

# **ELECTRONIC MESSAGE CENTERS**

# ELECTRONIC MESSAGE CENTERS (EMC)

- ✘ A variable-message sign that utilizes computer-generated messages or some other electronic means of changing copy. These signs include displays using incandescent lamps, LEDs, or LCDs. (ISA Sign Terms)



# ITEMS TO CONSIDER

- Message Hold Times
- Transition Method & Duration
- Brightness



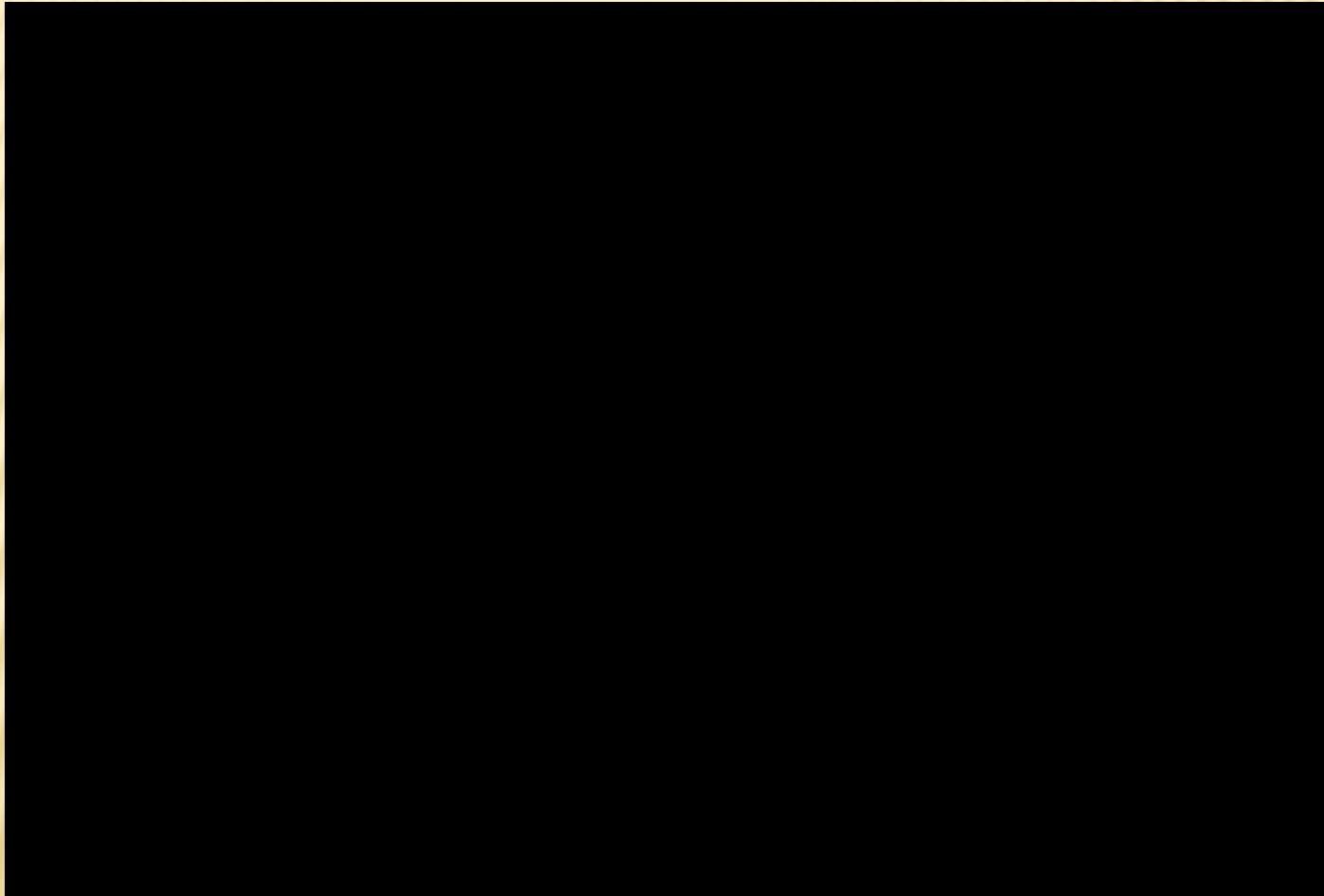
# MESSAGE HOLD TIME

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- Hold Time- How long a message must remain fixed in place before it can transition to another message.
- Safety Concerns?
  - + Shorter hold times (4-10 seconds) do not lead to more accidents (thesignfoundation.org)
- Business Impact:
  - + The shorter the hold time, the more beneficial for the user/business
  - + Provides the ability to communicate sequential messages (directions, event times, etc.)”

