

May 19, 2020

Newport-Mesa Unified School District
2985 Bear Street
Costa Mesa, CA 92626



**SOUTHERN
CALIFORNIA
GEOTECHNICAL**
A California Corporation

Attention: Lance Bidnick
Maintenance and Operations

Project No.: **20G139-2**

Subject: **Alternative Pavement Design Recommendations**
Proposed Elementary School Improvements
Newport - Mesa Unified School District
Newport Beach and Costa Mesa, California

Reference: Limited Pavement Investigation, Proposed Elementary School Improvements, Newport – Mesa Unified School District, Newport Beach and Costa Mesa, California, prepared for Newport-Mesa Unified School District, by Southern California Geotechnical, Inc. (SCG), SCG Project No. 20G139-1, dated May 13, 2020.

Gentlemen:

In accordance with your request, Southern California Geotechnical, Inc. (SCG) is providing this letter to present alternative pavement design recommendations for the subject project. We have been requested to provide full-depth asphalt thickness for the new pavement reconstruction areas.

The following pavement thicknesses have prepared using the results of R-value testing presented in the referenced report. The pavement thicknesses shown below are the minimum required sections determined in accordance with the Caltrans Highway Design Manual method for flexible pavement design.

Killybrooke, Wilson and College Park Elementary School

FULL-DEPTH ASPHALT PAVEMENTS (R = 1)			
Materials	Thickness (inches)		
	(TI = 4.0)	(TI = 5.0)	(TI = 6.0)
Asphaltic Concrete	6½	8	10
Compacted Subgrade (90% minimum compaction)	12	12	12

As discussed in the referenced report, cement treatment of the low strength subgrade soils at Killybrooke, Wilson, and College Park schools is a potential option. Cement treatment will help to create a stable pavement subgrade, and will also increase the pavement support characteristics

of the existing soils. Cement treated soils are expected to possess an R-value of 50. Therefore, if cement treatment is performed at one of these three school sites, the new pavements may be designed using the sections presented below for Mariners and Woodland schools.

Mariners and Woodland Elementary School

FULL-DEPTH ASPHALT PAVEMENTS (R = 50)			
Materials	Thickness (inches)		
	(TI = 4.0)	(TI = 5.0)	(TI = 6.0)
Asphaltic Concrete	3½	4	5
Compacted Subgrade (90% minimum compaction)	12	12	12

General

Site preparation in the pavement areas should be completed as indicated in the referenced geotechnical report. The pavement subgrade soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the Marshall maximum density, as determined by ASTM D-2726. All other recommendations presented in the referenced report remain valid.

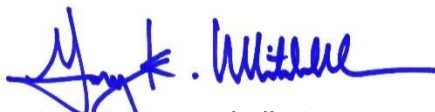
We appreciate the opportunity of providing geotechnical services on this project. If you have any questions regarding this information, please contact our office at your convenience.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.



Pablo Montes Jr.
Staff Engineer



Gregory K. Mitchell, GE 2364
Principal Engineer

Distribution: (1) Addressee

