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January 3, 2000
VIA HAND DELIVERY

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Mr. Bart Fletcher
Division of Water and Wastewater
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0873

Re: D.R. Horton Custom Homes, Inc.; PSC Docket No. 981609-WS
Emergency Petition to Eliminate Service Availability and AFPI Charges of Southlake Utilities, Inc.
Our File No. 33083.01

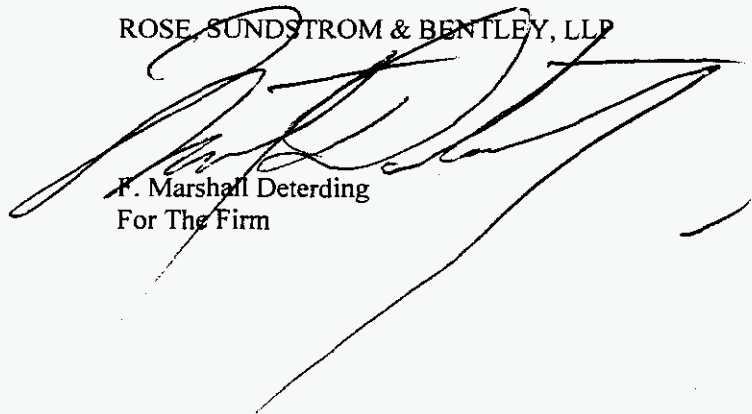
Dear Bart:

As I discussed with you today, we at D.R. Horton Custom Homes, Inc. have had our engineer, Jim Boyd, who is very experienced in the area of water and sewer utility construction and design, analyze the information submitted by Southlake in its most recent Response to the Staff Data Request in order to offer some opinions as to the appropriateness of the information provided.

Please thoroughly review Mr. Boyd's comments and incorporate them into whatever recommendation you present to the Commission, whether in the written recommendation itself or if time does not permit to do that, than in an oral modification of that Staff Recommendation. We do believe that these comments from Mr. Boyd are very important and clearly indicate that some of the projections presented by Southlake should not be utilized in arriving at a basis for Service Availability Charges on a historic or going forward basis. If we can provide you any further explanation or information in this regard, please let me know as soon as possible.

Sincerely,

ROSE, SUNDSTROM & BENTLEY, LLP



F. Marshall Deterding
For The Firm

- AFA _____
- APP _____
- CAF _____
- CMU _____
- CTR _____
- EAG _____
- LEG _____
- MAS _____
- OPC _____
- RRR _____
- SEC _____
- WAW _____
- OTH _____

cc: Samantha Cibula, Esquire
Blanca S. Bayo, Director
Tricia Merchant, CPA
Scott Schildberg, Esq.
Mr. David Auld
Mr. Ralph Spano
James Boyd, P.E.
Mr. Mike Burton
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DOCUMENT NUMBER-DATE

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FPSC-RECORDS/REPORTING

January 3, 2000

Mr. F. Marshall Deterding
Rose, Sundstrom & Bentley, LLP
2548 Blairstone Pines Drive
Tallahassee, FL 32301

Re: Southlake Utilities Investigation
Preliminary Review of Third Data Request
Boyd Environmental Project No. 031-A-01



BOYD
ENVIRONMENTAL
ENGINEERING, INC.

Dear Mr. Deterding:

In accordance with your recent request, we have conducted a preliminary review of Southlake's response to PSC's Third Data Request (Southlake response dated 12/2/99). Although we have not had time to perform a detailed review, our preliminary review has uncovered apparent inconsistencies between information previously submitted by Southlake and the information submitted in response to the Third Data Request. Some of the more significant inconsistencies are detailed below:

Projected Utility Plant in Service Additions, Water (Page 4 of Southlake Response)

A. Southlake revised this schedule to conform to the Water Facilities Plan ("WFP") prepared by CPH Engineer's Inc. ("CPH"). The schedule shows \$1,239,500 in plant additions for the year 2000, with an increase in plant capacity (maximum day basis) from 1.075 mgd to 2.448 mgd. Of the \$1,239,500 total, \$50,000 is attributable to a chlorination upgrade, and \$659,500 is attributable to Phase 2 improvements identified in the WFP. We note the following inconsistencies between this information and information previously provided by Southlake:

1. Southlake is currently expanding its water treatment plant (WTP) under FDEP Permit No. WC35-0080599-010 issued 1/29/99. This expansion will increase the permitted capacity to 2.916 mgd. These improvements are identified in the WFP as "Phase 1." According to the WFP, these Phase 1 improvements will be financed by Southlake, with subsequent improvements (Phases 2 through 5) financed by State Revolving Loan Funds. (It should be noted that the WFP was submitted to FDEP in conjunction with an application for State Revolving Loan Funds.) We have the following questions regarding the year 2000 program:
 - a. Why is the year 2000 capacity shown as 2.448 mgd, when the Phase 1 improvements will increase capacity to 2.912 mgd?
 - b. Why is it necessary to construct Phase 2 improvements in the year 2000, when the Phase 1 improvements will result in a rated capacity of 2.912 mgd?