# 30 SECOND HOLD TIME

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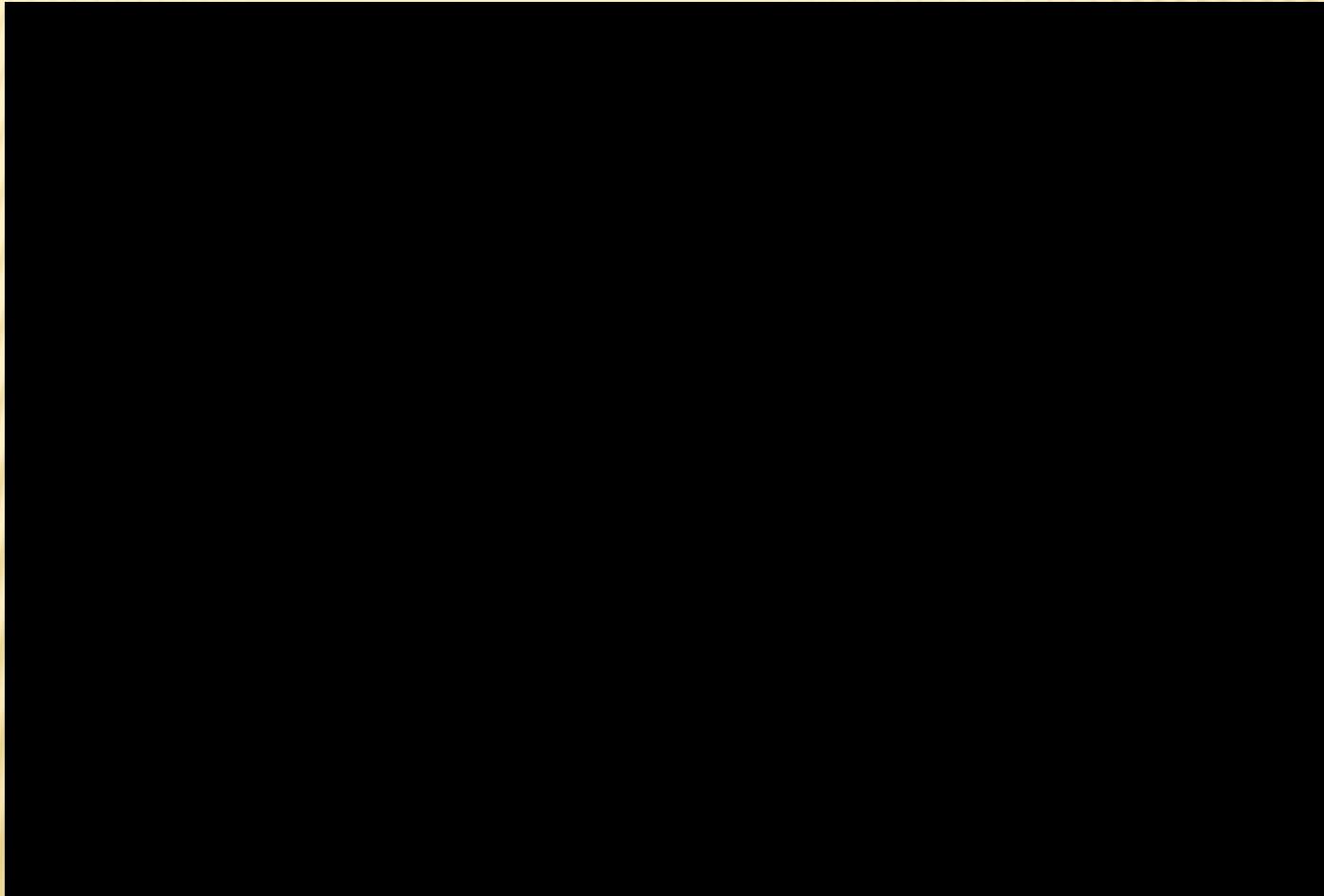
# 10 SECOND HOLD TIME

