




# LOS ANGELES FIRE DEPARTMENT

KRISTIN M. CROWLEY  
FIRE CHIEF

March 15, 2023

BOARD OF FIRE COMMISSIONERS  
FILE NO. 23-026

TO: Board of Fire Commissioners  
FROM:  Kristin M. Crowley, Fire Chief  
SUBJECT: CALL LOAD AND RESPONSE TIMES

FINAL ACTION:	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Corrections	<input type="checkbox"/> Withdrawn
	<input type="checkbox"/> Denied	<input type="checkbox"/> Received & Filed	<input type="checkbox"/> Other

## SUMMARY

As requested by the Los Angeles Fire Department (LAFD) Board of Fire Commissioners during the February 21, 2023 meeting, the FireStat Section is providing a report regarding the increased response times for LAFD resources.

## RECOMMENDATION

That the Board:  
Receive and file.

## DISCUSSION

FireStat Section staff analyzed the call load and response times between 2018 and 2022. The data was compiled from the publicly available metrics in the FireStatLA section on LAFD.org. The process of how each metric was calculated, as well as definitions of the terms used, is attached at the end of the report.

A series of graphs were created to help visualize the Department's various metrics. The metrics visualized are Count of Incidents, Call Processing Time, Turnout Time, Travel Time and Operational Response Time. Each graph shows the monthly averages of each metric for 2018, 2019, 2020, 2021 and 2022. Call Processing Time is measured as a single metric. EMS and Non-EMS Incidents are measured separately for Average Turnout Time, Average Travel Time, Average Operational Response Time, and the Count of Incidents. In addition, a graph showing the average Operational Response Time for Critical ALS Incidents was also created.

From the graphs, an increase is observed in both the number of incidents as well as the response times for both EMS and Non-EMS Incidents. In particular, there is a sharp increase in Travel Time and Operational Response Time in 2022, compared to previous years. It is difficult to pinpoint a single factor that caused these increases, as there are

multiple factors involved in an incident that can determine response times. A few possible causes of the increase in response times include staffing challenges, the effects of the pandemic, and the increasing call load and traffic within the city.

**CONCLUSION**

Board report prepared by Senior FireStat Analysts Anthony Guerrero and Son Htet, FireStat LA Section.

Attachments

## Attachment 1: LAFD RESPONSE TIME METRICS DEFINITIONS

The following are definitions for terms used in the analysis. The definitions are also provided on the charts where relevant.

### LAFD Operational Response Time:

The time interval that starts when first contact is made (either through 911 or the fire dispatch center) and ends when the first Standard Unit arrives on-scene.

### LAFD Call Processing Time:

The time interval that starts when the call is created in CAD by a Fire Dispatcher until the initial Fire or EMS unit is dispatched. Call Processing Time is measured as a single metric; not separately for EMS and Non-EMS.

### Turnout Time:

The time interval between the activation of station alerting devices to when the first responders have put on their PPE, are aboard apparatus and en-route (wheels rolling). Both station alarm and en-route times are required to measure this for each unit that responds. Turnout time is calculated for each unit dispatched to each incident.

### Travel Time:

The time interval that begins when the first Standard Unit is en-route to the incident and ends upon arrival of any of the Standard Units first on scene. This requires one valid en-route time and one valid on-scene time for the incident. Travel time can differ considerably amongst stations. Many factors, such as traffic, topography, road width, public events and unspecified incident locations, may impact travel time.

### Incident Count:

The number of incidents that result in one or more LAFD units being dispatched, regardless of record qualification.

### Qualified Data:

Only qualified data is used to calculate the Fire Department Call Processing Time, Turnout Time, and Travel Time. Qualified data meets the following criteria:

- Data with negative values or values greater than 24 hours are removed if it involves computed time variables (call processing, turnout and travel times)
- Occasionally, multiple time stamps can occur due to multiple button presses. The time stamp recorded with the first button push will be used for the analysis.
- Non-emergency responses are removed. Only emergency responses are included.
- Airport and Port resources (Fire Stations 80, 110, 111, and 114) are excluded because they are not dispatched through the LAFD CAD system.
- Turnout time measurement is restricted to QTR (in quarters) dispatch status.
- The highest and lowest 1% of computed time values (Operational Response Time, Call Processing Time, Turnout Time, and Travel Time) are removed or “trimmed” from the available data each month. This is done to protect the calculated value from the influence of outliers.

### ALS Critical Incidents:

This incident type includes all Advanced Life Support (ALS) incidents that are marked for immediate dispatch. This includes most types of critical incidents.

### Structure Fire Incidents:

This incident type indicates that a building or structure is reported to be actively burning. This category is calculated on a quarterly basis due their frequency of occurrence.

### Standard Unit:

A standard unit has the capacity or equipment to administer the full suite of lifesaving services. Other units are only deployed in special circumstances and lack either the capacity or equipment to deliver the full suite of lifesaving services. These specialized units are not considered under any current metric examined by the LAFD.

### Fire Department Call Processing Time:

The analysis we are currently reporting does not include the initial 911 call time stamp or the transfer time interval of that 911 call time stamp to the LAFD. Around 25% of calls that come in to the dispatch center are not from 911. Therefore, we use the creation time to start calculating the call processing time so we include all incoming calls. This metric is shown on the City-wide report.

