

Oahu Civilian E9-1-1 Status Report

October 1, 2019 – October 31, 2019

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1. PSAP OPERATIONS

9-1-1 CALL VOLUME CIVILIAN PSAPS – OCTOBER 2019

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	
2019	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
October	87,952	16,007	18.20%	68,849	78.28%	40.79%	37.49%	3,078	3.50%	18	0.02%	1,284	1.46%	14,452	16.43%	684	0.78%

9-1-1 CALL VOLUME CIVILIAN PSAPS – CALENDAR YEAR 2019

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	
2019	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	88,651	17,145	19.34%	68,155	76.88%	43.80%	33.08%	3,333	3.76%	18	0.02%	1,427	1.61%	15,027	16.95%	746	0.84%
FEB	81,871	16,620	20.30%	62,099	75.85%	43.70%	32.15%	3,127	3.82%	25	0.03%	754	0.92%	13,784	16.84%	697	0.85%
MAR	88,137	17,125	19.43%	67,804	76.93%	43.76%	33.17%	3,182	3.61%	26	0.03%	1,135	1.29%	13,461	15.27%	693	0.79%
APR	88,811	16,785	18.90%	68,855	77.53%	43.71%	33.82%	3,144	3.54%	27	0.03%	1,220	1.37%	14,154	15.94%	699	0.79%
MAY	96,789	18,167	18.77%	75,186	77.68%	44.07%	33.61%	3,417	3.53%	19	0.02%	980	1.01%	20,432	21.11%	574	0.59%
JUNE	86,913	16,600	19.10%	67,132	77.24%	42.54%	34.70%	3,164	3.64%	17	0.02%	1,179	1.36%	14,520	16.71%	624	0.72%
JULY	89,089	16,303	18.30%	69,543	78.06%	42.86%	35.20%	3,225	3.62%	18	0.02%	1,300	1.46%	14,085	15.81%	705	0.79%
AUG	92,120	17,060	18.52%	71,946	78.10%	43.29%	34.81%	3,086	3.35%	28	0.03%	971	1.05%	16,255	17.65%	679	0.74%
SEPT	87,722	16,167	18.43%	68,371	77.94%	42.87%	35.07%	3,158	3.60%	26	0.03%	1,202	1.37%	15,590	17.77%	742	0.85%
OCT	87,952	16,007	18.20%	68,849	78.28%	40.79%	37.49%	3,078	3.50%	18	0.02%	1,284	1.46%	14,452	16.43%	684	0.78%
NOV																	
DEC																	
YTD	888,055	167,979		687,940				31,914		222		11,452		151,760		6,843	
MON AVG	88,806	16,798	18.93%	68,794	77.45%	43.14%	34.31%	3,191	3.60%	22	0.03%	1,145	1.29%	15,176	17.05%	684	0.77%

NOTE:

- 911 Calls with No ALI for October 2019 = 0.02% - Statewide average for 2018 = 0.09%
- 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 – OCTOBER 2019

2019	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
October	76,892	87.42%	20,497	40,790	1,153	14,452	2,471	2.81%	110	58

2019	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
October	7,904	8.99%	20	80	1	0.00%	1	0