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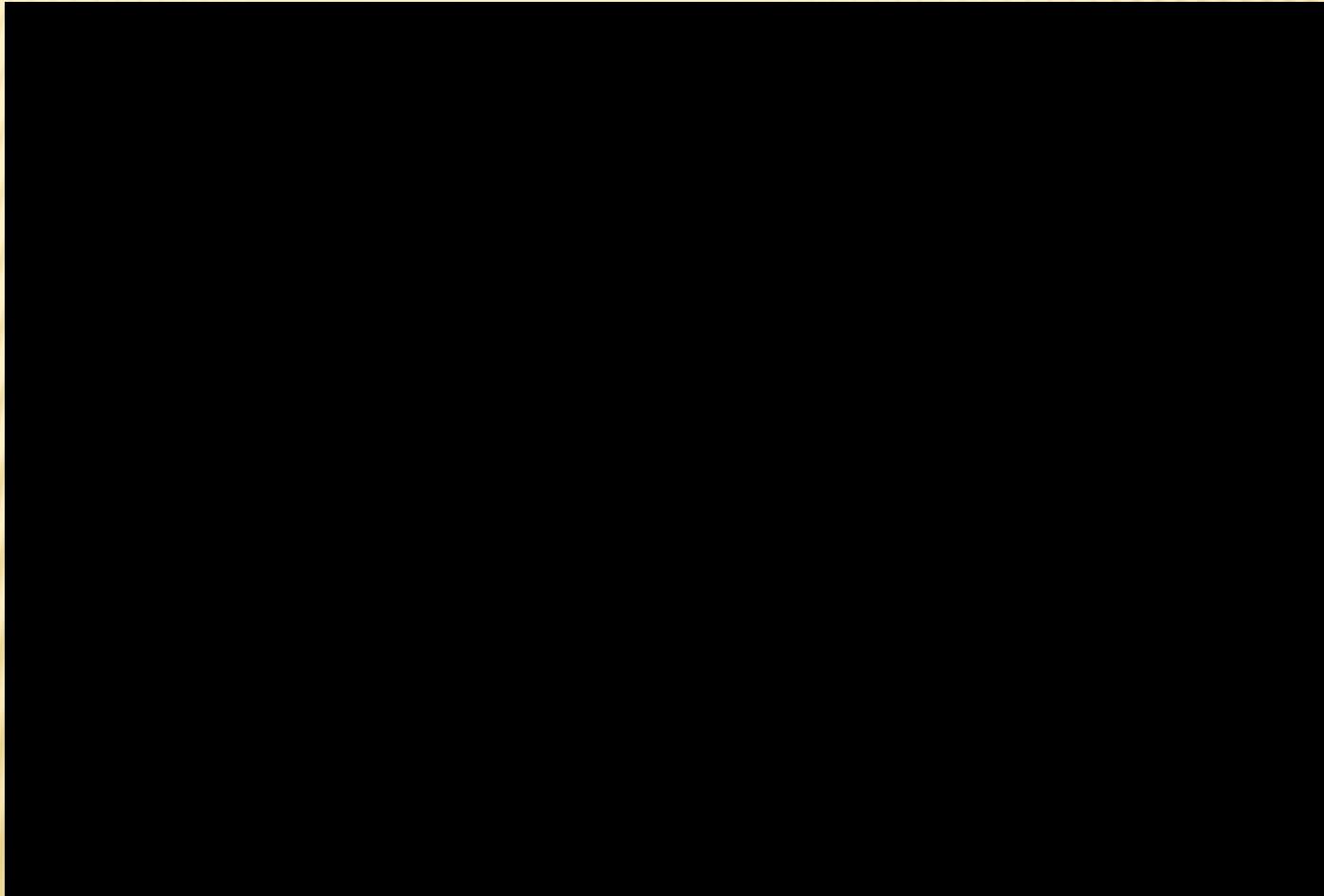
# 5 SECOND HOLD TIME

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# 3 SECOND HOLD TIME

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Examples Source- Mike Freeborg of Yesco

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## Determining Maximum Viewing Distance:

Estimate one inch of character height for every fifty feet of viewing distance to determine the best character size for your location.

Example: 2" text is readable to about 100 feet (at a walking pace)

## Viewing Ranges (Approximate)

Use this table to help determine the appropriate character size for a display based on viewing distance and the speed at which the audience may be traveling

Character Size		Max. Viewing Distance		Max. Viewing Time (seconds)							
inches	mm	feet	meters	5 mph (8 km/h)	15 mph (24 km/h)	25 mph (40 km/h)	35 mph (56 km/h)	45 mph (72 km/h)	55 mph (89 km/h)	65 mph (105 km/h)	75 mph (121 km/h)
2	51	100	30	13.7	4.6	2.7	1.9	1.5	1.2	1.1	0.9
6	152	300	91	41.1	13.7	8.2	5.8	4.6	3.7	3.2	2.7
9	229	450	137	61.6	20.5	12.3	8.8	6.8	5.6	4.7	4.1
13	330	650	198	89.0	29.7	17.8	12.7	9.9	8.1	6.8	5.9
18	457	900	274	123.3	41.1	24.6	17.5	13.7	11.2	9.5	8.2
24	610	1,200	366	164.4	54.8	32.8	23.4	18.2	14.9	12.6	10.9
36	914	1,800	549	246.6	82.2	49.2	35.1	27.3	22.3	18.9	16.4
48	1,219	2,400	732	328.8	109.6	65.6	46.8	36.4	29.8	25.2	21.8