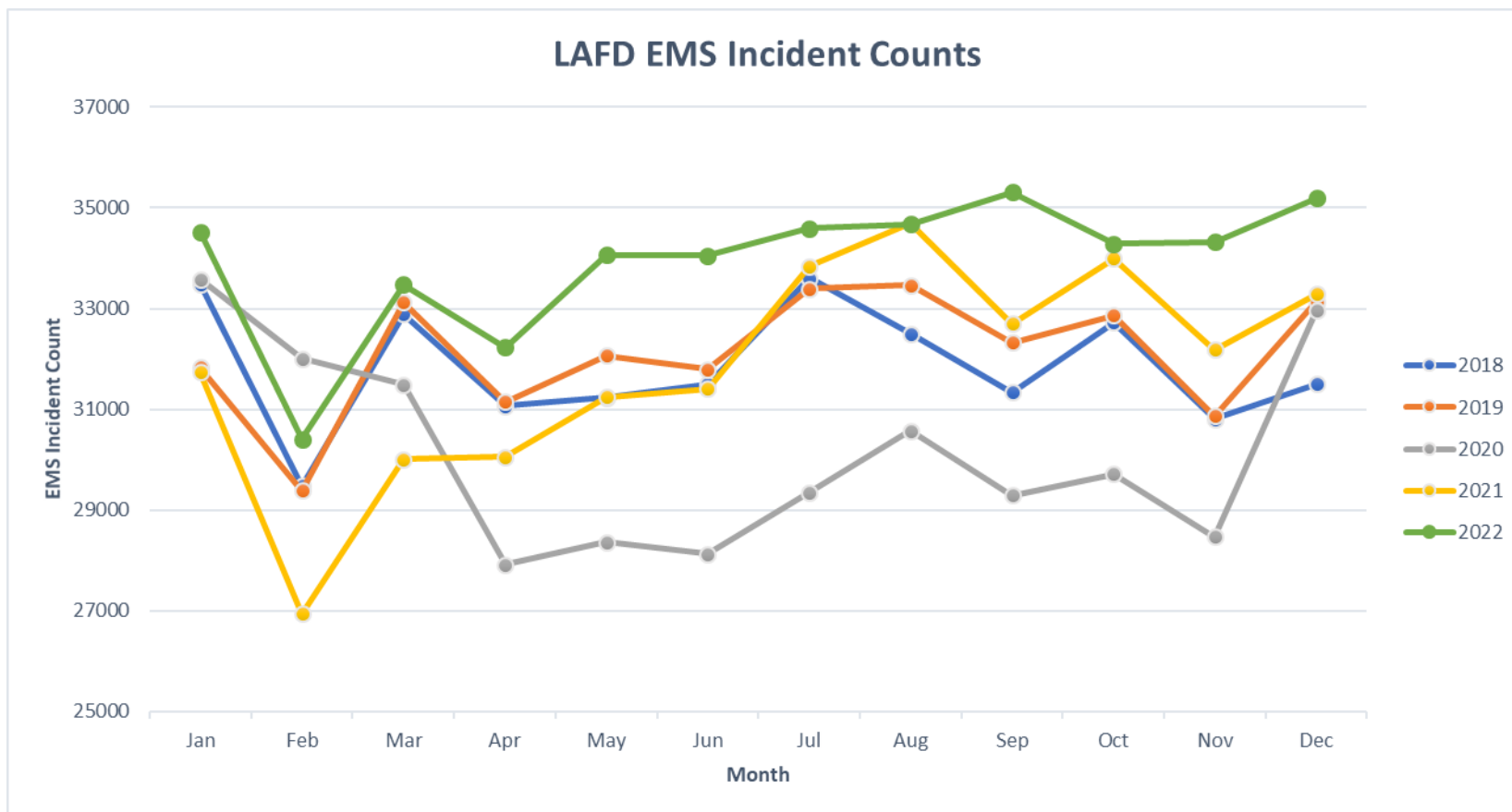
### **EMS:** Emergency Medical Service

**PPE:** Personal Protective Equipment, EMS category includes incident types that require minimum PPE and a Turnout Time of 60 seconds. The majority of these incidents do not require fire suppression tools and equipment to mediate. The NON-EMS category includes incidents that require full PPE and a Turnout Time of 80 seconds. The majority of these incidents require fire suppression tools and equipment to mediate and may result in patients that require medical evaluation and treatment.

**Outliers:** An outlier is a data point that is outside defined norms and is inconsistent with and further away from other data points. Values that are far away from the mean are likely a result of a separate type of error – coding problems, transcription errors, equipment failures, etc. The presence of outliers can distort the “true picture” of the measure of interest. Using outliers may lead to incorrect or misleading conclusions.

