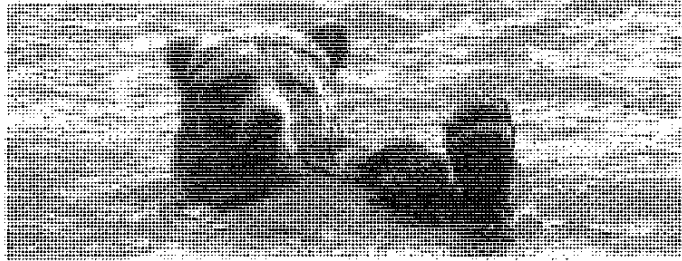


**SR Hartsell
Environmental
Health
Consulting**



Wastewater treatment and disposal systems designed to protect wildlife and public health.

September 12, 2012

Mr. Sal Akhter
Cordoba Center Project Coordinator
South Valley Islamic Center
P.O. Box 1777
Morgan Hill, CA 95038-1777

(EXHIBIT E)

Email: sakhter@induswest.com

Subject: Septic System evaluation for planned Cordoba Center, Morgan Hill
APN 779-06-002

Dear Mr. Akter:

The County has determined that the approved septic plan designed (by others) for the planned Cordoba Center, Morgan Hill (APN 779-06-002) can only accommodate 80 people a day as attached below:

Per approved septic plan, DEH has determined the November 2006 percolation tests are valid data which meets the standards for a septic system for the current project.

Dept. of Environmental Health's standards for waste water usage is 3 gallons of water per day per person for the prayer hall, 7 gallons per person per day for the multi-purpose hall, and 5 gallons per person per day for restroom use. For a proposed maximum occupancy of 80 persons, this calculates out to approximately 15 gallons allotted per person per day – with leachline capability of 1200 gallons of water per day with 1500 linear feet of leachlines for the 80 person capacity.

The Central Coast Regional Water Quality Control Board calculated a requirement of 900 gallons per day, less conservative than the Dept. of Environmental Health standard. Septic system as shown on plans meets DEH's standard to accommodate 1200 gallons of water per day.

Dept. of Environmental Health conditions requires that portable toilets be installed on site for the three events that will occur annually with capacity of over 80 people. A temporary events permit from Dept. of Environmental Health is required for those events.

This seemed a little conservative to both you and the Central Coast Regional Water Quality Control Board and you asked me to perform an independent evaluation.

During our discussions it became apparent to me that the maximum average amount of wastewater that will be propagated per visitor will be much less than the fifteen gallons cited by the County. I based this conclusion on *Design Manual, Onsite Wastewater Treatment and Disposal Systems* (1980, United State Environmental Protection Agency). This manual discusses all types of septic system in detail and

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CORDOBA CENTER, SEPTEMBER 12, 2012

provides tables with estimated wastewater flows for various non-residential structures on a per person basis (with references). This manual is specifically cited as the means by which such wastewater treatment and disposal systems shall be designed in neighboring San Mateo County and has been used by me in designing non-residential systems in both San Mateo and Santa Clara County.

As explained by you, the vast majority of the maximum anticipated attendance of 150 people per day visitors will spend 1-3 hours on the site, may pray, may visit the banquet hall for refreshments, and their children may use the playground and there will be no employees stationed at this site. Using a conservative approach and treating this like a restaurant and a visitor center combined, the maximum wastewater per visitor would be a maximum of 4 gallons per person per day at the banquet hall (table 4.6 of the manual, page 3) and a maximum of 7.9 gallons a day for the rest of the facility (visitor center table 4.8 of the manual, page 4) = 11.9 gallons per day per person. For the 1200 gallon capacity of the system (listed by the County) this would equal a capacity of a minimum of 1200 gallons per day/ 11.9 gallons per visitor per day = 101 visitors per day.

Much of the projected wastewater flow listed by me and the County is redundant since each of these numbers includes restroom uses which are unlikely to be necessary more than once in a 1-3 hour visit and it is likely that the actual wastewater flow will be closer to 8 gallons per day per person than 12 (enough difference to handle 150 people a day maximum attendance).

Furthermore, the events that will occur on this site are intermittent – usually no more than one a week although occasionally they may occur twice in a week. I suggest that you use High Capacity Infiltrator Chambers instead of rock for the 1500 linear feet of required leach trench. These chambers hold 14 gallons of wastewater per linear foot (see page 5). The use of chambers would provide a holding capacity of 21,136 gallons of wastewater (14 gallons per foot * 1500 linear feet).