 Shaded areas represent an acceptable exposure time

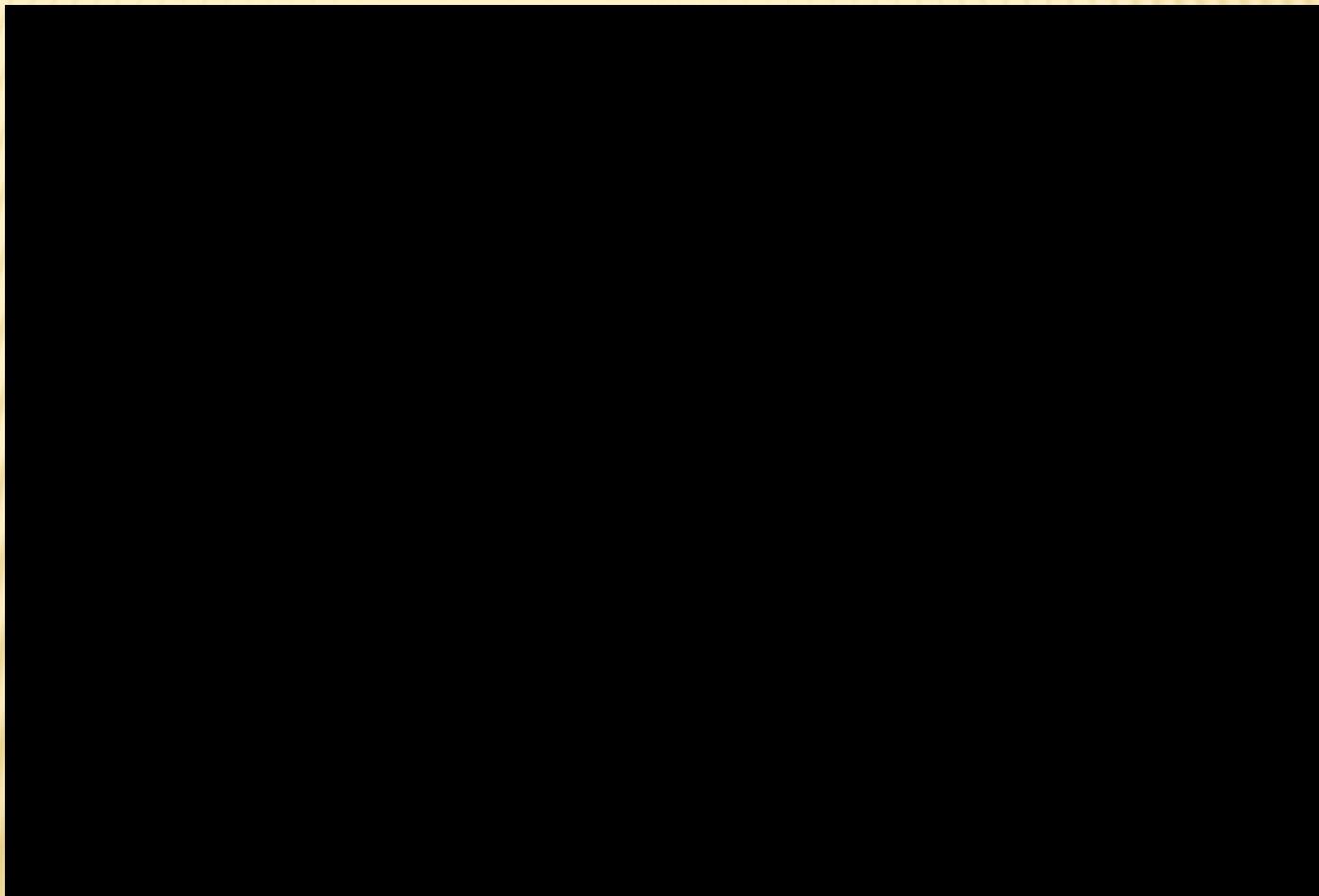
# TRANSITION METHOD & DURATION

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- The method is how the message/frame changes to the next message/frame.
- The duration is how long it takes the transition method to go from one message to the next (common 1 second or less)
- Types of transition methods: classified into 4 levels
  - + Static/instant (basic and most common)-level 1
  - + “Power Point” options: fade, dissolve, wipe left/right, lines, wedge, travel, scroll, etc.- level 2 and level 3
  - + Full Motion or Animation- level 4