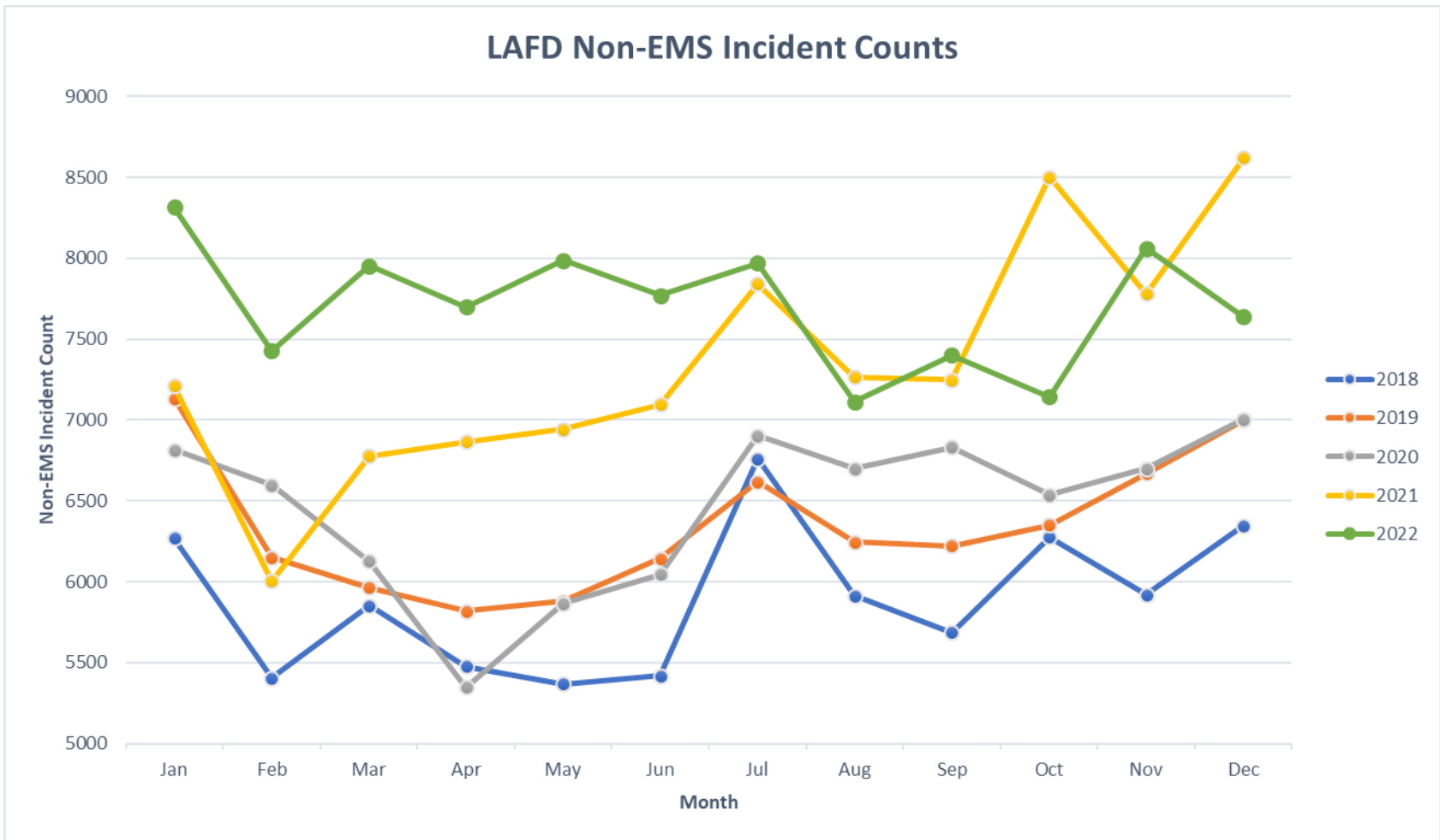
## Attachment 2: Graphs and Charts

### Incident Counts



**Incident Count:** The number of incidents that result in one or more LAFD units being dispatched, regardless of record qualification.

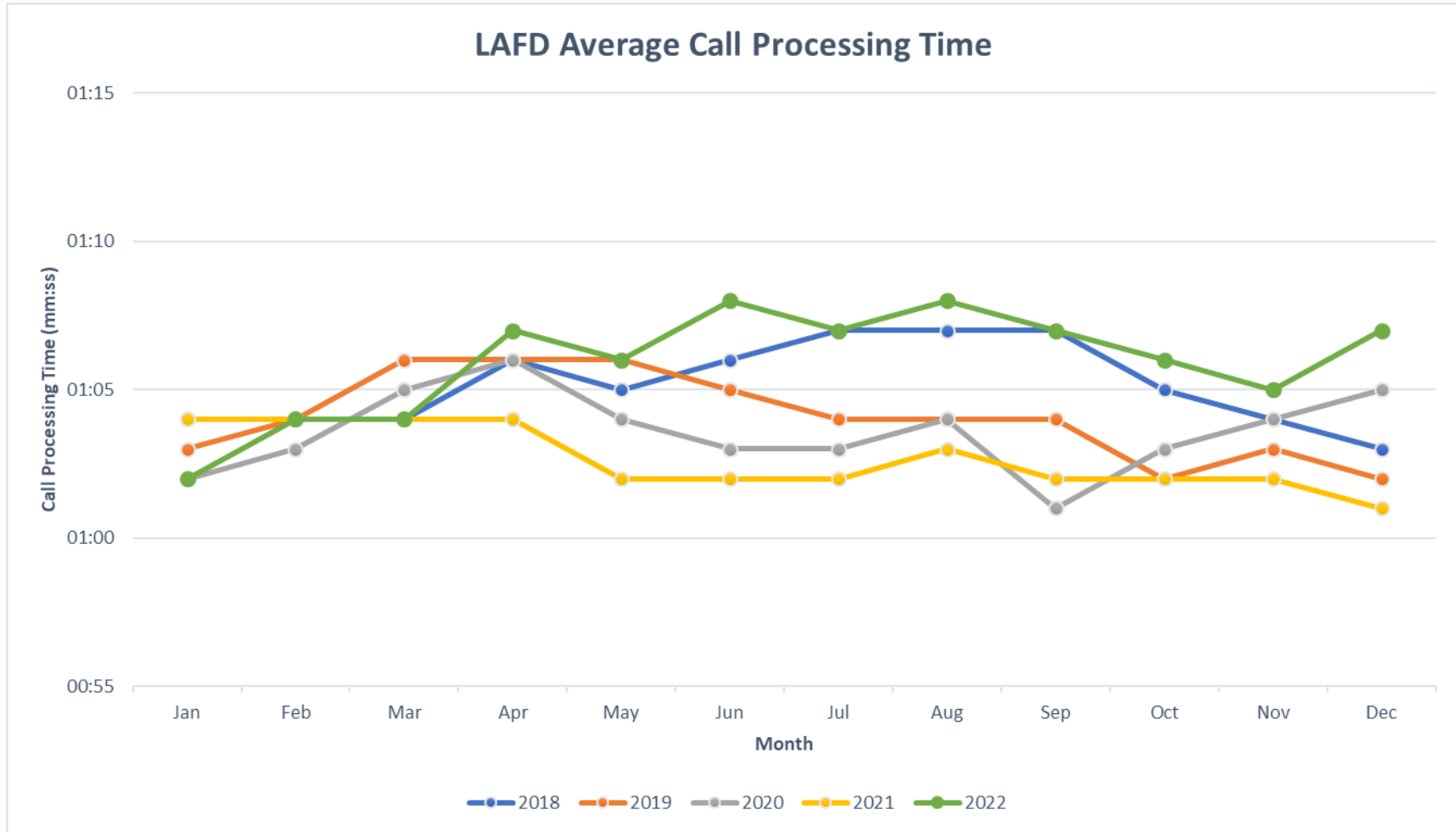
The **EMS** (Emergency Medical Service) category includes incident types that require minimum PPE and a Turnout Time of 60 seconds. The majority of these incidents do not require fire suppression tools and equipment to mediate.



