



COUNTY OF SAN MATEO
Department of Public Works
Inter-Departmental Correspondence

Date: September 20, 2005

To: Deputy Directors of Public Works -
Donna J. Vaillancourt, Doug R. Koenig, Brian C. Lee

From: Neil R. Cullen, Director of Public Works

Subject: **Policy on the Use of Fly Ash Concrete and Recycled Aggregates**

Policy

Use of Fly Ash in Concrete

It shall be the policy of the Department of Public Works to specify and use the highest percentage of fly ash in concrete, as appropriate:

- a) in all construction and maintenance work which involves the use of concrete that is performed by the various Divisions of the Department; and
- b) in all contracts which specify the use of concrete as part of the work.

Use of Recycled Aggregate

It shall be the policy of the Department to specify or purchase recycled aggregates for all projects requiring aggregate base or sub base material, unless the cost of delivered material is not economically justified based on the comparison of the cost of the material plus delivery costs.

Vision Alignment

These policies support the County's Shared Vision Commitment to be a "responsive, effective and collaborative government," and Goal 20, "government decisions are based on careful consideration of future impacts rather than temporary relief or immediate gain," as implementing this policy supports the County's long-term goal to reduce the amount of material that needs to be landfilled.

Background

Fly Ash Concrete

Fly ash, a waste product of coal fired power plants, can be used in place of Portland Cement and results in a stronger more durable concrete, can reduce thermal cracking in concrete and has become a standard with the California Department of Transportation.

The policy on the use of fly ash in concrete is based on the evaluation by the Engineering and Resources Protection Division of the Department. This evaluation concluded that fly ash concrete is readily available at no additional cost, and identified ways that this material can be utilized in order to implement this policy.

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Recycled Aggregate

Recycled aggregate is comprised of crushed concrete or stone that can be graded to meet the specifications for both aggregate base as well as sub base. Specifying recycled materials creates a market for material that would otherwise be landfilled; and in most instances, is a more economical alternative to using virgin material.

Engineering Documentation

The following information from the Engineering Services Section is available which was the basis for these policies:

- Memo regarding fly ash
- Chart showing substitutions for fly ash
- Memo regarding recycled aggregate

In addition, Engineering Services has done the following to help with implementation:

- Changed the specifications in Section 26, Aggregate Base Class 2 and Section 90, Portland Cement Concrete.
- Added a Materials Tab to the Project Database that includes boxes to check if fly ash, recycled AC, or recycled aggregate are used.

Implementation

Contract special provisions shall specify fly ash concrete and recycled aggregate as appropriate.

Engineering shall notify the Construction Division that recycled material is being required by the project plans and specifications.

The Roads Division shall specify fly ash concrete and recycled material when ordering material for maintenance work.

Project engineers/managers shall notify consultants retained to develop contract plans and specifications of this policy and the requirement to incorporate fly ash and recycled aggregate into project specifications as appropriate.

Monitoring

The Engineering Services Section of the Department shall report to the Director of Public Works quarterly on the amount of fly ash and no fly ash concrete, and the amount of virgin and recycled aggregate that has been used in County projects administered by the Department of Public Works.

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The Roads Division of the Department shall report to the Director of Public Works quarterly on the amount of fly ash and non fly ash concrete, and the amount of virgin and recycled aggregate that has been used in the maintenance activities conducted by the Roads Division.

Neil R. Cullen
Director of Public Works

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cc: Jill Boone, RecycleWorks Programs Manager