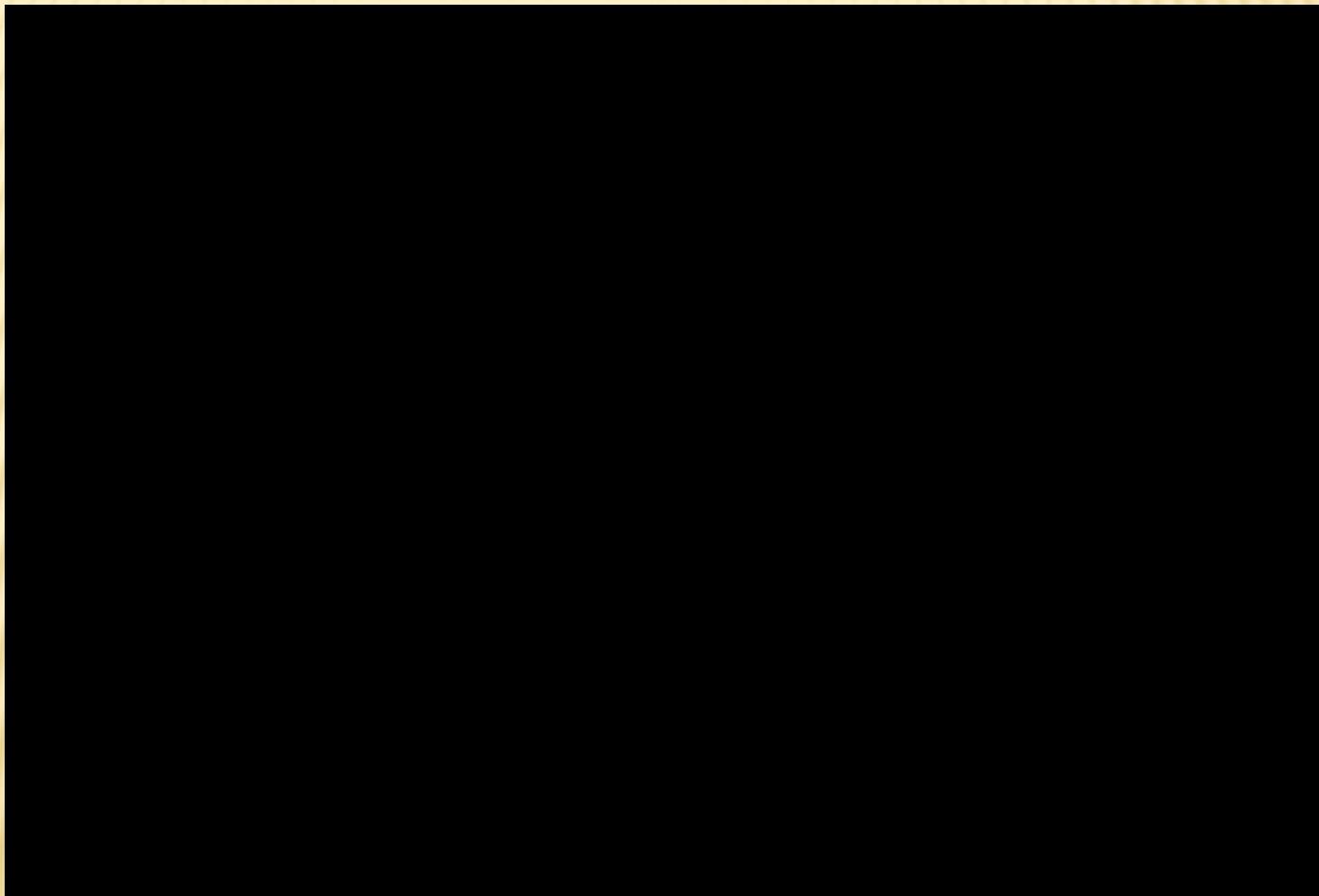
# LEVEL 1: STATIC IMAGE