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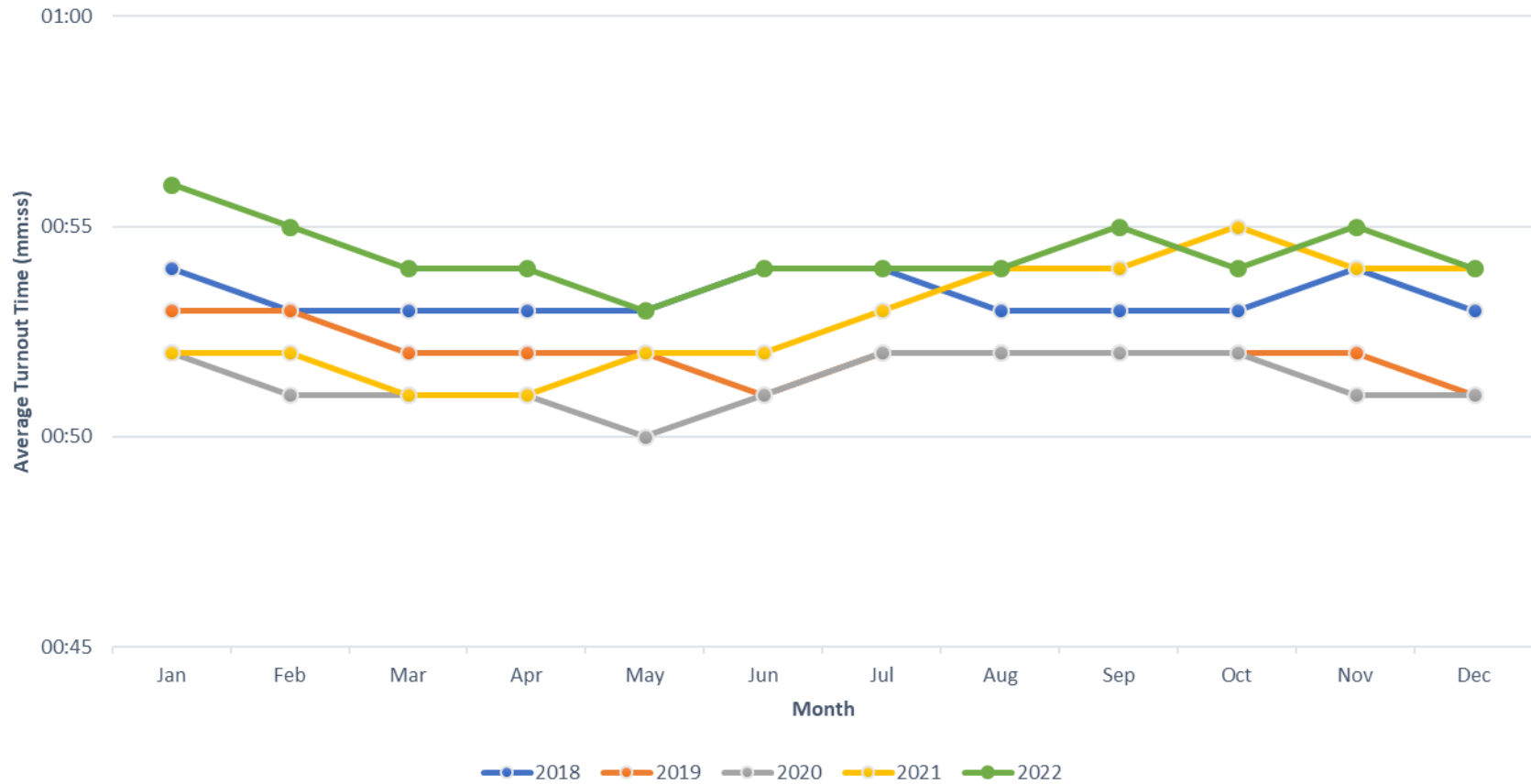
The **Non-EMS** category includes incidents that require full PPE and a Turnout Time of 80 seconds. The majority of these incidents require fire suppression tools and equipment to mediate and may result in patients that require medical evaluation and treatment.

## Response Times



**LAFD Call Processing Time:** The time interval that starts when the call is created in CAD by a Fire Dispatcher until the initial Fire or EMS unit is dispatched.