9-1-1 CALL VOLUME BY AGENCY – CALENDAR YEAR 2019

2019	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	76,658	86.47%	19,605	40,890	1,136	15,027	2,885	3.25%	127	35	8,311	9.37%	114	84	51	0.06%	50	2
FEB	71,410	87.22%	19,014	37,981	631	13,784	2,521	3.08%	86	35	7,212	8.81%	7	130	31	0.04%	30	2
MAR	75,630	85.81%	20,604	40,625	940	13,461	2,896	3.29%	121	44	8,865	10.06%	21	114	53	0.06%	53	0
APR	76,613	86.27%	20,309	41,091	1,059	14,154	3,391	3.82%	108	97	8,065	9.08%	11	100	43	0.05%	42	0
MAY	84,829	87.64%	20,869	42,752	776	20,432	3,044	3.14%	141	45	8,287	8.56%	15	109	55	0.06%	48	0
JUNE	75,356	86.70%	19,881	39,964	991	14,520	3,123	3.59%	136	63	7,758	8.93%	4	106	52	0.06%	48	0
JULY	77,352	86.83%	21,033	41,176	1,058	14,085	3,029	3.40%	137	50	7,948	8.92%	51	95	55	0.06%	54	0
AUG	80,472	87.36%	20,922	42,483	812	16,255	3,045	3.31%	110	57	7,885	8.56%	10	81	39	0.04%	39	0
SEPT	76,455	87.16%	19,595	40,196	1,074	15,590	2,850	3.25%	99	47	7,659	8.73%	13	76	16	0.02%	16	0
OCT	76,892	87.42%	20,497	40,790	1,153	14,452	2,471	2.81%	110	58	7,904	8.99%	20	80	1	0.00%	1	0
NOV																		
DEC																		
YTD	771,667		202,329	407,948	9,630	151,760	29,255		1,175	531	79,894		266	975	396		381	4
MON AVG	77,167	86.89%	20,233	40,795	963	15,176	2,926	3.29%	118	53	7,989	9.00%	27	98	40	0.05%	38	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								
911 Call Volumes								
PSAP	2018		2017		2016		2015	
Oahu Civilian	1,034,193	72.46%	1,022,818	73.60%	1,009,059	71.93%	1,019,402	70.94%
Hawaii County	206,648	14.48%	193,166	13.90%	205,412	14.64%	217,768	15.15%
Maui County	133,869	9.38%	123,685	8.90%	137,333	9.80%	142,952	9.95%
Kauai County	52,623	3.68%	49,902	3.60%	50,955	3.63%	56,874	3.96%
Total	1,427,333	100.00%	1,389,571	100.00%	1,402,759	100.00%	1,436,996	100.00%

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TEXT TO 911 OAHU CIVILIAN PSAPS – CURRENT MONTH – OCTOBER 2019

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 2019						
Month	Total	HPD	HFD	EMS	OS	911 (handled)
January	153	131	1	4	0	17
February	106	92	0	2	0	12
March	115	95	1	2	0	17
April	92	85	1	3	0	3
May	130	112	2	1	0	15
June	150	133	2	3	0	12
July	142	128	2	3	0	9
August	151	134	0	2	0	15
September	172	139	1	1	0	31
October	125	100	0	0	0	25
November						
December						
YTD	1,336	1,149	10	21	0	156
Monthly Avg.	133.6	114.9	1.0	2.1	0.0	15.6

NOTE:

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

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911 WIRELESS OAHU CIVILIAN PSAP TESTING – OCTOBER 2019

OAHU CIVILIAN - OCTOBER 2019						
Date	WSP	Sites Tested	Sectors Tested	Tested By:	Test Pass/Fail	Comments:
10/3/2019	Sprint	1	3	Oahu PSAP	Pass	
10/8/2019	Sprint	1	1	Oahu PSAP	Pass	
10/10/2019	Sprint	4	4	Oahu PSAP	Fail	Sprint Fail to show or call
10/15/2019	Sprint	1	1	Oahu PSAP	Fail	site not ready
10/29/2019	Sprint	4	4	Oahu PSAP	1/Pass 3/Fail	wrong sector information

NOTES:

- There were five (5) scheduled Wireless 911 Test for the Oahu Civilian PSAP in October 2019.
- 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 – OCTOBER 2019

OAHU CIVILIAN	9-1-1 TRANSACTIONS								
	Total	MSAG	ALI Submitted			Open ALI Discrepancy Records			Customer Addresses Affected
2019		MSAG (A)	TN CR (B)	ALI DR (C)	VoIP (D)	TNCR	ALI DR	VoIP DR	
JANUARY	178	24	154	0	0	403	0	0	683
FEBRUARY	177	1	176	0	0	123	0	0	176
MARCH	39	23	16	0	0	339	0	0	26
APRIL	217	20	197	0	0	355	0	0	2,344
MAY	217	18	199	0	0	767	0	0	3,634
JUNE	477	13	464	0	0	539	0	0	3,582
JULY	278	9	269	0	0	538	0	0	824
AUGUST	280	8	271	0	1	344	0	0	1,337
SEPTEMBER	222	13	208	1	0	274	0	0	1,529
OCTOBER	131	18	112	1	0	355	0	0	1,193
NOVEMBER									
DECEMBER									
TOTAL YTD	2,216	147	2,066	2	1				15,328
AVG PER MONTH	222	15	207	0	0				1,533

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 **131** 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 **1,193** customer ANI/ALI (telephone/address) records updated as a direct result.

