

FACTSHEET

TITLE: CHANGE OF ZONE NO. 06059, requested by the Director of Planning, amending Title 27 of the Lincoln Municipal Code relating to relating to changeable copy signs and LED or similar technology.

STAFF RECOMMENDATION: Approval, as revised.

SPONSOR: Planning Department

BOARD/COMMITTEE: Planning Commission
Public Hearing: 09/27/06
Administrative Action: 09/27/06

RECOMMENDATION: Approval, as revised, with amendments (9-0 (Strand, Cornelius, Sunderman, Taylor, Larson, Krieser, Carroll, Esseks and Carlson voting 'yes')).

FINDINGS OF FACT:

1. The current sign code does not permit billboards to display changeable copy, and many of the business signs on our streets today actually do not meet the current standards. These proposed text amendments recognize that new electronic and computer technology is making it possible for businesses and billboard companies to purchase changeable message signs that have many more features and require less energy to operate than their predecessors of just a decade ago. The proposed changes will:
 - A. Permit off-premise signs (billboards) to utilize electronic changeable copy, including some nonconforming signs, subject to a special new requirement to remove multiple nonconforming sign faces (or equivalent "banked" rights to install new billboards based on nonconforming signs that were previously removed). These new types of signs must also be spaced at least 5000 feet from another such sign.
 - B. Set limitations on animation and brightness, geared toward those new electronic changeable copy signs. Brightness standards would be based on ambient light; the darker the sky the less the brightness to avoid glare. Signs would be equipped with mechanisms to automatically adjust to changes in ambient light. Messages would be non-animated, with a minimum duration (on-premise signs for 3 seconds, off-premise signs for 10 seconds). An interval of up to 2 seconds for transition would be required between messages, with limited animation permitted during this transitions.
2. The staff recommendation of approval, as revised, is based on the "Analysis" as set forth on p.2-3, concluding that the proposed amendments will permit the use of electronic changeable copy for both off-premise (billboards) and on-premise (business) signs, while avoiding the extremes of brightness and animation which have been the cause of recent citizen complaints. The additional revisions proposed by the staff were submitted by memorandum dated September 27, 2006 (p.15). The additional information submitted by the staff from Time-O-Matic, Inc. and Daktronics, Inc., is found on p.13-14.
3. The minutes of the public hearing before the Planning Commission are found on p.4-11. There was testimony in support from members of the sign industry, i.e. Nebraska Neon and LaMar Outdoor Advertising (p.5-6). Bob Norris, on behalf of Nebraska Neon Sign Company, requested an amendment to 27.69.030(d) to reduce the minimum "hold time" to 1 second (as opposed to 3 seconds). A motion to make this amendment failed 4-5. Mr. Norris also requested an amendment to 27.69.030(a) in favor of performance standards as opposed to specific hardware to control brightness. Staff indicated support for this amendment, and it was passed with the main motion.
4. There was no testimony in opposition.
5. On September 27, 2006, the Planning Commission agreed with the staff recommendation, as revised, including the amendments submitted by memorandum dated September 27, 2006, and voted 9-0 to recommend approval, as revised, with amendment to 27.69.030(a), as requested by Bob Norris.
6. The proposed ordinance for Council action includes the staff amendments and the recommendation of the Planning Commission.

FACTSHEET PREPARED BY: Jean L. Walker

REVIEWED BY: _____

REFERENCE NUMBER: FS\CC\2006\CZ.06059

DATE: October 24, 2006

DATE: October 24, 2006

LINCOLN/LANCASTER COUNTY PLANNING STAFF REPORT

for September 27, 2006 PLANNING COMMISSION MEETING

PROJECT #: Change of Zone No.06059

PROPOSAL: Amend section 27.69. Signs to provide for new LED (Light Emitting Diode) technology for on and off premise signs and to set limits on brightness and animation.

CONCLUSION: These amendments will permit the use of electronic changeable copy for both off premise (billboards) and on premise(business) signs, while avoiding the extremes of brightness and animation which have been the cause of recent citizen complaints.

