Appendix F

Hydrology Analysis

HYDROLOGY ANALYSIS

FOR

TTM 17707

City of Lake Forest

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HYDROLOGY ANALYSIS

FOR

TTM 17707

City of Lake Forest

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SECTION 1

PROJECT NARRATIVE

PROJECT LOCATION

The project site is TTM 17707 in the City of Lake Forest. The site is bordered by an existing Commercial on the west, Portola Parkway on the east, Foothill Transportation Corridor on the north, and Sport park on the south (see attached Vicinity Map for details.)

STUDY PURPOSE

This report is to support the submittal of Tentative Tract Map.

METHODOLOGY

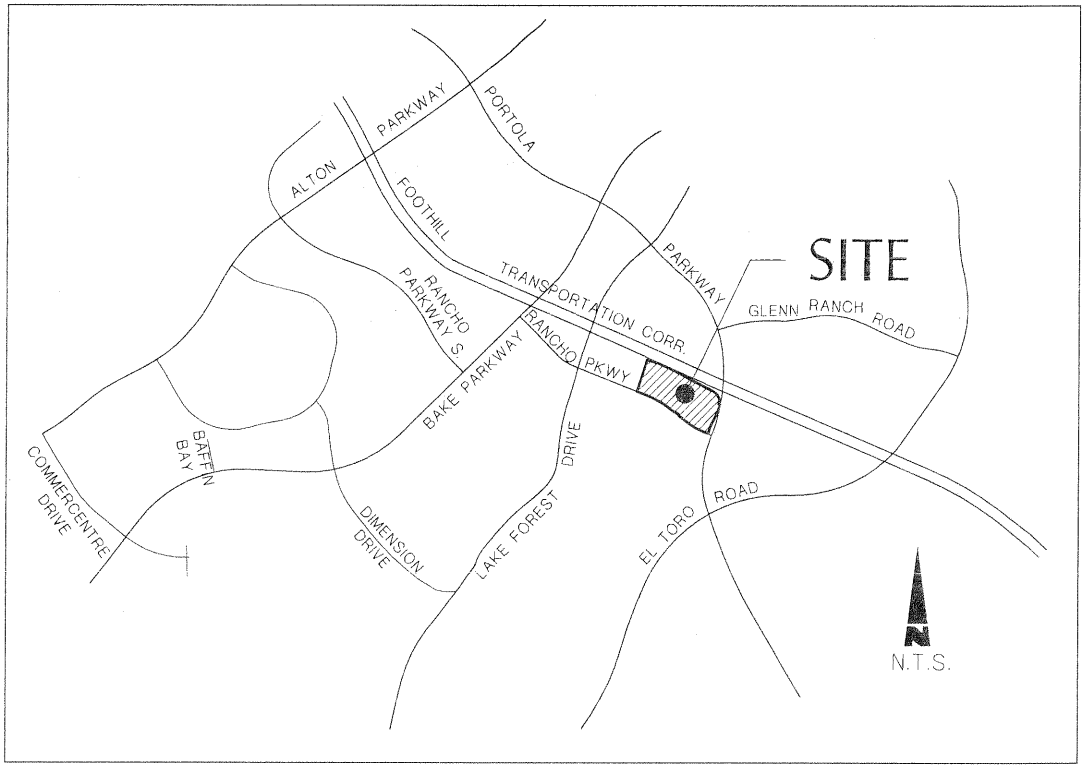
The methodology used to determine the peak discharges for TTM 17707 is based upon the criteria set forth in the *Orange County Flood Control District Hydrology Manual* dated 1986 as incorporated in the Advanced Engineering Software (AES) "RATSC" Program. The hydrologic soil types were determined from the Hydrologic Classification of Soils map contained in the *Orange County Hydrology Manual.*

DISCUSSION

The site will be developed as residential with both single and multi-family dwelling units. The project is divided into two drainage areas "A' and "B" as shown on the hydrology map.

Storm drain system serving TTM17707 will be designed for the 25-yr storm event with secondary outlets provided at sump locations. At node #3, the exit elevation of the secondary outlet is 784.5ft while the lowest pad elevation is 786.5ft at lots 36 and 37. At node #29, the exit elevation of the secondary outlet is 774.5ft while the lowest pad elevation is 776.8ft at lot 90.

The 25-yr storm runoff produced from drainage area "A" is 71.3cfs and will be discharged into the modified existing Detention/Water Quality basin and then to a storm drain system designed for 73.5cfs prepared by Psomas (see reference section for the Drainage Report for Lake Forest Sport Park, dated January 29, 2010; also see Storm Drain Plan, sheets 18 and 23 of 46, dated December 20, 2011).

The 25-yr storm runoff produced from drainage area "B" is 7.6cfs and will be discharged into an existing 24" RCP designed for a Qmix of 15.9cfs prepared by RBF, dated August 2, 1990, sheet 32 of 38 (see reference section for plan).

VICINITY MAP