

#### 4.4 Wastewater

##### 4.4.1 Proposed Wastewater Demands

Based on the proposed 200 single family unit and a 1-acre park with the future 1,500 square foot pavilion with comfort stations and 100 parking stalls, using the design standard of 4 persons per single family unit at 80 gallons per capita per day and 20 gallons per parking stall, the proposed average wastewater demand generated by the project is estimated at 0.064 MGD for the single-family units and 0.02 MGD for the park or 0.066 MGD. This estimate is used for the hydraulic calculations.

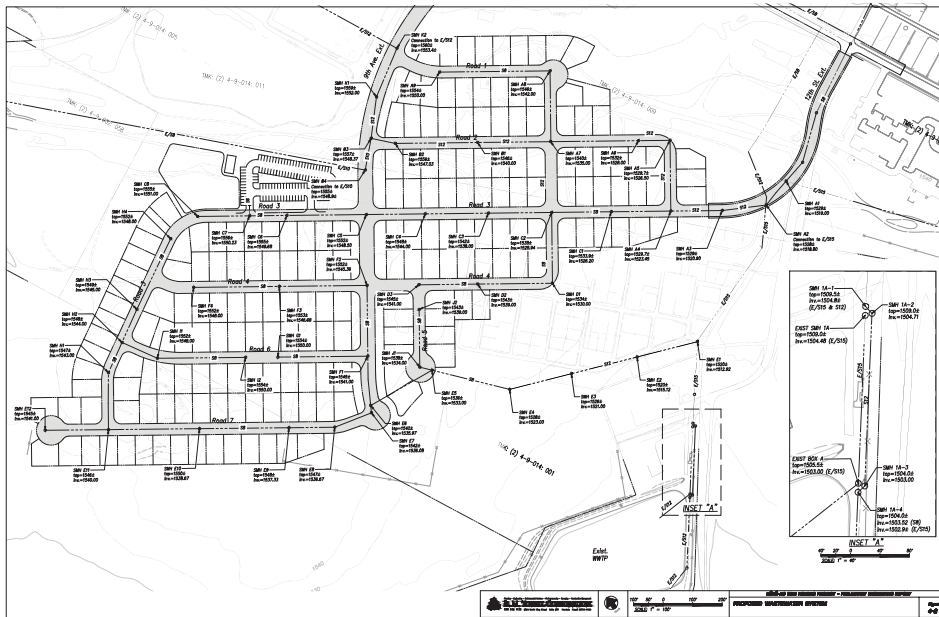
The 20 gallons per parking stall used to estimate the wastewater demand was approved by the County of Maui for the Central Maui Regional Park (CMRP) and is based on 4 persons per vehicle and 5 gallons per capita. The CMRP also estimated that no more than 50% of the parking would be in use at any time so a 50% reduction in wastewater demand was allowed. As most of the parking is for non-park use, a conservative average wastewater demand for the park is 0.001 MGD at the treatment plant is estimated at 0.065 MGD.

##### 4.4.2 Proposed Wastewater System

The new onsite wastewater system will collect wastewater generated by the new homes and convey the wastewater to the existing Lanai City WWRF. The new wastewater collection system will be designed for the residential units and the future park, pavilion and parking stalls and constructed within the new roads and is shown on **Figure 4-2**.

##### 4.4.3 Impacts to Regional Wastewater Facilities

The wastewater demand of the project is estimated to be 0.065 MGD of which 0.064 MGD is for the proposed housing demand and 0.001 MGD is for the 1-acre park demand. The Preliminary Engineering Report Lanai City Auxiliary Wastewater Treatment Facility report done in 1993 by Belt Collins & Associates states that the Lanai City Wastewater Treatment Plant was designed to treat wastewater generated by Lanai City and the Koele Project District. The WWRF is currently servicing an average daily flow of approximately 0.315 mgd. Allocations totaling 0.395 mgd have been granted to existing development. The proposed



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development will yield an average daily flow of less than 0.07 mgd, therefore there is currently sufficient capacity at the WWRF to serve the project.