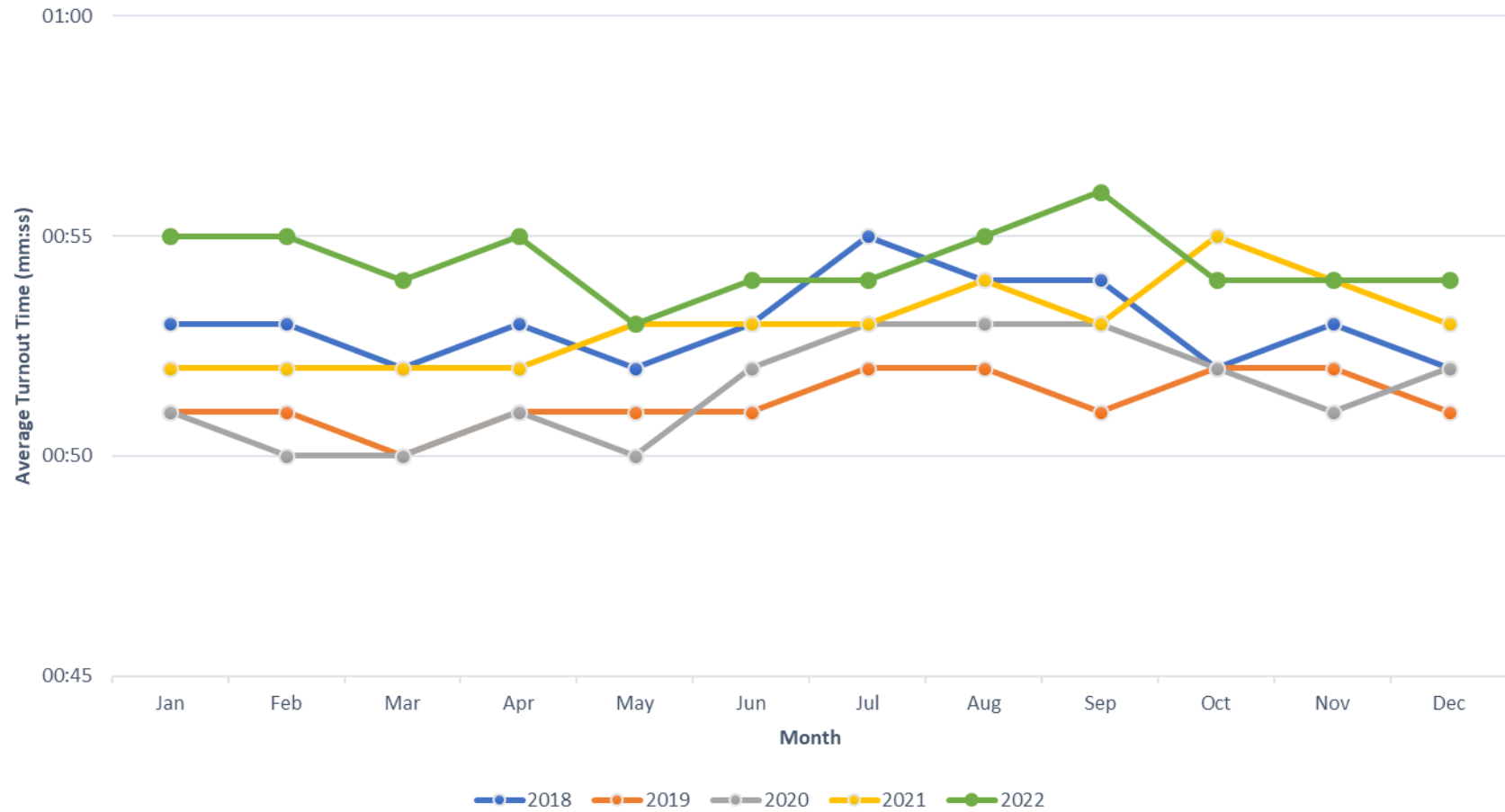
### LAFD Average Turnout Times - EMS Incidents



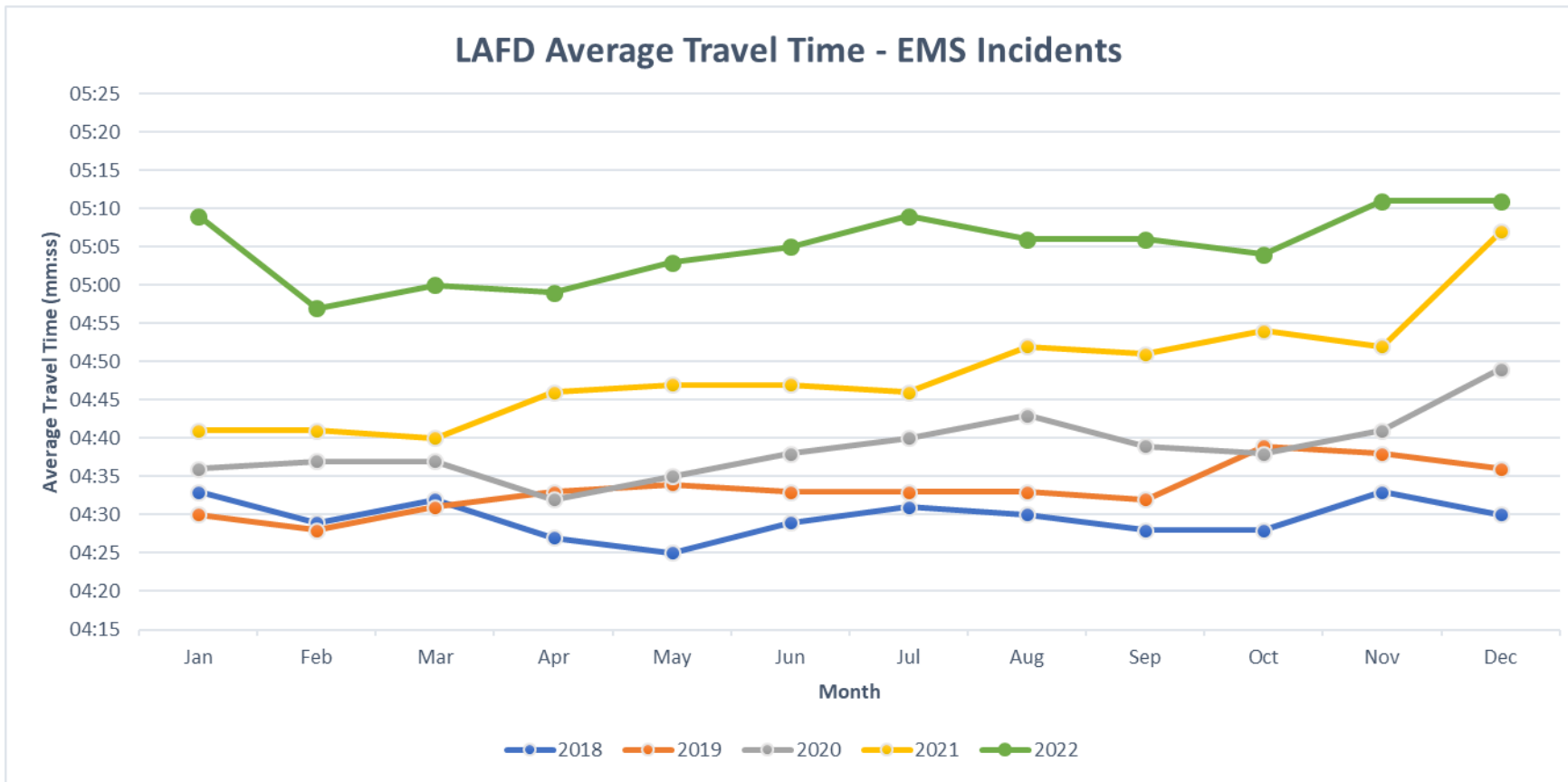
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## LAFD Average Turnout Times - Non-EMS Incidents