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

One (**1**) ALI DR was submitted as the result of 9-1-1 call from a resident in Pearl City.

Akimeka processed one hundred five (**105**) TN CRs related to the Dispatchable Location Project during the current month.

OAHU CIVILIAN OPEN TELEPHONE RECORD (ALI) DISCREPANCY STATUS:

- **There are currently 355 Open TN CRs.**

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

- **Refer to chart in the next section "TNCR Current Status"**
- **There are no Open ALI-DRs as of October 31, 2019**
- **There is no Open VoIP DRs as of October 31, 2019**

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TNCR (TELEPHONE NUMBER CHANGE REQUEST) CURRENT STATUS – OCTOBER, 2019

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	355	1	188	166

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 – OCTOBER 2019

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 161 transactions submitted and 105 processed in October 2019.

Dispatchable Location			
2019	Common Name Place MSAG Address	TNCR*	Transactions
Quarter 4		Transactions Submitted	Processed**
Quarter 3 Carryover		5,101	4,423
October	Waikiki Grand Hotel, 134 Kapahulu Ave, Waikiki	70	3
	Honolulu Zoo, 151 Kapahulu Ave, Waikiki	41	4
	Moanalua Shopping Center, Valkenburgh St, Moanalua	0	39
	Diamond Head Shopping Center, 3045 Monsarrat Ave, Waikiki	0	6
	Waikiki Shell, 2805 Monsarrat Ave, Waikiki	0	16
	Kapahulu Shopping Center, 909 Kapahulu Ave, Kaimuki	15	2
	Kilohana Square, 1016 Kapahulu Ave, Kapahulu	0	1
	Kahala Mall Shopping Center, 1173 21st Ave, Kaimuki	35	34
November			
December			
Total		161	105
Total		5,262	4,528

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SPECTRUM (CHARTER) 9-1-1 VOIP DATABASE VERIFICATION PROJECT – OCTOBER 2019

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 – OCTOBER 2019

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) – OCTOBER 2019

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	10/25/19 To 10/31/19	Next Delivery 11/8/2019
		Corrected location name for four (4) records in Waimanalo
		Corrected spatial for one (1) record in Kaneohe
		Corrected location name for eight (8) records in Honolulu
		Corrected location name for five (5) records in Aiea
		Added apartment for one (1) record in Kaneohe
		Corrected building for one (1) record in Manoa
		Corrected location for three (3) records in Waialae
		Added routingID for four thousand, one hundred and forty (4140) records in Ewa Beach
		Added apartment for nine (9) records in Kaimuki
		Added location name for two (2) records in McCully
		Corrected locationa name for one (1) record in Waikiki
		Added building for three (3) records in Manoa
		Corrected location name for seven (7) records in Aina Haina
		Added new address point for one (1) record in Hawaii Kai
		Added apartment for two (2) records in McCully
		Added location name for twelve (12) records in Waikiki
		Corrected house number for one (1) record in Kalihi
		Corrected spatial for one (1) record in Waimanalo
		Corrected location name for ten (10) records in Kaneohe
		Corrected apartment for one (1) record in Hokulani
		Corrected location name for two (2) records in Kaimuki
		Corrected location name for four (4) records in Moanalua
		Corrected location name for eight (8) records in Kailua
		Added apartment for two (2) records in Kailua
		Corrected location name for four (4) records in Manoa
		Added apartment for four (4) records in Aina Haina
		Corrected street type for one (1) record in Kaneohe
		Added location name, apartment for two (2) records in Waikiki
		Corrected location name for two (2) records in Pearl City
		Corrected location name for two (2) records in Kakaako
		Corrected spatial for twenty-four (24) records in Kaimuki
		Added location name for two (2) records in Kaimuki