RECOMMENDATION:

Approval

ANALYSIS:

1. This request is to amend the amend various provisions of 27.69 LMC relating to sign illumination and animation.
2. The purpose of this amendment is to acknowledge and recognize that new electronic and computer technology is making it possible for businesses and billboard companies to purchase changeable message signs that have many more features and require less energy to operate than their predecessors of just a decade ago. These signs have become more popular in the past couple of years, but city staff has received complaints from motorists and residents that some of these signs are distracting and annoying due to excessive brightness and animation. In fact, some of these signs may be violating the current code standard which limits how bright signs can be.
3. Only on-premise (business) and not off-premise (billboard) signs are permitted to have electronic changeable copy under the current code. The company that owns most of the billboards in Lincoln asked staff to look at amending the sign provisions to allow them to install signs using this technology on some of their existing signs. Staff has reviewed codes in other cities and talked to experts in this sector of the sign industry. We are proposing some changes which will:
 - a) Permit off-premise signs (billboards) to utilize electronic changeable copy, including some nonconforming signs, subject to a special new requirement to remove multiple non conforming sign faces (or equivalent "banked" rights to install new billboards based on nonconforming signs that were previously removed). These new types of signs must also be spaced at least 5000 feet from another such sign.
 - b) Set limitations on animation and brightness, geared toward those new electronic changeable copy signs. Brightness standards would be based on ambient light; the darker the sky the less the brightness to avoid glare. Signs would be

equipped with mechanisms to automatically adjust to changes in ambient light. Messages would be non-animated, with a minimum duration (on premise signs for 3 seconds, off-premise signs for 10 seconds). A maximum interval of 2 seconds for transition would be required between messages, and limited animation permitted during these transitions.

c) Establish new and modified definitions to help administer the new requirements

4. The department has worked with the sign industry to refine the standards. This is a new area of sign control with which a number of communities are struggling. Some communities have banned all electronic changeable copy signs, with possible exceptions for time/temperature or similar information. Mesa Arizona adopted brightness standards similar to the ones proposed below, but they are more restrictive about the frequency of message changes (no more than once per hour, unless approved by a special board on a case-by-case basis and no less than 15 seconds per change). Sioux Falls' regulations allow maximum message time for a multi frame message to be ten seconds with up to five changes per sequence. The Nebraska Department of Roads has adopted regulations for billboards along the State Highway system which mirror the 10 -second rule and 5000 foot spacing for billboards in the city as proposed below
5. Note: Chapter 22 LMC needs to be reviewed by Building and Safety for consistency with the proposed changes.

Prepared By:

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Planner

September 11, 2006

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CHANGE OF ZONE NO. 06059

PUBLIC HEARING BEFORE PLANNING COMMISSION:

September 27, 2006

Members present: Strand, Cornelius, Sunderman, Taylor, Larson, Krieser, Carroll, Esseks and Carlson.

Ex Parte Communications: None.

Additional information for the record: Mike DeKalb of Planning staff submitted a memo from himself suggesting that there are two additional amendments that staff is working on which the staff would request be amended in by the Planning Commission, with the final language to be drafted prior to submitting this text amendment to the City Council, i.e. 1) to allow for the night time use for public emergency broadcasting by governmental emergency services, and 2) to allow for some additional ECC face changes for nonconforming billboards, unless it is within 150 feet of and facing a residential zone, park or cemetery.

DeKalb also submitted two e-mail messages from Time-O-Matic, Inc. and Daktronics, Inc., providing information about LED lighting and the technology. These two companies did raise issues about the sensors and brightness level being required in the proposal.

Staff presentation: DeKalb explained that this proposal was initiated by the Director of Planning when the Planning Department was approached by LaMar Outdoor Advertising to use LED's for billboards in Lincoln. The amendments to the sign code, as proposed, affect both on- and off-premise signs and provide for billboards to "swap out" and utilize LED signs. There are restrictions specific to spacing. The proposal adds provisions for brightness; restricts animation; and provides definitions. The complaints and issues that have been raised to date include requests to use this technology. The city is also currently conducting a lighting study, and the issue of blinding or distraction by these signs has come up in that study. This issue is being controlled by the standards for brightness in the proposed legislation.

DeKalb then showed a video of the types of signage that this proposal will allow.

Cornelius inquired about the term "illuminated tubes". DeKalb explained that the illuminated tube is actually old technology and a lot of the historic language is being carried forward in the new proposal.