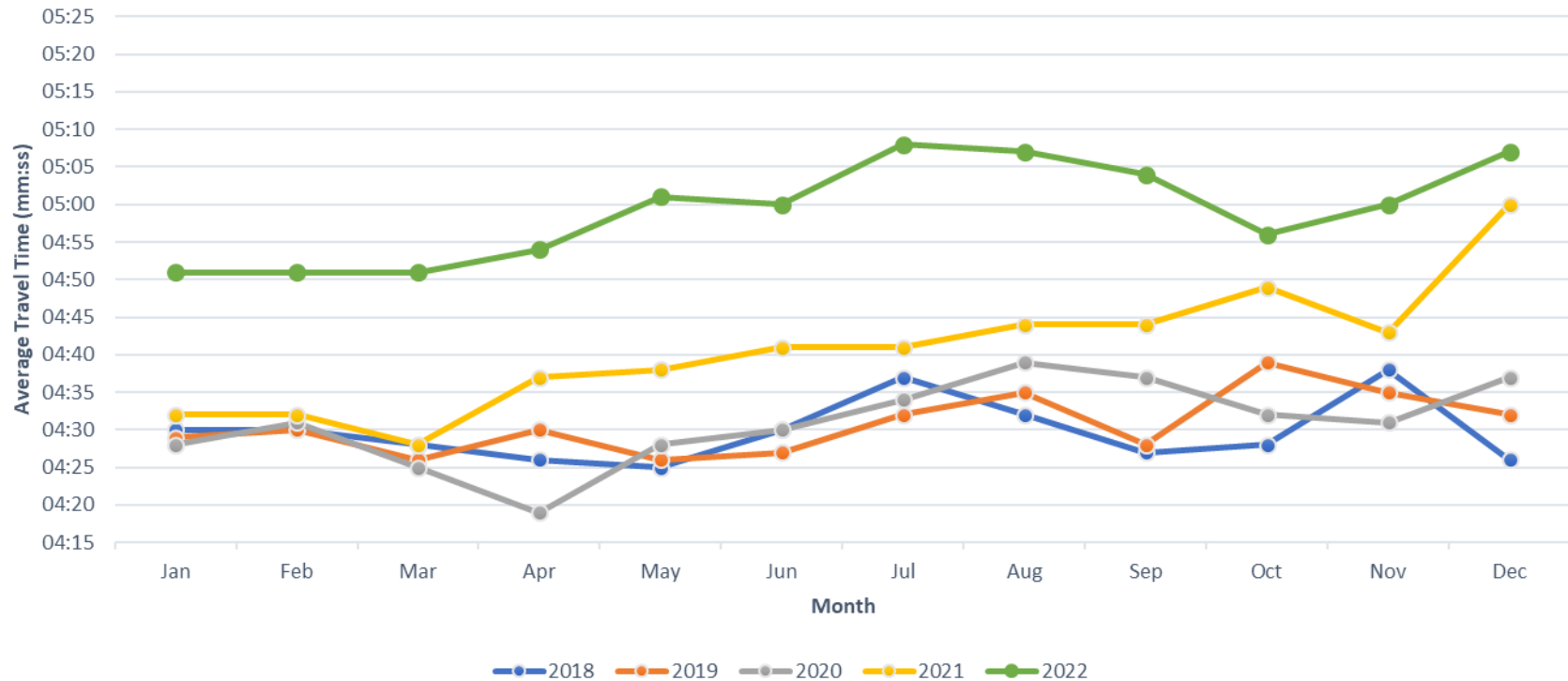
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**Travel Time:** The time interval that begins when the first Standard Unit is en-route to the incident and ends upon arrival of any of the Standard Units\* first on scene. This requires one valid en-route time and one valid on-scene time for the incident. Travel time can differ considerably amongst stations. Many factors, such as traffic, topography, road width, public events and unspecified incident locations, may impact travel time.

\* **Standard Unit:** A standard unit has the capacity or equipment to administer the full suite of lifesaving services. Other units are only deployed in special circumstances and lack either the capacity or equipment to deliver the full suite of lifesaving services. These specialized units are not considered under any current metric examined by the LAFD.