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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	10/25/19 To 10/31/19	Added location name for three (3) records in Kapahulu
		Corrected location name for one (1) record in Laie
		Corrected house number for four (4) records in Kailua
		Corrected location name for one (1) record in Nuuanu
		Corrected building for three (3) records in Kaimuki
		Corrected apartment for six (6) records in Hawaii Kai
		Added location name for two (2) records in Honolulu
		Corrected location name for one (1) record in Kalihi
		Corrected location name for three (3) records in Ewa Beach
		Corrected spatial for nine (9) records in Waikiki
		Corrected spatial for one (1) record in Kahala
		Corrected location name for two (2) records in Hawaii Kai
		Corrected locaiton name for one (1) record in Hawaii Kai
		Corrected location name for one (1) record in Waipahu
		Corrected house number for one (1) record in Waikiki
		Corrected spatial for two (2) records in Hawaii Kai
		Corrected apartment for one (1) record in Ewa Beach
		Corrected location name for two (2) records in Mililani
		Added building for two (2) records in Honolulu
		Added building for one (1) record in Hawaii Kai
		Corrected spatial for five (5) records in Kailua
		Added building for two (2) records in Kahala
		Added location name for two (2) records in Hawaii Kai
		Added apartment for one (1) record in Waimanalo
		Added location name for two (2) records in Ala Moana
		Corrected spatial for two (2) records in McCully
		Corrected house number for one (1) record in McCully
		Corrected location name for four (4) records in Waikiki
	10/11/10 To 10/24/19	Delivered 10/25/2019
		Corrected location name for three (3) records in Waimanalo
		Corrected apartment for one (1) record in Mililani
		Corrected spatial for one (1) record in Kapolei

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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)		
Address Points	10/11/10 To 10/24/19	Corrected spatial for four (4) records in Waianae
		Added apartment for two (2) records in Kaneohe
		Corrected location name for one (1) record in Laie
		Corrected routingID for three hundred and thirty-seven (337) records in Makakilo
		Corrected house number for one (1) record in Kapolei
		Corrected spatial for three (3) records in Maili
		Corrected spatial for two (2) records in Makiki
		Corrected location name for one (1) record in Waipio
		Added routingID for two thousand, eight hundred and seventy-one (2871) records in Ewa Beach
		Corrected apartment for two (2) records in Kahuku
		Corrected location name for two (2) records in Kapolei
		Corrected location name for four (4) records in Kaneohe
		Added apartment for fifty-eight (58) records in Mililani
		Corrected location name for three (3) records in Wahiawa
		Corrected location name for four (4) records in Waialua
		Corrected location name for one (1) record in McCully
		Corrected location name for one (1) record in Aina Haina
		Corrected location name for one (1) record in Maili
		Added new address point for one (1) record in Wahiawa
		Corrected routingID for one hundred and eighteen (118) records in Ewa Beach
		Corrected location name for one (1) record in Kahuku
		Corrected spatial for three (3) records in Kaneohe
		Corrected location name for two hundred and thirty-nine (239) records in Makakilo
		Corrected spatial for one (1) record in Honolulu
		Corrected location name for one (1) record in Airport
		Corrected location name for one (1) record in Kailua
		Corrected house number for one (1) record in Haleiwa
		Corrected apartment for one (1) record in Waipio
		Added routingID for one (1) record in Kaneohe
		Corrected location name for one (1) record in Sunset
		Corrected spatial for one (1) record in Waipio
		Added routingID for one hundred and fifty-four (154) records in Kunia
		Corrected location name for three (3) records in Pearl City