Esseks inquired as to the potential safety risks. How do the proposed changes deal with those risks? DeKalb suggested that the key issue on safety relates to distraction to the motorist. There are probably two pieces – brightness/blinding distraction and animation – which tends to catch the eye and distract it. This proposal attempts to limit both. The "nits" or illumination level attempts to address the brightness issue. Other issues relative to lighting would be similar to what is in place today.

Strand inquired whether this legislation is retroactive or whether existing signs will be grandfathered. DeKalb stated that the expectation is that everything that is in place would be grandfathered.

Larson stated that he does not understand the proposal for the exchange of one LED for three non-illuminated signs. DeKalb explained that it was found that LED is a new technology for presenting new information in a different way. When we were looking at other cities, we found that many cities looked at this as a way of getting away from older signs. LaMar was agreeable to “swap out” a face from an existing structure because there is a lot more value to the new technology – they have agreed to do a “three-to-one swap out” to get rid of some of the old faces and old signs. This applies anywhere in the city.

Support

1. Martha Lee Heyne, 5906 Rolling Hills Blvd., appeared on behalf of **LaMar Outdoor Advertising**. She expressed appreciation to the staff for bringing this legislation forward. LaMar Outdoor is the primary billboard company in Lincoln, being in business for over 100 years. She requested that the Planning Commission approve the staff’s recommendation. She acknowledged that there will be a need for some fine-tuning as this moves forward to City Council, one being the opportunity to do Amber Alerts or other civil defense messages. She advised that currently, LaMar’s billboards are dark from midnight to 5:00 a.m. and that will not change.

2. Bob Norris, Nebraska Neon Sign Company, 1140 N. 21st, submitted proposed amendments as follows:

27.69.030(a). Signs may be illuminated, except as otherwise provided in residential districts; provided, however, that the surface illumination of any sign shall not exceed the levels shown on the following graph “A” for different conditions of ambient light. Prior to the issuance of a sign permit the applicant shall provide a written certification from the sign manufacturer that the light intensity has been preset not to exceed the above illumination levels and the present intensity level is protected from end user manipulation by password protected software or other methods approved by the Building Official.

27.69.030(d). Any message on an electronic changeable copy sign shall be non-animated. Transition between messages shall not exceed a duration of two (2) seconds. Any sign over eighty square feet (80 sq. ft.) in area of the electronic message change shall hold the message for at least ten (10) seconds. A sign with eighty square feet or less in electronic message area shall hold for a least one (1) second.

Norris agrees with the issue of brightness but there will be challenges in regulating it. In the last decade, 90% of the electronic signs put up in Lincoln have been dimmable, dimming anywhere from 75% to 90%. He fears that we are writing a lot of words that we don’t need to write. With regard to brightness, he believes it would be smarter to set performance standards for daytime and nighttime. As long as it can be certified that they can meet the limits that are set and they do hit the limits, why do we care how they get there?

Norris’s first amendment [27.69.030 (a)] eliminates the last sentence that specifies the hardware that has to be used. It’s like setting the speed limit and then telling Ford to manufacture a car that won’t go beyond 70 mph.

His second amendment deals with 27.69.030 (d) where the appear and disappear modes are specified. These modes are built into the software. The limits in the proposed language will eliminate the opportunity for animation in the display. The staff proposal restricts the transition time and the hold time. Those things by themselves preclude the user from using many of the animated displays. He does not believe the language needs to specify which are allowed. That will leave this open to more amendments for new technology in the future. The proposal is too specific in only allowing three modes of transition into the message.

Norris requested that the hold time be reduced from three seconds to one second. "If I am a commercial endeavor and I have one of these units with a small one-line or two-line unit, and I am mandated to show a message in 6 seconds, the market will be past my sign at 25-30 mph and will not see the sign." The industry would recommend .5 to .7 hold time per frame.

Carroll clarified that Norris's proposed change to (a) would eliminate the requirement of how it is dimmed. Norris agreed. He does not think it is fair to eliminate someone from the market by the ordinance. As long as they certify and do hit the limits, why specify how they have to get there? Just set the general standards of performance.

