispatch of 9-1-1 resources to the caller's location.

The goal, which requires the cooperation among all service providers, is to clean-up all ESN 199 MSAG records to a valid City & County of Honolulu ESN 100 to ensure that all ALI records assigned to the City & County of Honolulu (Oahu Civilian) have an "MSAG valid address".