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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)		
Address Points	10/11/10 To 10/24/19	Corrected spatial for one (1) record in Mokuleia
		Corrected apartment, new AP for two (2) records in Kapolei
		Corrected location name for four (4) records in Mililani
		Corrected location name for six (6) records in Aiea
		Corrected location name for five (5) records in Waianae
		Corrected location name for three (3) records in Nuuanu
		Added building for eleven (11) records in Laie
		Added location name for four (4) records in Kapolei
		Added apartment for six (6) records in Makakilo
		Corrected location name for one (1) record in Haleiwa
		Added new address point for fifty-eight (58) records in Ewa Beach
		Added apartment for thirty-three (33) records in Mokuleia
		Corrected location type for two (2) records in Waimanalo
		Corrected location name for thirteen (13) records in Ewa Beach
		Added building for forty (40) records in Kapolei
		Corrected apartment for three (3) records in Waimanalo
		Corrected location for two (2) records in Wahiawa
		Corrected routingID for one (1) record in Kunia
		Added routingID for four thousand, six hundred and twenty (4620) records in Makakilo
		Added new address point for one (1) record in Kapolei
		Corrected building for fifteen (15) records in Ewa Beach
		Added routingID for three thousand, nine hundred and eighty-nine (3989) records in Kapolei
		Corrected location name for one (1) record in Hawaii Kai
		Added routingID for seven hundred and ninety (790) records in Kalaeloa
		Corrected location name for one (1) record in Waipahu
		Added building for sixteen (16) records in Waialua
		Corrected spatial for six (6) records in Sunset
		Corrected apartment for one (1) record in Ewa Beach
		Added apartment for four (4) records in Waipio
		Added apartment for fifty-two (52) records in Ewa Beach
Corrected spatial for five (5) records in Wahiawa		
Corrected location name for one (1) record in Waikiki		
Added apartment for four (4) records in Sunset		

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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)		
Address Points	10/11/10 To 10/24/19	Corrected spatial for two (2) records in Makaha
		Corrected spatial for one (1) record in Kailua
		Corrected location name for one (1) record in Kalihi
		Corrected spatial for three (3) records in Laie
		Corrected spatial for three (3) records in Haleiwa
		Added apartment for forty (40) records in Kapolei
		Corrected apartment for one (1) record in Makakilo
		Corrected location name for one (1) record in Makaha
		Corrected location name for two (2) records in Honolulu
		Corrected apartment for two (2) records in Laie
	10/1/19 To 10/10/19	Delivered 10/11/2019
		Corrected spatial for thirteen (13) records in Kalihi
		Corrected spatial for eight (8) records in Waianae
		Added PoliceID for four (4) records in Kakaako
		Added location name for three (3) records in Kaneohe
		Added PoliceID for three (3) records in Ewa Beach
		Added PoliceID for thirteen (13) records in Hawaii Kai
		Added routingID for sixteen (16) records in Makaha
		Added routingID, new AP for one (1) record in Waimanalo
		Added new address point for forty-one (41) records in Kapolei
		Added routingID for fourteen (14) records in Mokuleia
		Corrected spatial for one (1) record in Kakaako
		Added PoliceID for two (2) records in Iroquois
		Added apartment for four (4) records in Kahaluu
		Corrected routingID for twenty-three (23) records in Nanakuli
		Added PoliceID for thirteen (13) records in Kahala
		Added routingID for six (6) records in Laie
		Corrected location name, new AP for one (1) record in Hawaii Kai
		Added apartment for five (5) records in Kaneohe
		Corrected location name for four (4) records in Kaneohe
		Added PoliceID for six (6) records in Ala Moana
		Added routingID for two (2) records in Kahaluu
		Added routingID for three (3) records in Hauula

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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)		
Address Points	10/1/19 To 10/10/19	Added new address point for one (1) record in Waikiki
		Added routingID for seven (7) records in Kailua
		Corrected routingID for one (1) record in Kailua
		Corrected spatial, new AP for one (1) record in Ewa Beach
		Correcte routingID one (1) record in Makaha
		Corrected location name for forty-eight (48) records in Waianae
		Added routingID for twenty-six (26) records in Sunset
		Corrected spatial for one (1) record in Waipahu
		Added PoliceID for six (6) records in Makaha
		Added new address point for fifty-nine (59) records in Ewa Beach
		Added PoliceID for one (1) record in Airport
		Added PoliceID for three (3) records in Laie
		Added PoliceID for one (1) record in Nanakuli
		Added routingID for ten (10) records in Kapolei
		Added routingID for three (3) records in Kalaeloa
		Added PoliceID for two (2) records in Kalihi
		Added routingID for two thousand, one hundred and twenty-nine (2129) records in Waianae
		Added routingID for five (5) records in Waimanalo
		Added routingID for eleven (11) records in Kahuku
		Added routingID for thirteen (13) records in Haleiwa
		Added routingID for two thousand and seventy-eight (2078) records in Maili
		Added routingID for two thousand, one hundred and four (2104) records in Nanakuli
		Corrected ESN, added routingID, corrected location name, new AP for one (1) record in Nanakuli
		Added PoliceID for seven (7) records in Aina Haina
		Added routingID for six (6) records in Kaaawa
		Added PoliceID for two (2) records in Waimanalo
		Corrected routedID for one (1) record in Maili
		Corrected routingID for five hundred and sixty-three (563) records in Kapolei
		Corrected routingID for twenty-two (22) records in Maili
		Added routingID for one (1) record in Punaluu
		Added routingID, corrected address for one (1) record in Sunset
		Added PoliceID for two (2) records in Sunset
Corrected spatial for two (2) records in Kaneohe		
Added PoliceID for seventeen (17) records in Waikiki		