Carroll suggested that the unknown is whether they will hit those limits without the city's requirement. Norris suggested that if they can't hit those limits, then the sign companies cannot sell their products. We would have to remove the sign if it does not meet the standards. The burden is on the user not to put up something that cannot hit those limits. We have supplied this product in Lincoln a lot and have had no complaints of brightness. "Let them demonstrate that their product is marketable. Don't write them out of the market by using the ordinance."

With regard to the proposed amendment to (d) and the transition modes, Cornelius was curious about describing an alternative transmission mode besides fade and scroll and dissolve. Norris deferred to the engineers. It would be easier to do another video presentation to demonstrate other modes. The old fashioned traveling mode is the worst method to use.

3. Mitch Spencer, of Electronic Display Systems, 436 Pheasant Drive, Grand Island, Nebraska, testified and agreed with the concerns raised by Mr. Norris, i.e. the hold times. Electronic Display Systems manufactures this type of product. Longer hold times force the displays to have more copy. One line every three seconds of one or two words just does not communicate. With the same square footage, they turn it into three or four lines of four or six inch copy which is tougher to read, but that is the only way to get the complete message. So from a safety perspective, now all of a sudden you are forcing me to come up on the message I can't see at the last minute and I'm overwhelmed with numerous lines of copy. We provide time and temp displays that change at one-second intervals. If there is more copy, the market dictates that the copy needs to stay up longer to be able to be read.

With regard to brightness, Spencer believes it is interesting that some of the readings appeared on the displays were incorrect. Probably more difficult to obtain is a ratio between how bright it is in the ambient background as opposed to what the sign actually is. Spencer pointed out that the signs that are out there now are allowed to be double the brightness of the new LED signs that actually run at lower levels. Even though we have no problems meeting any of the proposed specifications, if you limit the time changes, you are going to come up with signs that are actually less safe and not as effective as what is allowed now. We want our product to be readable, both day and night, so we will end up adjusting those brightness levels.

Esseks inquired whether Mr. Spencer's industry has collected information on the risks of these signs. It seems that if you have a story that you are telling in a series of slides and it takes you 10-15 seconds to tell that story, you get people engrossed. There must be some standards that have evolved. Spencer believes that the Federal Highway Administration (FHA) has done numerous studies that have indicated that you should end up having a complete message be visible numerous times before you actually pass that sign. This is just what we are talking about. If you hold that to three seconds, that actually goes contrary to the recent FHA study.

As far as safety issues, Spencer advised that Electronic Display Systems has been in business 25 years, and if there was a safety hazard, he suggested that they certainly would have been named in some suit or action that would relate to some kind of liability regarding the distracting nature of this type of product. Electronic Display Systems has never been named in any litigation and he is not aware of any study which shows that these displays pose a safety hazard.

Esseks believes a story that takes too long to tell could be risky. Spencer suggested that it depends on the speed of the traffic. It should be done in a manner that allows you to see the complete story multiple times before you pass. Esseks is worried about taking people's eyes off the road. Spencer observed that if you were out along the freeway and it is a 60-inch character telling that story, 15 seconds might be the right choice. If you are in town and it is a nine-inch character at 35 mph, 7 or 8 seconds might be the right choice. It would depend on the particular location of the sign, the speed and the particular height of the character. Other things like the actual visibility of the signage with regard to trees or other signage would be another issue and that would be unique to every location.

Esseks stated that he can read a billboard in two seconds. He is concerned about a message that takes so much longer that it becomes a traffic hazard. Spencer responded, suggesting that if he had 10-15 lines of copy on that billboard, you couldn't read that in two seconds. It depends on the content of the sign.

Strand observed that if the billboard is giving her directions, it takes her longer to read. She believes that the sign above I-80 which is three or four lines is much more difficult than if it is one line, and then another line. Spencer suggested that this could be shown in a presentation which would show how you can pick up images at a glance better than you can see multiple lines of copy.

With regard to technology, Strand assumes that just in the last 10 years, technology is continually changing. Does the amendment proposed by Mr. Norris for paragraph (a) address technology in a way that works for the industry? Spencer concurred that it does address future technology, but the technology is changing fast. That is a little bit of the risk you run anytime you try to limit this kind of technology. In all likelihood what is being proposed with these billboards is going to become more the norm than the exception. It is just the way that the industry is moving. The changing technology will continue to be an issue if you try to stifle what businesses use. Strand stated that it may be better to set the limits, otherwise we will constantly need to make changes.

