



# Informational Bulletin

## CAD Update Project

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Approved By: Mark S. Ciarrocca, Acting Fire Rescue Chief

This informational bulletin describes the culmination of changes after almost two years of work and effort brought forth by multiple agencies within our jurisdiction to include, Fire & Rescue, Emergency Communications, and GIS to update our CAD system to increase efficiency.

There has been an ongoing effort to create some necessary changes to our methodology and process of receiving, dispatching, and responding to calls for service. It is imperative that we always seek to provide the most effective and efficient service to the citizens of our county and surrounding jurisdictions. Part of ensuring this occurs is a constant evaluation of our processes and procedures and making changes when deemed necessary.

### Single Layering CAD:

The current CAD design incorporates the usage of separate layers and incident numbers for EMS and Fire incidents. The new configuration merges the EMS and Fire layers within CAD. This will eliminate the need for two reports for each incident dispatched where suppression and EMS units respond. Additionally, the call processing process is streamlined by eliminating unnecessary steps thus increasing efficiency.

### Unit Identifications:

Beginning on the roll-out date of May 2, 2019 all fire-rescue and communications personnel will utilize the Metropolitan Washington Council of Governments, "COG", designations when vocalizing units via radio transmissions.

This is being done in an effort to minimize confusion of both ECC and field personnel when operating on multi-jurisdictional events. An example of this would be the following,

*"Fauquier to Engine 1103 you are responding to assist Engine 2404 with an auto crash".*

*"Engine 1103 is direct on assisting Engine 2404".*

An additional change in unit identifiers will be noticed when referring to EMS transport units. The designation of "M1 etc." which has historically been used to denote the unit as a career staffed unit, will no longer hold true.

When "like" units are responding from the same station location they would be defined by the following unit designators.

- M1101, M1101-B, M1101-C

Should two units respond from any one station and not be similar the following would occur.

- M1101, A1101, SK1101

If a station has two like fire units (like identified, Wagon and Engine although performing the same function are differently identified) the same methodology would apply.

The types of ancillary vehicles has been reduced to the following in CAD:

Utility 11XX – Typically a pick-up truck style vehicle

Response 11XX – Typically a car or SUV

Command 11XX – A pick-up truck or SUV with a fixed command module installed

Plow 11XX – A Utility with a plow attached

When multiple of the same type vehicle exists in a station, the Bravo designator will be used.

- U1103, U1103-B

If a Response vehicle is ALS equipped and responding with an ALS provider, the unit should markup “*Response 1102 with ALS*”.

### **Unit Identifications: Unit Dispatching**

In an effort to eliminate any delays in the appropriate unit response to mitigate emergencies we will be dispatching by unit, not companies.

To ensure this in fact works as designed we ask that each station have “on-duty” and “off-duty” apparatus. What this means is that each station will have one of each type unit available from their respective stations, on-duty at any one point in time.

Example: Company 7 has Engine and Wagon 1107, only the first out unit will be “on-duty” in CAD.

This does not mean at the time of dispatch that crews cannot elect to take the “off-duty” unit if station policy dictates the response of the other unit.

What is accomplished by having only one like unit “on-duty” in CAD is the elimination of a delay in response to second and subsequent calls for service. For example, if E1110 is dispatched for a fire alarm and then a second call for service is received, the next closest available Engine will be automatically dispatched.

When this occurs the first due station will be given a courtesy tone so that personnel, if available, can respond in an additional unit from that station. Should they be able to mitigate the event, they can place the next available company in service.

If a station has enough personnel available to specifically staff multiple like units they may do so and mark both units “on-duty” with communications. Should personnel elect to do this, it is imperative that when the unit is unstaffed the unit is taken back “off-duty” so to not create a delay in appropriate unit response to calls for service.

It is important to note the difference in terminology when referring to in/out of service vs. on/off duty. ECC personnel use the terminology of on/off duty when making units available in CAD, while field personnel typically make the statement of in/out of service.

The easiest way to distinguish between the forms of terminology is as follows.

Out of Service: used when a unit is temporarily out of service for a period of time to accomplish a task or replenish equipment after a call for service. ECC personnel may make a note of this and not place the unit “off duty” in CAD. Typically no longer than an hour or two but less than 12 hours. When marking a unit in/out of service personnel may elect to verbalize this via radio transmissions.