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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)		
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		

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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)		
Medic Districts		
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	10/25/19 To 10/31/19	Next Delivery 11/8/2019
		Corrected routingID for two (2) records in Mokuleia
		Corrected routingID for two (2) records in Waiialua
		Corrected spatial for two (2) records in Kakaako
		Corrected spatial for six (6) records in Waikiki
	10/11/10 To 10/24/19	Delivered 10/25/2019
		Added routingID for thirty-six (36) records in Mokuleia
		Added routingID for one hundred and nineteen (119) records in Sunset
		Added routingID for seventy-one (71) records in Kahuku
		Corrected name for one (1) record in Airport
		Added routingID for sixty-nine (69) records in Haleiwa
		Corrected spatial for one (1) record in Kaneohe
		Corrected spatial for one (1) record in Ewa Beach
		Added routingID for ninety-nine (99) records in Laie
		Added routingID for forty-nine (49) records in Kaaawa
		Added routingID for fifty-six (56) records in Punaluu
		Added routingID for thirty-four (34) records in Hauula
	10/1/19 To 10/10/19	Delivered 10/11/2019
		Added routingID for four hundred and twenty-six (426) records in Kaneohe
		Added routingID for eighty-three (83) records in Kahaluu

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MAPPING LAYERS UPDATED (PART IX)

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)		
Police Beats		
Police Districts		
Police Response Areas		
Police Stations		
Post Offices		
Schools		
Street Centerlines	10/25/19 To 10/31/19	Next Delivery 11/8/2019
		Corrected spatial for one (1) record in Wahiawa
	10/11/10 To 10/24/19	Delivered 10/25/2019
		New segment for three (3) records in Ewa Beach
		Corrected ESN for two (2) records in Waimanalo
		Corrected right MSAG community for two (2) records in Punchbowl
		Split segment for, corrected range for one (1) record in Waipahu
		Corrected ESN for two (2) records in Mililani
		Corrected ESN for one (1) record in Maili
		Corrected ESN for two (2) records in Kapolei
		Corrected range for two (2) records in Kapolei
		Split segment for, corrected range for two (2) records in Ewa Beach
	10/1/19 To 10/10/19	Delivered 10/11/2019
		Corrected spatial for one (1) record in Maili
		Corrected street name for twenty-seven (27) records in Kaneohe
Subdivisions		
Tow Jurisdictions		
Tsunami Evacuation Zones		
Tsunami Heights		
Waste Water Plants		
WSP Cell Sectors	10/25/19 To 10/31/19	Next Delivery 11/8/2019
		Added twenty (20) sectors per Verizon Wireless CRS
		Updated six (6) sectors per AT&T CRS
		Added six (6) sectors per AT&T CRS
		Updated eight (8) sectors per Verizon Wireless CRS

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MAPPING LAYERS UPDATED (PART X)