Carroll inquired about certification of maximum and minimum nits. Spencer stated that in his company's particular technology, they end up setting a minimum on the photocell where at darkest night it will achieve that dimmest level. It will take input and brighten itself up until the brightest time of the day. Even those levels are programmable. We only make the signs go as bright as they need to go in the daytime.

Carroll confirmed that the photocell is a variable rate as opposed to on/off. It increases or decreases according to the lightness of the day. Spencer agreed, but that is significant if everyone can adjust to that small change of light level. A 20% change of light level is incomprehensible to most people.

Cornelius noted that the draft specifies three transition modes: fade, scroll and dissolve. What other transition modes might there be? And what advantage is gained by an animated transition? Spencer suggested that everyone in the industry is going to call their mode “dissolve”, but they may call it fade, zoom, dissipate or whatever they want to call it. Cornelius believes the modes are clearly defined in the code draft. Spencer stated that his favorite transition is zoom. At that point he can end up doing that as a dissolve. He thinks he can fall within the realms of a dissolve or something that would allow a zoom mode to be used. Some of the most effective modes would be a wipe or a curtain where it just opens all of a sudden. Some municipalities require a shutter or a Venetian which replicates something that would be akin to a tri-view sign. All of those are modes that are available and probably effective. Cornelius suggested that the mode is to attract the attention of the viewer.

Cornelius inquired whether there is an ideal number of frames per message. Spencer stated that “frames” is a tough way to break up a message.

4. Scott Morton, 5930 S. 91st, appeared to clarify that there is a difference between off- and on-premise. They are not proposing that billboards will do any scrolling or flashing. All they want is a static message that is held for 10 seconds.

Staff response

DeKalb pointed out that this proposal is attempting to accommodate the needs for both on- and off-premise signs. The difference that you see in the proposed text of the hold time is to address the difference between on- and off-premise signs.

On the brightness question, the staff concern is that it adjust to cloudy days, snow days, etc. Mr. Norris’s issue is that he has one manufacturer that does not have this mechanism. Other jurisdictions have it and require it. If they are willing to certify, the staff is willing to go along with it.

With regard to Mr. Norris’s proposed amendment to subparagraph (d), the only real change is from 3 seconds to 1 second. There was a long discussion on this and the video confirms that on-premise needs to change faster. DeKalb thought they had reached agreement on the three seconds. Staff believes that one second is just too fast and does not support the proposed amendment to one second.

As far as the transitions, the proposal talks about a variety. The definitions came out of a document provided by Bob Norris. The reason we did provide the definitions is that we are talking about animation on one hand and about time of seeing that message. The key issue was if you do a scroll and you don’t catch the beginning, you had to watch the whole thing. The intent was to try to get away from some of the technology that takes a long time to read.

Esseks noted that some communities have ban the use of cell phones while people drive because of the distractions. He is very concerned because this new technology may grow into becoming a dangerous distraction to the driver. Are we better off with rapid change in one second or better off with changes after three seconds? DeKalb stated that the staff has taken the position that holding the image was better than rapid changes.

Strand disagrees. When she's looking for the time and temp, she does not want to wait three seconds. She also wants to see the stock market information. She wants the quick changes. DeKalb suggested that it relates to graphics management as opposed to the timing.

Carroll then referred to Mr. Norris's proposed amendment to subparagraph (a) and wondered whether language could be added at the end of the last sentence, "or other device approved by the Director of Building & Safety." DeKalb would accept this amendment. If they can meet the intensity levels without the sensor, that would be acceptable.

Larson believes that one second is better. The only concern should be distraction. The Planning Commission should not be concerned with the effectiveness of the sign. Let the advertiser worry about that. There seems to be a lot less distraction if you have a change in one second. DeKalb suggested that watching the sign to see a one second image and multiple images in a sentence might be more distracting than stacking them up and having a longer hold.