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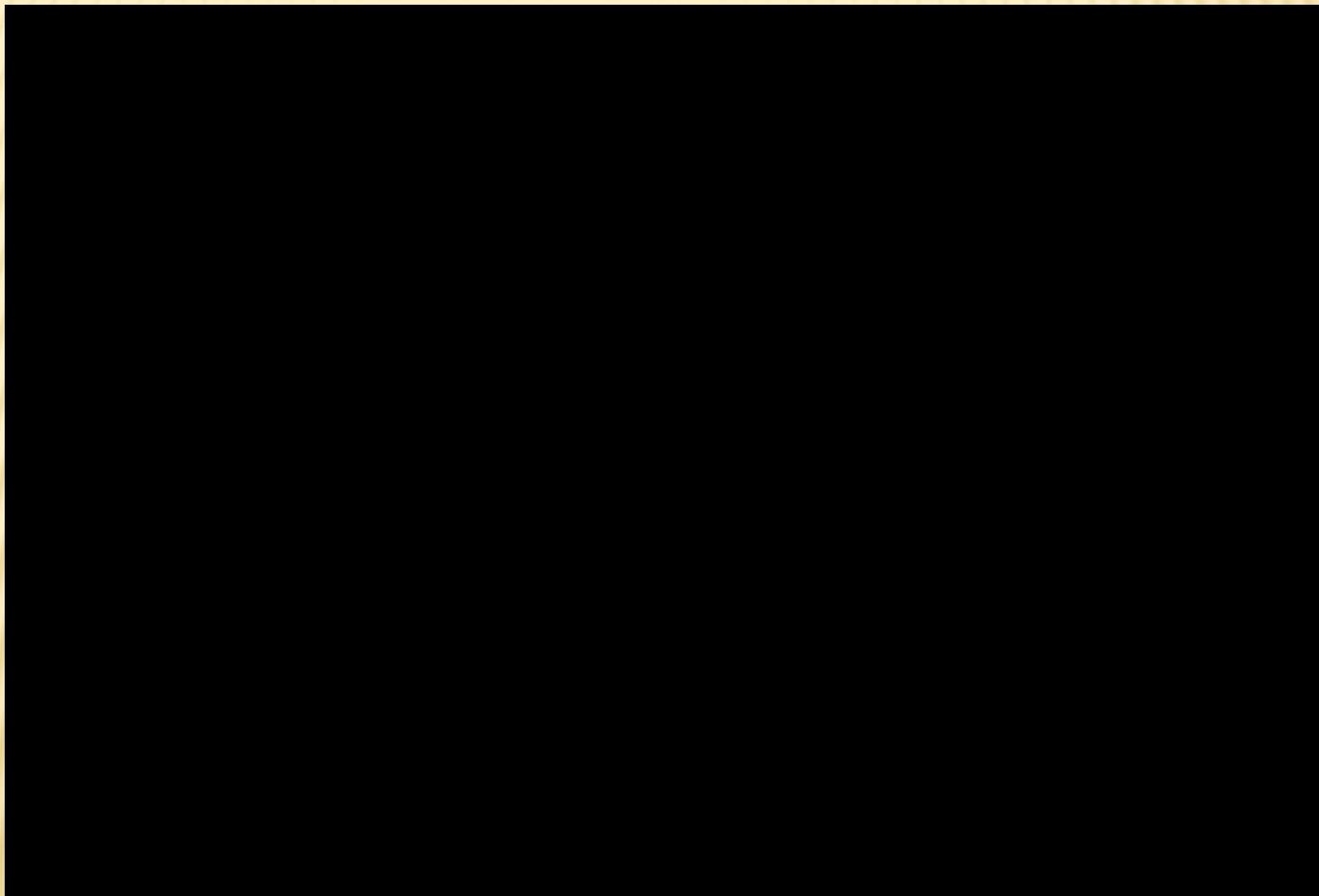
# LEVEL 2