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)		
WSP Cell Sectors	10/11/10 To 10/24/19	Delivered 10/25/2019
		Updated twelve (12) sectors per Sprint CRS
		Added three (3) sectors per AT&T CRS
		Added eighteen (18) sectors per Verizon Wireless CRS
		Updated two (2) sectors per T-Mobile audit
	10/1/19 To 10/10/19	Delivered 10/11/2019
		Added forty-eight (48) sectors per Verizon Wireless CRS
		Added twelve (12) sectors per T-Mobile audit
		Updated seventy (70) sectors per Verizon Wireless CRS
		Updated three (3) sectors per AT&T CRS
		Added eleven (11) sectors per AT&T CRS
		Updated two (2) sectors per Verizon Wireless audit
		Updated thirty-four (34) sectors per T-Mobile audit
WSP Cell Towers	10/25/19 To 10/31/19	Next Delivery 11/8/2019
		Updated three (3) towers per Verizon Wireless CRS
		Added one (1) tower per Verizon Wireless CRS
		Updated one (1) tower per AT&T CRS
	10/11/10 To 10/24/19	Delivered 10/25/2019
		Added one (1) tower per Verizon Wireless CRS
		Updated one (1) tower per Verizon Wireless CRS
		Updated two (2) towers per Sprint CRS
		Updated one (1) tower per AT&T CRS
		Updated two (2) towers per Sprint audit
		Updated one (1) tower per T-Mobile audit
	10/1/19 To 10/10/19	Delivered 10/11/2019
		Added one (1) tower per AT&T CRS
		Updated fourteen (14) towers per Verizon Wireless CRS
		Added one (1) tower per Verizon Wireless CRS
		Updated twenty-eight (28) towers per T-Mobile audit
		Updated five (5) 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
10/25/2019	Delivered Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD.
10/25/2019	Delivered Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD.
10/25/2019	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.
10/14/2019	Delivered draft drivetime-based fire response areas to Honolulu Fire.
10/11/2019	Delivered Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD.
10/11/2019	Delivered Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD.
10/11/2019	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.

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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 October 2019

Hawaii County – October 8th, 2019 and October 22nd, 2019

Maui County – October 9th, 2019 and October 23rd, 2019

Kauai County – October 10th, 2019, and October 24th, 2019

Honolulu – October 11th, 2019, and October 25th, 2019

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 October, 2019.

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.

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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.
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.

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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.
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 October 2019.

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.

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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.

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.

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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 October 1, 2019.

The database synchronization effort included comparing Oahu Civilian's 9-1-1 MSAG received from the 911 Database provider, Intrado on October 1, 2019, against the PSAP's 911 GIS Street Centerline data. A total number of **7,845** 9-1-1 MSAG records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on October 1, 2019 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 – 2019

9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS	Notes	As of January 1, 2019		As of April 1, 2019		As of July 1, 2019		As of October 1, 2019	
		9-1-1 MSAG Dated 1-01-19		9-1-1 MSAG Dated 4-01-19		9-1-1 MSAG Dated 7-01-19		9-1-1 MSAG Dated 10-01-19	
		# of Records	%	# of Records	%	# of Records	%	# of Records	%
Total 9-1-1 MSAG Records Reviewed		7,802		7,833		7,834		7,845	
Less: 9-1-1 MSAG Exception Records	(1)	32	0.4%	31	0.4%	28	0.4%	29	0.4%
Net 9-1-1 MSAG Records Eligible for Comparison		7,770		7,802		7,806		7,816	
Total 9-1-1 MSAG Records Match (9-1-1 MSAG -- GIS Match -- No Corrections Required)		7,763	99.9%	7,792	99.9%	7,798	99.9%	7,794	99.7%
9-1-1 MSAG -- GIS No Match - Minor Correction Required	(2)	6	0.1%	7	0.1%	7	0.1%	22	0.3%
9-1-1 MSAG Record With No Matching GIS Record	(3)	1	0.0%	3	0.0%	1	0.0%	0	0.0%
Total 9-1-1 MSAG Records No Match		7	0.1%	10	0.1%	8	0.1%	22	0.3%

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 **October 2019 with a 99.7% Match Rate to a 99.9% Match Rate as of July 2019.**