Even using the County's very conservative numbers of 1200 gallons a day capacity of the soil to disperse wastewater and 2250 gallons generated by 150 people (15 gallons per day * 150 people) the system will easily disperse the water from such an event in two days and from two such events in four days. Furthermore even after two events on consecutive days the chamber system would have a reserve capacity of 16,636 gallons (2 * 2250 gallons - 21,136 gallon holding capacity).

My conclusion is that the proposed septic system is far larger than needed to handle the anticipated maximum daily event with up to 150 people a day as long as there are no more than three such events in any one week.

Sincerely,



Steven R. Hartsell
Registered Environmental health Specialist #5979

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Attachment: Supp. Info 1 - Correspondence Received from South Valley Islamic Center (64605 : Grant or Deny Appeal filed by Silicon Valley

CORDOBA CENTER, SEPTEMBER 12, 2012

TABLE 4-6
TYPICAL WASTEWATER FLOWS FROM COMMERCIAL SOURCES (18)

Source	Unit	Wastewater Flow	
		Range	Typical
		gpd/unit	
Airport	Passenger	2.1 - 4.0	2.6
Automobile Service Station	Vehicle Served	7.9 - 13.2	10.6
	Employee	9.2 - 15.8	13.2
Bar	Customer	1.3 - 5.3	2.1
	Employee	10.6 - 15.8	13.2
Hotel	Guest	39.6 - 58.0	50.1
	Employee	7.9 - 13.2	10.6
Industrial Building (excluding industry and cafeteria)	Employee	7.9 - 17.2	14.5
Laundry (self-service)	Machine	475 - 686	580
	Wash	47.5 - 52.8	50.1
Motel	Person	23.8 - 39.6	31.7
Motel with Kitchen	Person	50.2 - 58.1	52.8
Office	Employee	7.9 - 17.2	14.5
Restaurant	Meal	2.1 - 4.0	2.6
Rooming House	Resident	23.8 - 50.1	39.6
Store, Department	Toilet room	423 - 634	528
	Employee	7.9 - 13.2	10.6
Shopping Center	Parking Space	0.5 - 2.1	1.1
	Employee	7.9 - 13.2	10.6

CORDOBA CENTER, SEPTEMBER 12, 2012

TABLE 4-8
TYPICAL WASTEWATER FLOWS FROM RECREATIONAL SOURCES (18)

Source	Unit	Wastewater Flow	
		Range	Typical
		gpd/unit	
Apartment, Resort	Person	52.8 - 74	58.1
Cabin, Resort	Person	34.3 - 50.2	42.3
Cafeteria	Customer	1.1 - 2.6	1.6
	Employee	7.9 - 13.2	10.6
Campground (developed)	Person	21.1 - 39.6	31.7
Cocktail Lounge	Seat	13.2 - 26.4	19.8
Coffee Shop	Customer	4.0 - 7.9	5.3
	Employee	7.9 - 13.2	10.6
Country Club	Member Present	66.0 - 132	106
	Employee	10.6 - 15.9	13.2
Day Camp (no meals)	Person	10.6 - 15.9	13.2
Dining Hall	Meal Served	4.0 - 13.2	7.9
Dormitory, Bunkhouse	Person	19.8 - 46.2	39.6
Hotel, resort	Person	39.6 - 63.4	52.8
Laundromat	Machine	476 - 687	581
Store Resort	Customer	1.3 - 5.3	2.6
	Employee	7.9 - 13.2	10.6
Swimming Pool	Customer	5.3 - 13.2	10.6
	Employee	7.9 - 13.2	10.6
Theater	Seat	2.6 - 4.0	2.6
Visitor Center	Visitor	4.0 - 7.9	5.3

62

Page 4

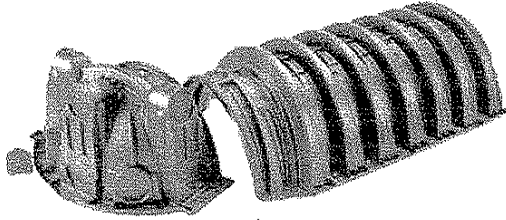
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CORDOBA CENTER, SEPTEMBER 12, 2012

The Quick4 High Capacity Chamber

The Quick4 High Capacity Chamber fits into a 36 inch wide trench. Its MultiPort end cap with eight molded-in inlets/outlets allows multiple piping options and eliminates pipe fittings.
[Download product specs here. \(PDF\)](#)



Size (W x L x H).....	34" x 53" x 16" (86 cm x 135 cm x 41 cm)
Storage Capacity.....	62 gal (235 L)
Louvered Sidewall Height.....	12" (30 cm)
t.....	12" (30 cm)

53" / 12" = 4.4 linear feet per chamber 62 gallons / 4.4 linear feet = 14 gallons per linear foot