Cornelius observed that if we are allowing this one second hold time with the idea that more information will be conveyed, the temptation is going to be to convey more information. He does not think there is a big difference. The problem he is having is that we are treating a variety of display methods very similarly. We're talking about the 8 x 6 lamp, etc., the same as we are treating the exploding hamburger, and they are very different in the way they convey information. That is the trouble that we are having here. It's almost as though there are separate classes of display methods – high resolution and multi-colored and low resolution and text. DeKalb agreed that the technology varies. But in all honesty, every code that the staff reviewed did try to package together one set of standards for brightness level, animation, etc., regardless of the technology.

Cornelius wondered about no limitation on the transition types but a time restriction – if we just said, do whatever you want for two seconds. DeKalb suggested that he can explode a lot of hamburgers in two seconds, and that is what we are trying not to allow to happen.

Carlson suggested that the balancing act is to determine the most effective way to keep the driver paying attention to driving. DeKalb suggested that the more it draws your eye off the road, the bigger the distraction. We are trying to address brightness level and animation that draws your eye away. He does not believe there is any clear scientific evidence.

Esseks stated that he is inclined to accept three seconds because there is less distraction in that time.

ACTION BY PLANNING COMMISSION:

September 27, 2006

Carroll moved approval, as revised, including the proposed amendments set forth in the Memorandum of Mike DeKalb dated September 27, 2006, with amendment to the last sentence in subparagraph (a) on page 6, adding, "or other devices approval by the Director of Building & Safety." Motion was seconded by Cornelius.

Strand made a motion to amend subparagraph (d) on page 6, that if said sign area is 80 square feet or less, the message shall hold for at least three seconds if animated, and the message shall hold for at least one second if text, seconded by Larson.

Marvin Krout, Director of Planning, pointed out that there is some animation allowed up to two seconds, but there can be some kind of transition. The amendment seems to indicate that you can do an animated message for three seconds, but a static message for one second. He does not believe the sign industry is asking to be allowed to hold an animated message for three seconds. We are all in agreement that it should be static. The question is how long. Strand thinks three seconds is too long for time, temp and basic information.

Strand revised the motion to amend to change three seconds to one second on line 15, page 6, seconded by Larson.

Larson pointed out that if you're driving down 13th Street and you're looking at the First Federal sign, you've probably got three seconds to see the different messages. But if you are going 40 mph down 27th Street, you just don't have three seconds to wait for it to change from time to temp. He believes it is much safer to have a one second time frame.

Cornelius is surprised by how many people depend on electronic copy signs for time and temp. He never thought about it that way.

Carlson's concern is that it lends itself to doing much longer messages so it tends to keep the driver's eye off the road.

Strand suggested that most advertisers that are paying \$15,000 to \$25,000 are going to put on a message that actually gets the one message across. They will not utilize them to send long-winded messages. For example, the Union Bank sign never advertises anything at Union Bank. They are only advertising how the stock market did and the time and temp, so it is very precise information.

Carlson believes that the overriding question is public safety and how to keep people's eyes on the road.

Motion to amend to one second failed 4-5: Strand, Sunderman, Larson and Krieser voting 'yes'; Cornelius, Taylor, Carroll, Esseks and Carlson voting 'no'.

Main motion for approval of the staff recommendation, as revised, with amendment to subparagraph (a) on page 6, and with the amendments as set forth in the Memorandum from Mike DeKalb dated September 27, 2006, carried 9-0: Strand, Cornelius, Sunderman, Taylor, Larson, Krieser, Carroll, Esseks and Carlson voting 'yes'. This is a recommendation to the City Council.

Memorandum

To: Mike Dekalb, Planning Department
From: Dennis Bartels, Engineering Services
Subject: Changes to the Sign Code, Chapter 27.69
Date: September 15, 2006
cc: Randy Hoskins
Roger Figard

Development Services has reviewed the proposed text changes concerning changeable message signs and has no objections. We do agree that there is a need to regulate and control these signs in regard to brightness and animation.

Bob,

I think the chart has serious problems. How about if I list some specific problems then suggest a more enforceable alternative? Let me know if this helps.