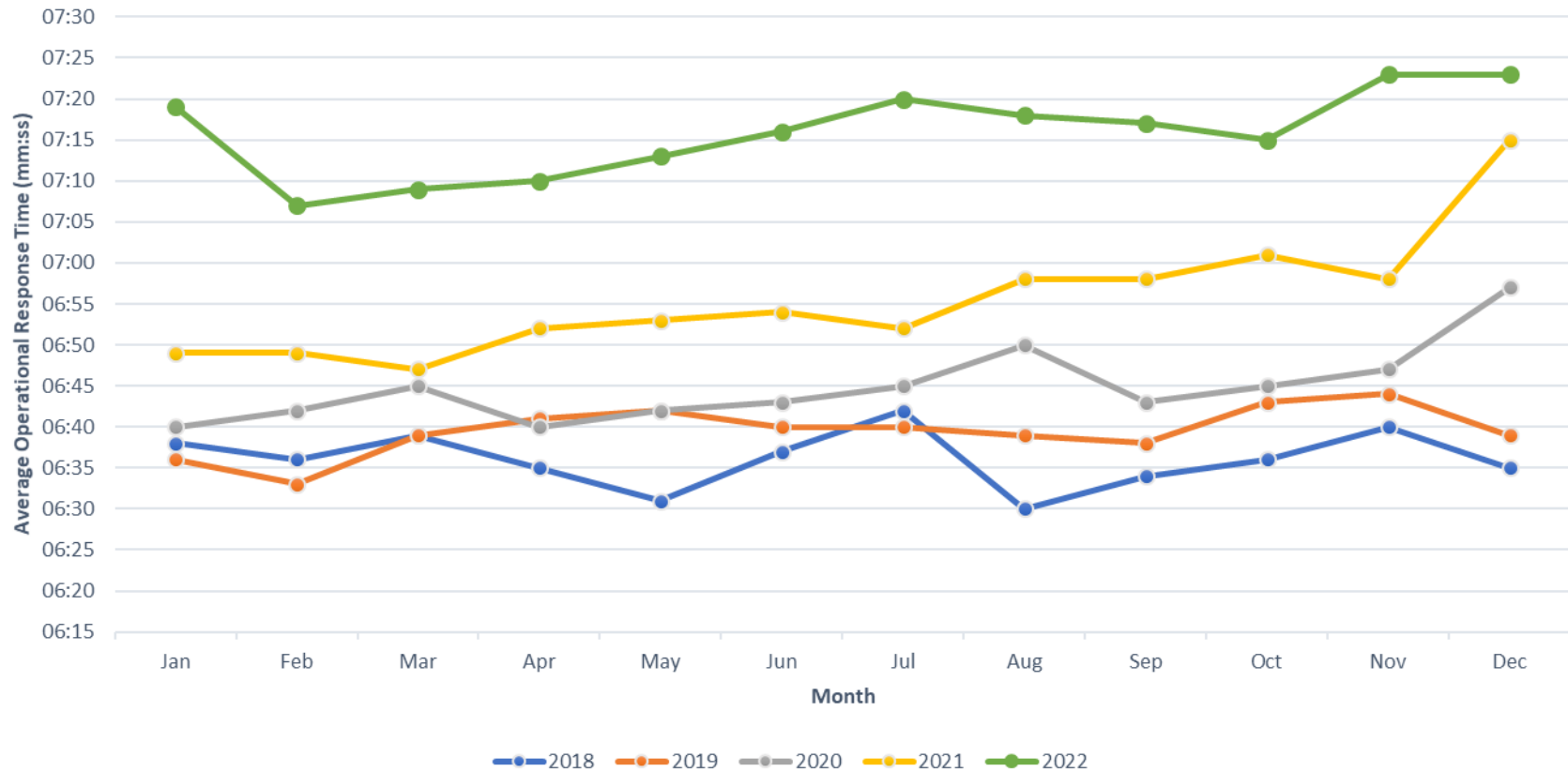
## LAFD Average Travel Time Non-EMS Incidents



