

MEMORANDUM

DEPARTMENT OF PUBLIC WORKS

County of Placer

TO: BOARD OF SUPERVISORS

DATE: May 9, 2006

FROM: KEN GREHM / ^{YD}BOB COSTA ^{AC}

SUBJECT: LAND DEVELOPMENT MANUAL REVISION – ROADBED DESIGN

ACTION REQUESTED / RECOMMENDATION

Approve a Resolution amending Section 4.07, Roadbed Design, of the Placer County Land Development Manual (LDM) to include reference to alternative construction materials.

BACKGROUND / SUMMARY

The County's Land Development Manual provides technical guidance to planners, engineers, surveyors, developers and others involved in the subdivision and development process. It describes the County's expectations with regard to preparation of construction plans and subdivision maps, and provides direction for designing infrastructure improvements.

Section 4.07 of the Land Development Manual, entitled "Roadbed Design", describes the design methodology for determining the appropriate pavement section for new roadway construction. This section of the LDM does not currently address the use of alternative construction materials that may have the effect of enhancing roadway durability, or that promote use of recycled materials. While it has been the Department's practice to use, and allow, such materials, the LDM does not specifically acknowledge these opportunities.

DPW is proposing to add provisions that recognize various materials options, but that will not mandate the use of any specific applications. In this manner, designers and developers may propose alternatives that may be economically superior to traditional construction methods, or that may be desired to extend roadway life beyond the minimum requirements.

ENVIRONMENTAL

Exempt from the provisions of CEQA per Guidelines Section 15060 (c) (2), Preliminary Review.

FISCAL IMPACT

There is no expected fiscal impact to County budgets as a result of this change.

Attachments: Resolution
Exhibit A

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**Before the Board of Supervisors
County of Placer, State of California**

**In the matter of: A RESOLUTION APPROVING
AN AMENDMENT TO SECTION 4.07,
ROADBED DESIGN, OF THE PLACER
COUNTY LAND DEVELOPMENT MANUAL**

Resol. No:.....

Ord. No:.....

First Reading:.....

The following RESOLUTION was duly passed by the Board of Supervisors
of the County of Placer at a regular meeting held _____,

by the following vote on roll call:

Ayes:

Noes:

Absent:

Signed and approved by me after its passage.

**Attest:
Clerk of said Board**

Chairman, Board of Supervisors

BE IT HEREBY RESOLVED by the Board of Supervisors of the County of Placer,
State of California, that this Board approves an amendment to Section 4.07,
Roadbed Design, of the Placer County Land Development Manual, as shown on
the attached Exhibit A.

Exhibit A

To Resolution Number : _____

Placer County Land Development Manual

SEC. 4.07 ROADBED DESIGN

(1) ~~Minimum~~ Unless otherwise required by project conditions of approval, or subject to the following provisions, the minimum allowable thickness of roadbed on new or reconstructed residential streets section shall be 3" Type A asphalt concrete and 8" Class 2 aggregate base provided:

(a) If the developer and/or his private engineer ~~feel their development is in an area where~~ wish to design an alternate pavement section on the basis of favorable soil conditions are encountered, or on the basis of item 4, below, they may retain a California Registered Civil Engineer or Geotechnical Engineer to prepare a pavement design report on the basis of the resistance factor "R" which shall be filed with the engineer for his approval. However, in no case will the structural section be less than 6" Class 2 aggregate base and 2.5" type A asphalt concrete.

(b) In those areas considered by the Engineer as being critical soil condition areas, ie:

i. Soils classified under the Unified Soil Classification System as sandy clay (SC), silty clay (CL), high plastic clay (CH), silt (ML), high plasticity or micaceous silt (MH), organic silt (OL), organic clay (OH), and peat & mulch (PT), or

ii. Low undrained shear strength (equivalent to R-value < 20),

or

iii. High water table, and high soil sensitivity

it may be required that the section shall ~~be designated~~ be designed on the basis of the resistance factor "R" by a Private Engineer. Any revised section proposed by the private engineer shall be submitted to the Engineer for his approval and shall be supported by a soils report.

(c) The Engineer may require a pavement design report for Collector, Industrial and Arterial streets, and any other situations involving anticipated heavy vehicles or large traffic volumes.

(d) For restoration, repairs, and minor improvements on an existing street, where no other structural standard is specified, the minimum thickness shall be as cited above, or to match existing, whichever is greater.

(2) In all cases involving a structural section design, the traffic index shall be furnished by the Engineer.

(3) Flexible pavement structural section design may incorporate Caltrans, AASHTO, or any other design methodology acceptable to the Engineer.

(4) The use of alternate road building materials will be allowed if supported by a comprehensive pavement design study prepared by a registered civil engineer or Geotechnical engineer and approved by the Engineer. These alternate road building materials may include, but not be limited to, the following:

- **Subgrade stabilizing and/or isolating geotextiles and grids**
- **Pavement stress absorbing interlayers**
- **Soil and subgrade stabilizing admixtures**
- **Use of recycled materials in the manufacture of subbase, subgrade, and asphalt concrete**
- **Rubberized asphalt concrete**
- **Subbase drainage facilities**
- **Concrete**
- **Pavers / Paving stones**