Out of Service - Long term: used when a unit is out of service for a period of time that will exceed 12 hours for such reasons as mechanical issues or scheduled maintenance. ECC personnel should place the unit “off duty” in CAD. When marking Out of Service – Long term personnel should make contact via telephone to the ECC shift supervisor and advise of the status.

Off Duty: terminology is utilized when a unit is not staffed (EMS units), the second out unit (Engines) or out of service – long term as described above. When marking units on/off duty personnel should make contact via telephone to the ECC shift supervisor and advise that the unit will be on/off duty. Adding to an event in an off duty unit should be done over the radio.

It is imperative that personnel be vigilant when maintaining the status of units within their respective stations. Failure to do so could result in an extended delay in dispatching or response of adequate or appropriate resources to mitigate an emergency call for service.

### **Time and Distance: Response Areas**

Through funding provided by the Volunteer Fire and Rescue Association and approved by the Chiefs group we were able to purchase a computer aided, response area redistricting program which calculates by several factors, which company should be first and subsequently due to each area of the county.

This program has been calculated multiple times taking into account the different factors that impact response such as distance, speed limit, road type/conditions, and call processing delays. Through these calculations we have formulated an acceptable product which all agencies have agreed to.

Personnel will notice changes in response areas as we move forward. GIS is working to provide each station with an updated streets list that reflects any changes to response areas. Station personnel should utilize these documents to ensure their respective first due mapping is as up to date as possible.

Also, in relation to response areas, a new methodology has been utilized when drawing and numbering the numerous response areas. The first due companies will now find themselves as the center/focal point of their area and the box areas will be numbered accordingly by the below chart. The general the concept used was to divide each company's first due area into quadrants generally aligned with north-south main roadways.

- Upper left quad is the 10 series.
- Upper right quad is the 20 series.
- Lower left quad is 30 series.
- Lower right quad is 40 series.
- Boxes in a town are 00 series.
- Box number for firehouse location is 00.  
The first two digits of the box are the station number (e.g. 04) then the next is the quad number (e.g. 1,2,3,4) then the sequence number (e.g. 1,2,3,4,5,6,7,8,9). Typically the sequence number gets bigger the further away from the station you get.

The interstate boxes will be the 50 series with the sequence number being odds for eastbound and evens for westbound (e.g. Box 0351 would be Company 3's first due, I66 east bound lanes). Boxes sequentially going away from station get bigger.



## **Time and Distance: Run Orders**

In conjunction with changing response areas, personnel will notice a change to the run order assignments. Whereas a station might have been third due to an area, they may now find themselves second or fourth or subsequently further due in the new response order. Station personnel will need to remain vigilant in recognizing these changes during dispatch to ensure they are not in deviation from their preassigned roles and responsibilities of their new arrival order.

There may be times with bordering response areas that mutual aid partners are recommended as first due. While this may hold true given the time and distance they are from the area, we still have an obligation to ensure adequate service is provided to that area. When this occurs the first due station will be given a courtesy tone so that personnel, if available, can respond from that station. As a general rule, companies can respond to any event in their first due area if available to do so. Recognizing the out of jurisdiction unit is recommended as the closer unit, the in county units should add to the event and respond along with the out of county units.

Example: In Box 1116, E1409 is recommended as the closest engine. If it is a single engine response, Company 11 will be toned to be notified of the event and E1409 has been dispatched. Company 11 can add on to the event at their discretion.

Similarly, we need to ensure an adequate response to all areas of the county to ensure the safety of our personnel and citizens. Knowing this, and that surrounding jurisdictions may operate by different policy and procedures, we will typically maintain at least three in county units on all major incidents such as structure fires. Per normal operating procedures, should a unit which is arriving to the scene of an event deem it necessary to request additional units or specific units they may do so.

CAD will be programmed with the 1<sup>st</sup> – 40<sup>th</sup> due companies.

## **Procedural/Process Concerns and Complaints:**

As stated in the opening of this bulletin, a constant evaluation of all county processes is an absolute necessity to ensure its success. In an effort to provide an avenue for those wishing to express a concern or complaint over the processes associated with this bulletin we have created a survey which can be accessed from the county website at the link below.

[https://www.surveymonkey.com/r/FCFR-Communciations\\_Survey\\_2019](https://www.surveymonkey.com/r/FCFR-Communciations_Survey_2019)

Personnel should be professional in their submission to this survey while also being as descriptive as possible so that the concerns can be addressed adequately.

Questions regarding this bulletin should be directed to Battalion Chief Dale Kidwell or Assistant Chief Mark Ciarrocca.