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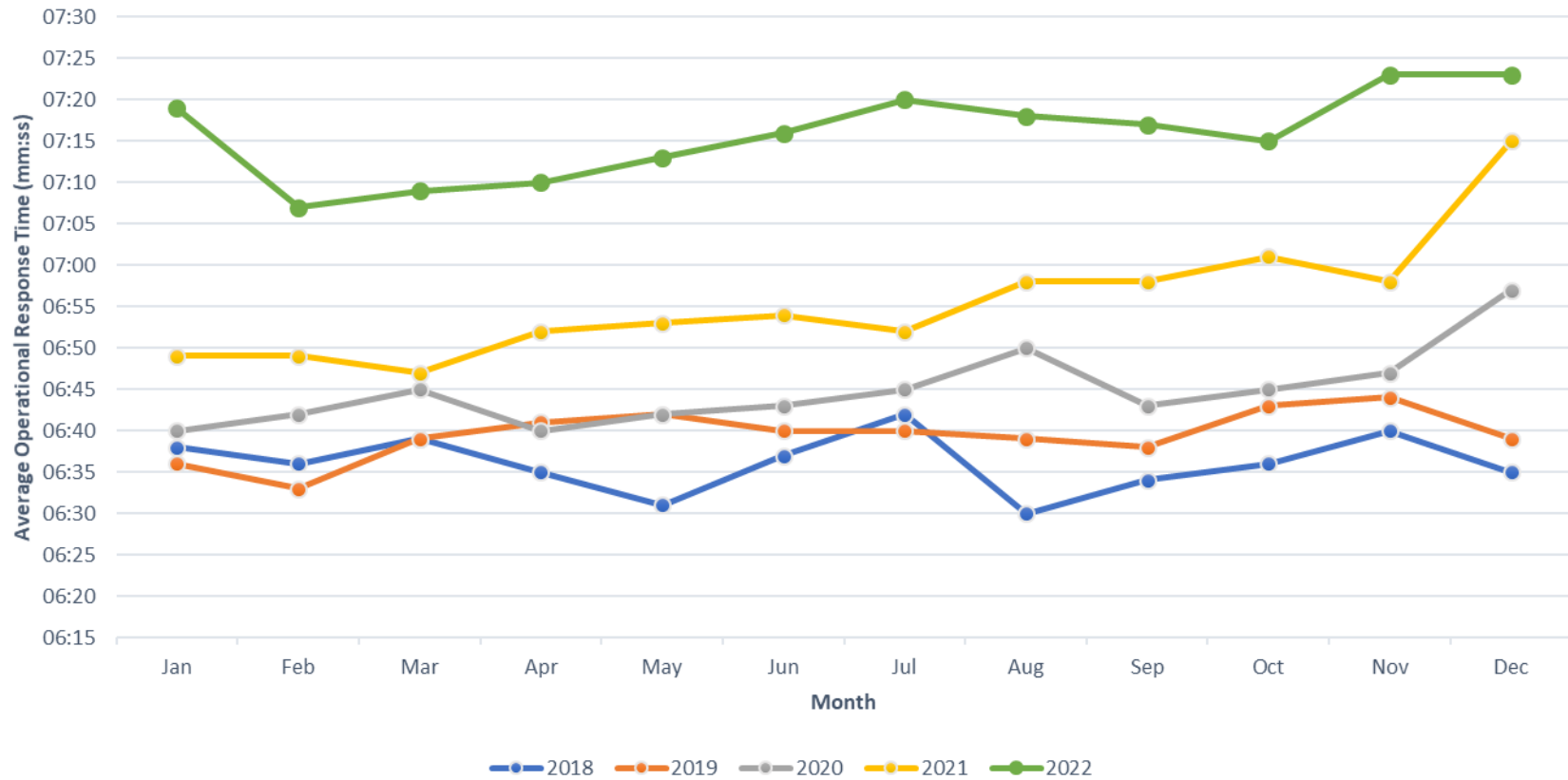
## LAFD Average Operational Response Time - EMS Incidents



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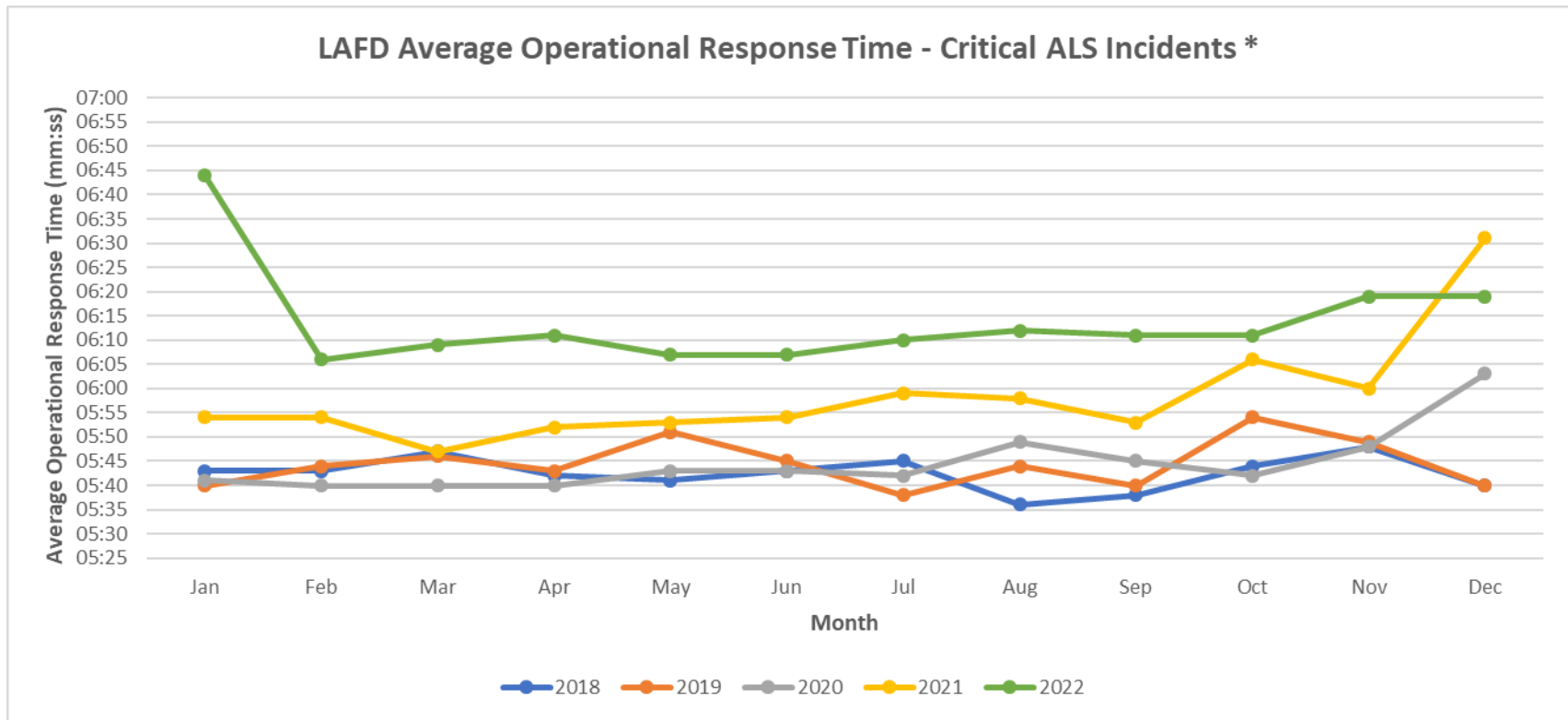
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## LAFD Average Operational Response Time - Non-EMS Incidents



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