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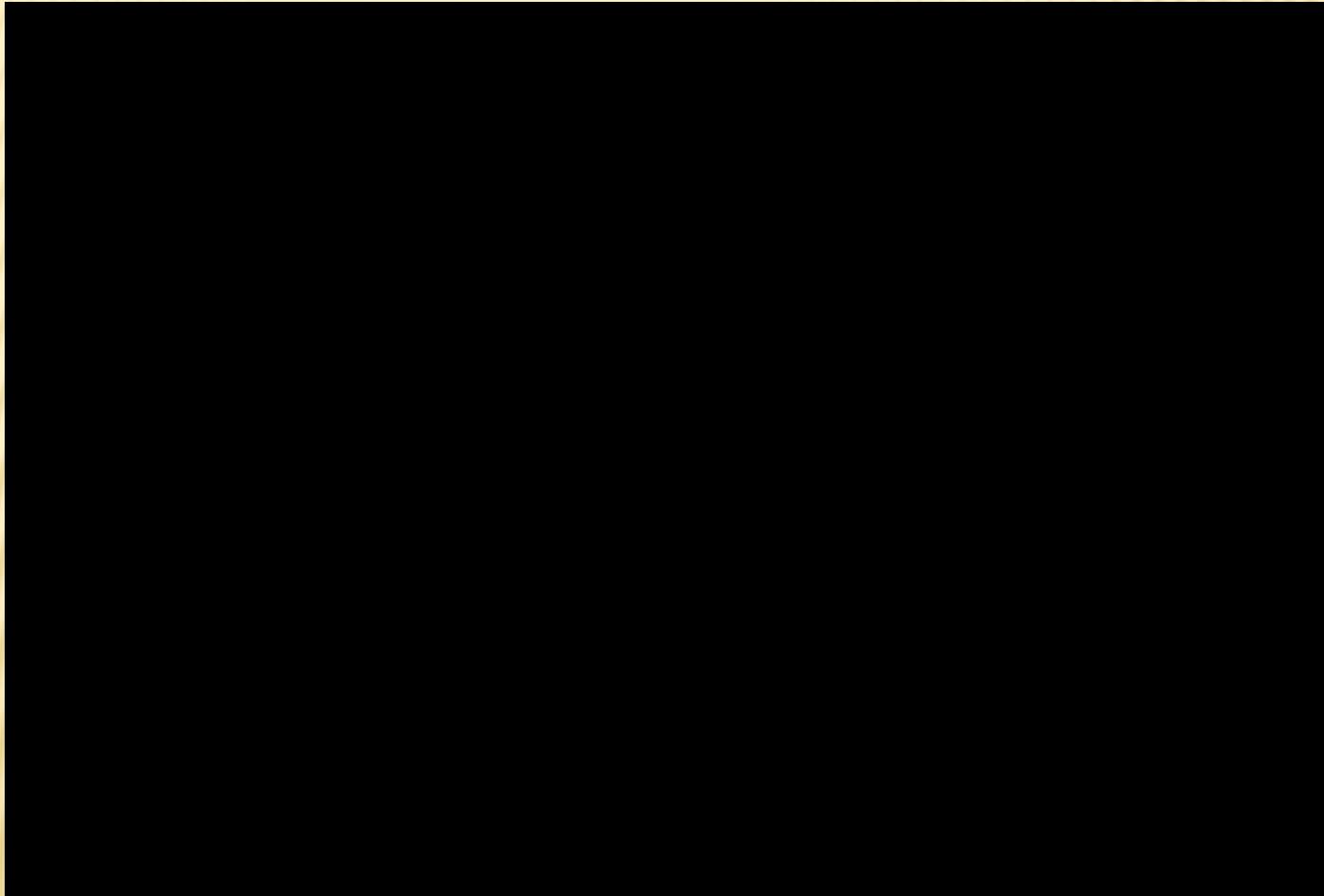
# LEVEL 3

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# LEVEL 4- FULL MOTION/ANIMATION

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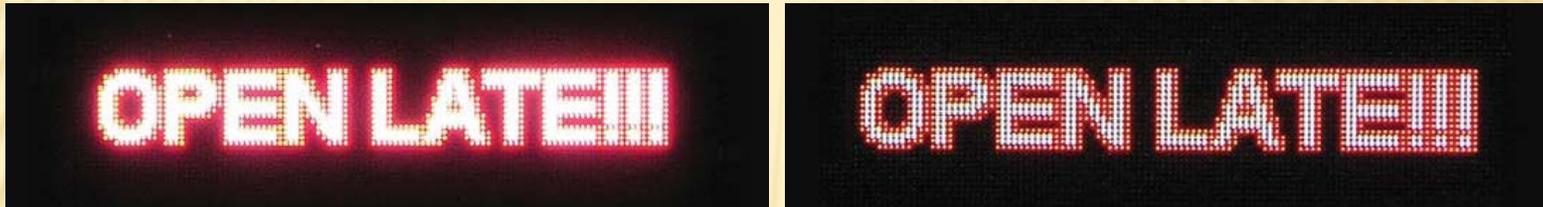


Examples Source: Mike Freeborg of Yesco

# BRIGHTNESS

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- How bright the sign is during the day and at night is important. Too bright can be offensive as well as ineffective and illegible.



- Brightness can be determined and regulated using a footcandle meter (aka a luxmeter) to measure footcandles.
- Currently there are no regulations on brightness
- As a result of the research from the ISA's brightness levels for EMCs report, "[t]he recommended brightness level for on premise EMCs is 0.3 foot candles above ambient light conditions when measured at an appropriate distance. This is a lighting level that works in theory and in practice."