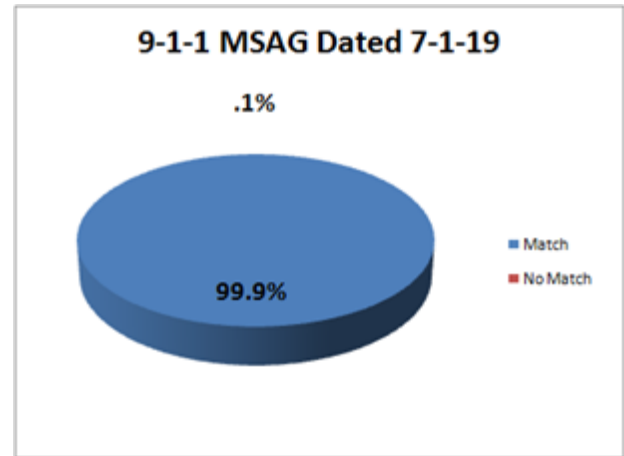
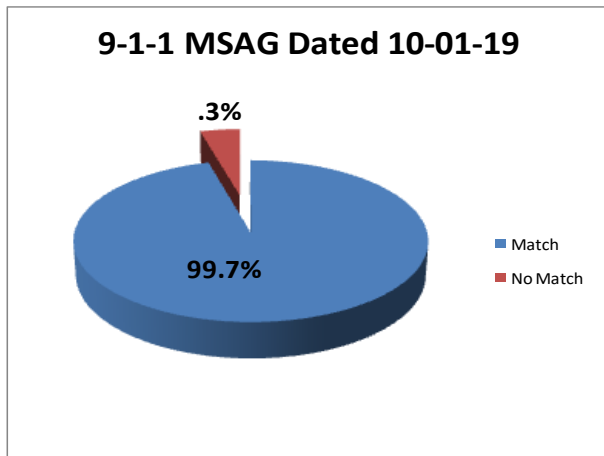
NOTES:

- (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 – OCTOBER 1, 2019 MSAG VS JULY 1, 2019 MSAG



Oahu Civilian's level of accuracy or 9-1-1 Match percentage remained consistent with a 99.7% as of October 1, 2019 compared to 99.9% as of July 1, 2019.

- ❖ 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 (7 to 22) from July 2019 to October 2019. The non-match condition 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 - OCTOBER 1, 2019 MSAG VS JULY 1, 2019 MSAG CONTINUED

- ❖ MSAG Record with No GIS Record” decreased (1 to 0) from July 2019 to October 2019. 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 01-01-19		9-1-1 MSAG Dated 04-01-19		9-1-1 MSAG Dated 07-01-18		9-1-1 MSAG Dated 10-01-19	
	Number of Records	% of Total Invalid MSAG Records	Number of Records	% of Total Invalid MSAG Records	# of Records	% of Total MSAG Records (Valid and Invalid)	# of Records	% of Total MSAG Records (Valid and Invalid)
ESN 199	0	0.0%	0	0.0%	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 October 1, 2019 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.

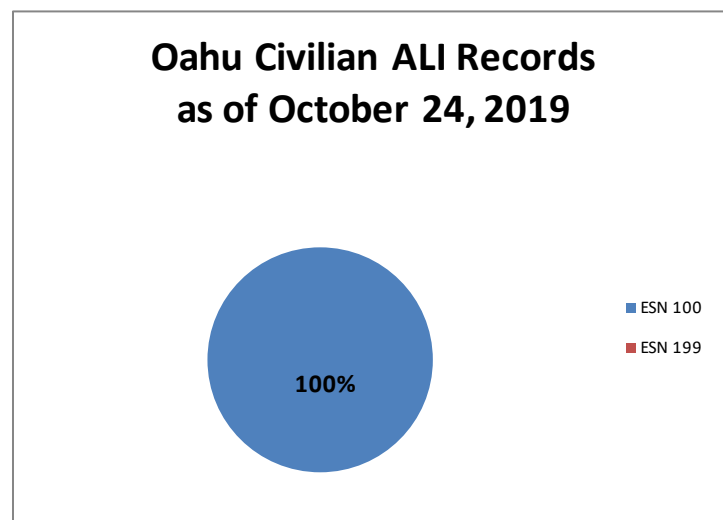
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AUTOMATIC LOCATION IDENTIFICATION (ALI) DATABASE DISCREPANCIES

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 **October 24, 2019**, 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 July 2019 to August 2019. 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".