Objections:

- The chart dictates the use of old technology (a photocell sensor) to adjust the brightness level of the sign. Sensors are unreliable devices with service problems. It is very easy to install a sensor such that it will not work properly. A superior method used by Time-O-Matic is a software algorithm to step the sign up into full day brightness at sunrise and then back down to full night at sunset. The algorithm uses the geographic coordinates of the sign and the date to calculate the precise time of sunrise and sunset.
- The chart uses a log scale for the x-axis, which is not easily understood or read by everyone. The x axis is poorly marked, so this chart would be very difficult to enforce.
- Measuring LUX is very difficult. Depending on the orientation of the meter results can vary several hundred percent. A very cloudy sky a couple of hours after sunrise measures 2000-10000 LUX. Time-O-Matic signs could run at full brightness or 5000 NITs according to the chart. Trying to measure levels as low as 40 NITs at night is practically impossible.

Suggestion:

Replace the graph with a simple statement that is easy to figure out and more enforceable.

Max Night Brightness - 1250 NITs
Max Day Brightness - 10,000 NITs

Thanks,

Jeff

Jeff Koebrich
Executive Vice President
Director of Engineering
Time-O-Matic Inc.
Phone 217-442-0611 x117

Bob, Here are some of the thoughts I discussed with our engineers on the following points.

ITEM NO. 4.1: CHANGE OF ZONE NO. 06059

#1

(p.31 - Public Hearing - 9/27/06)

Our experience has been that brightness (including lack of) and certain "effects" are the most offensive aspects and are the source of most safety concerns of electronic programmable displays. NEMA in cooperation with Daktronics is establishing a specification for these types of displays which has a minimum and maximum display brightness level dependent upon ambient light conditions and color of emitted light.

By establishing these brightness specifications into a code, the code must then be able to be enforced. The instruments for measurement need to be available to the authority just as a speed radar is used by traffic enforcement.

A white light LED display would be borderline too dim to be readable in full sunlight at 5,000 nits, whereas, a red LED would be arguably too bright at 5,000 nits and an amber color display would have acceptable brightness at 6,000-7,000 nits. As these displays age, they become less bright and a display which is too dim is difficult to read and would be as much if not more hazardous as too bright.

Nighttime brightness again depends upon ambient light surrounding the display. Since the brightness must change according to different ambient light conditions, a light detector would need to be used to automatically adjust the brightness.

#2

In the case of a malfunction, a manual override should be available so the brightness is able to be brought into compliance. A certificate from a manufacturer is only as good as the integrity of the manufacturer.

#3

Limiting the number of messages might be ok if all emc's were the same size and capable of the same amount of information at any particular point in time. A single line display capable of only 2-3 words is not going to be safe to read if one has to wait 10 seconds for the 2nd half of the message. I don't see any benefit in limiting the number of messages as long as the effects are controlled. In most cases the frame duration should be a minimum of .5-.7 seconds to accommodate small emc's. A demonstration of this might be appropriate.

#4

Effects: I would suggest that rather than state what is allowed, state what is not allowed, such as flashing or travelling/scrolling since there are entry effects that are yet to be invented that would be effective yet non-offensive. Example: EMC's shall not be programmed to FLASH in either text/graphic/background on/off/alternating colors. Words or

graphics must not travel or scroll from side to side, top to bottom/bottom to top, or diagonally.

In Daktronics software, these types of effects can be disabled and password protected by the administrator called Zoning enforcement.

Be glad to discuss with you further.
Kelly

Kelly Koenig
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Commercial Territory Manager
331 32nd Avenue
Brookings, SD 57006
<http://www.daktronics.com>
phone 888-325-7446

MEMORANDUM

DATE: September 27, 2006
TO: Planning Commission
FROM: Mike DeKalb, Planning Department 
SUBJECT: CZ 06059, signs text change amendment
COPY: Marvin Krout, Director of Planning
Ray Hill, Planning

In response to conversations with Lamar, staff would support additional amendments to the change of zone request to allow two additional provisions relative to off-premise signs.

1. Allow for the night time use for public emergency broadcasting by governmental emergency services and
2. Allow for some additional ECC face changes for nonconforming billboards, unless it is within 150 feet of and facing a residential zone, park or cemetery.

Staff have not had time to prepare a refined and final text amendment to reflect these changes but would be prepared to make these amendments prior to scheduling to the Council, if agreeable to the Planning Commission.