## ...BRIGHTNESS CONTINUED

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- “Most electronic displays are designed to produce sufficient brightness to ensure clear legibility during daylight hours. However, daytime brightness settings are usually inappropriate for nighttime viewing. The following general methods are used to dim an electronic display for appropriate nighttime viewing:
  1. *Manual Dimming.* Using this method, the sign operator dims the display in response to changing ambient light conditions.
  2. *Scheduled Dimming.* Sunset-sunrise tables allow an electronic display to be programmed to dim at the same time that the sun sets and rises. This method is generally acceptable, but is more effective when used as a backup to automatic dimming controls capability, such as photocell technology.
  3. *Photocell Technology.* An electronic display that utilizes photocell technology can automatically dim as light conditions change. A photocell sensor alerts the display to adjust brightness according to ambient light conditions.”

Source: ISA's "Recommended Brightness Levels for On-Premise Electronic Message Centers (EMC's)" Report

# CURRENT CODE

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- *Definition-Automated Sign: Any sign utilizing a mechanical, electronic, or other means to automatically change the sign copy subject to the following: (1) the sign copy, including colors, may not change more than one time per twenty (20) seconds and (2) the sign copy may not scroll, flash, or be otherwise animated.*
- UDC Section 15-05-003 A.1.f. Prohibited Signs -*Any sign or device with intermittent or flashing illumination, animations or moving copy, but not including automated signs.*
- Brightness allowable for EMCs is not currently regulated.
- Transition method is not clearly defined; could use more clarification/specifics.

# EXAMPLES





120 CHARACTERS OF 2"

TRY OUR NEW CHICKEN!

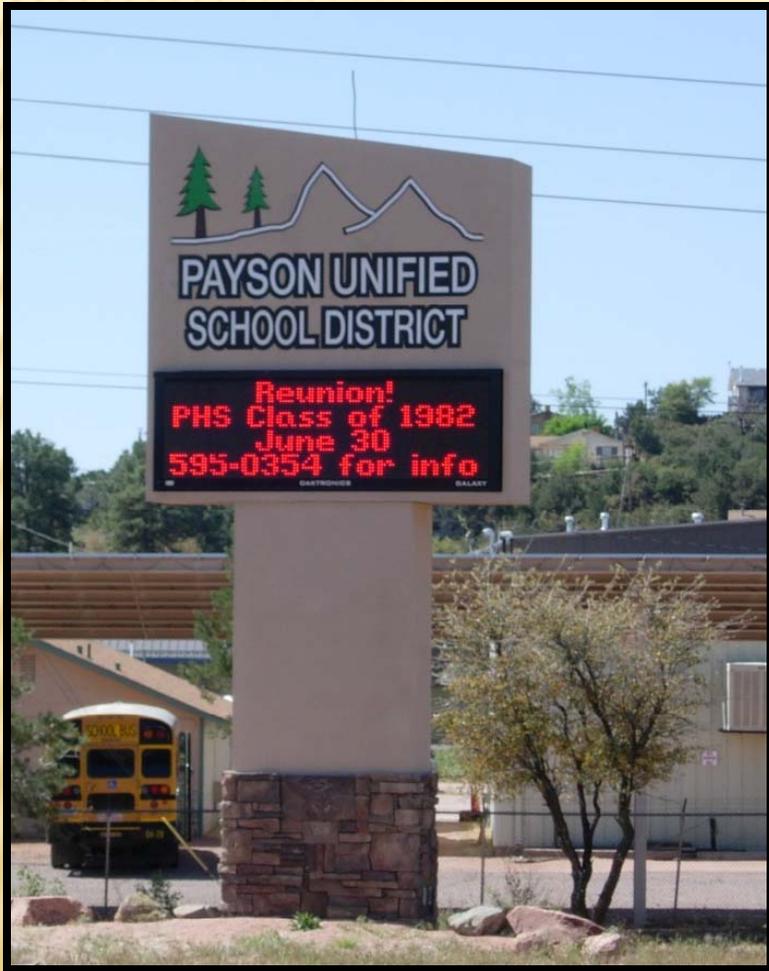
7 Rows / 120 Columns  
Case Size: 38"L x 3.8"H x 3.25"D

Pitch: 0.3"  
2" High Text

ADVERTISE AND SAVE

BIG SALE!!







# FEATHER SIGNS

And unregulated signage

# EXAMPLES OF UNREGULATED FEATHER SIGNS



Six (6) feather signs, three (3) banners on the building, one (1) A-Frame, one (1) banner (“propane”), and one (1) fence sign



Three (3) feather signs; two (2) have the same message



Four (4) feather signs, one (1) A-Frame, and two (2) or three (3) small signs