

STATE OF CALIFORNIA  
GOVERNMENT OPERATIONS AGENCY  
CALIFORNIA BUILDING STANDARDS COMMISSION  
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Office Use Item No. \_\_\_\_\_

**PARTICIPATION COMMENTS FOR THE NOTICE DATED MARCH 21, 2014**  
Written comments are to be sent to the above address.

**WRITTEN COMMENT DEADLINE: MAY 5, 2014**

Date: 04/25/2014

From: Eugene Lozano, Jr.

\_\_\_\_\_  
Name (Print or type)

\_\_\_\_\_  
(Signature)

-- California Council of the Blind  
Agency, jurisdiction, chapter, company, association, individual, etc.

4537 Sycamore Ave                      Sacrament                      CA                      95841  
Street                                      City                                      State                                      Zip

I/We (do)(**do not**) agree with:

[  ] The Agency proposed modifications As Submitted on Section No. ITEM 11B-31 Section: 11B-411.4.11.2 Contrast.

and request that this section or reference provision be recommended:

[  ] Approved    [  ] Disapproved    [  ] Held for Further Study    [  ] Approved as Amended

**Suggested Revisions to the Text of the Regulations:**

**11B-411.4.11.2 Contrast.** Visual display shall provide contrast with light white characters on a dark black background or dark characters on a light background. The background shall be solid and static.

**Reason:** [The reason should be concise if the request is for “Disapproval,” “Further Study,” or “Approve As Amend” and identify at least one of the 9-point criteria (following) of Health and Safety Code §18930.]

As the early 1970s, researchers have investigated the question of color combinations that are particularly suitable for letters and backgrounds of signs for persons who have low vision.

One such study, "Information Transfer Problems of the Partially Sighted: Recent Results and Project Summary," the Rand Corporation, R-1770-HEW, June 1975, was conducted as part of a broad program on information transfer problems of persons who have low vision sponsored by the Rehabilitation Services Administration of the U.S. Department of Health, Education and Welfare.

They found:

1. That more than 70 percent of the time persons with low vision prefer to view white symbols on a black background over black symbols on a white background. The reasons for this were (a) that light came to the pathological eye via the information carrying alphanumeric symbols rather than from the matrix in which the symbols were imbedded and (b) that, in general, the alphanumeric symbols occupied a smaller portion of a sign than the matrix in which they were imbedded and hence produced less glare and less light scattering.
2. Through the use of a very sophisticated pseudo color generator that could produce more than 16.7 million two color combinations, it was found that persons who have low vision preferred very light colored alphanumeric symbols on very dark backgrounds. For example, they felt that they could see very clearly white or yellow characters on a black, dark red, dark brown, dark green, or dark blue background. They found red on blue, blue on red, blue on brown, brown on blue, green on blue and blue on green to be particularly difficult to distinguish.

Based on the above and other research, it would seem that there would be a greater degree of access for persons who have low vision by clearly specifying that floor destination indicators on the elevator door jambs have white characters on a black background.

The specification to have light on dark or dark on light is too general and will not provide the contrast needed by persons who have low vision. Hence, this was not supported by DSA's Disability Advisory Committee (December 2013) and the California Building Standard's Commission's Access Code Committee (February 2014). Both committees recommended to DSA staff white characters on a black background.

Code 3 & 4

## HEALTH & SAFETY CODE SECTION 18930

### SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

- (a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:
- (1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
  - (2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
  - (3) The public interest requires the adoption of the building standards.
  - (4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
  - (5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
  - (6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
  - (7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
    - (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
    - (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
  - (8) The format of the proposed building standards is consistent with that adopted by the commission.
  - (9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.