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- c. Why is it necessary to construct Phase 2 improvements in the year 2000, when the capacity of the Phase 1 improvements (2.912 mgd) will reportedly be sufficient through the year 2002? (The schedule shows a maximum day flow projection of 2.843 mgd in 2002, and 3.645 mgd in 2003.)
2. The \$50,000 chlorination upgrade is shown as a separate line item from the Phase 2 improvements. However, the Phase 2 improvements (as defined by CPH) specifically include this item. (See underlined language in Exhibit I, attached.)
- B. The plant in service additions shown in the schedule are specifically identified as "total on-site plant additions." However, the costs shown for Phase 2 (totaling \$3,297,500) and Phase 3 (totaling \$2,130,500) include the cost of distribution system improvements. (See underlined language in Exhibit II, attached.)
- C. The schedule shows the following phasing information:

<u>Phase</u>	<u>Year Initiated</u>	<u>Year Completed</u>	<u>Plant Capacity, Max Day (mgd)</u>
2	2000	2002	3.456
3	2002	2004	6.912
4	2004	2005	6.912
5	2006	2007	8.640

This phasing information is inconsistent with the schedule provided in the WFP (see Exhibit II, attached). It should be noted that the schedule shown in Exhibit II was obtained from the FDEP Bureau of Water Facilities Funding in Tallahassee, and was not included in Southlake's response to the Third Data Request. Phasing information, derived from the WFP, is as follows:

<u>Phase</u>	<u>Year</u>	<u>Plant Capacity, Max Day (mgd)*</u>
2	2000	5.832
3	2005	8.964
4	2010	11.124
5	2015	13.284

* In accordance with FDEP plant rating criteria, plant capacity (maximum day basis) is assumed the smaller of the following:

1. Total well capacity, or:
2. Total high service pump capacity divided by a peak hour to maximum day factor of 2.0.



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Given the above inconsistencies between the schedule and the WFP, there appears to be no justification for including the Phase 4 and Phase 5 improvements in the schedule (which runs through the year 2007). The Phase 3 improvements will provide a total maximum day capacity of 8.964 mgd as derived from the WFP. This would be more than sufficient to handle the projected 6.396 mgd maximum daily flow for the year 2007 as shown in the schedule.

- D. Southlake does not provide an itemized cost breakdown for the Phase 2 and Phase 3 improvements. Therefore, we are unable to review the reasonableness of these cost estimates. Also, remember that the overall Phase 2 (\$3,297,500) and Phase 3 (\$2,130,50) estimates include distribution system components that should not be considered part of on-site plant additions.
- E. According to the local FDEP office, none of the Phase 2 water plant improvements have been permitted through that agency. This circumstance brings into question the \$659,500 Phase 2 expenditure shown in the schedule for the year 2000.

Projected Utility Plant in Service Additions, Wastewater (Pages 25 and 26 of Southlake Response)

- A. Southlake prepared this schedule based on cost of projects initiated but not completed by 12/98, forecasted growth, and revised engineering cost estimates. The schedule shows \$849,510 in plant additions for the year 1999, with no increase in plant capacity. The schedule also shows \$1,614,451 in plant additions for the year 2000, with an increase in plant capacity from 0.300 to 0.550 mgd. For 2001, the schedule shows a \$1,621,641 expenditure, which will increase plant capacity to 1.0 mgd. On a cost per gallon added basis, the schedule shows the following:

<u>Year</u>	<u>Cost Per Gallon Added</u>
2000	\$2.94
2001	2.32

We note the following apparent inconsistencies between this information and other information provided by Southlake:

1. Southlake is currently expanding its wastewater treatment plant (WWTP) under FDEP Permit No. FLA010634-001 issued 8/3/98 (for minor modifications), and Permit No. FLA010634 issued 11/26/96 (for addition of clarifier). This expansion will increase the permitted capacity to 0.550 mgd. Based on information submitted by Southlake, we assume that the cost of these permitted improvements is itemized as follows:



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Clarifier	\$449,260
Upgrade Treatment Unit 1	210,500
Bring Treatment Unit 2 On-Line	285,250
Percolation Pond Upgrade	<u>25,000</u>
Total	\$970,010

For the years 1999 - 2001, Southlake is showing the following plant in service additions:

1999 -	\$849,510
2000 -	1,614,451
2001 -	<u>1,621,641</u>
Total	\$4,085,602

Of this amount, only \$970,010 is apparently attributable to existing permitted improvements, which will increase plant capacity to 0.550 mgd. The remainder (\$3,115,592) will apparently increase the plant capacity from 0.550 mgd to 1.0 mgd (the schedule shows a projected plant capacity of 1.0 mgd in the year 2001). This equates to a cost per gallon added of \$6.92 (\$3,115,592 / 450,000 gallons), which is considerably higher than the cost per gallon figures shown in the schedule.

3. For the year 2000, we believe that proposed expenditures are categorized as follows:

Upgrading Unit 1 and Unit 2 for Production of Public Access Quality Effluent	\$1,087,200
Expenditure Under the "Tanks, Aeration, Digestion, Storage" Line Item	289,596
Expenditure Under the "Operation Building" Line Item	27,155
Upgrade Treatment Unit 1	<u>210,500</u>
Total	\$1,614,451

According to the local FDEP office, none of the above improvements have been permitted with the exception of "Upgrading Treatment Unit 1." We also understand that no permit applications have been submitted for these improvements. For the years 1999 and 2000, we believe that the permitted versus un-permitted breakdown is as follows:



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<u>Year</u>	<u>Permitted</u>	<u>Un-Permitted</u>	<u>Total Additions</u>
1999	\$759,510	\$90,000	\$849,510
2000	210,500	1,403,951	1,614,451

The un-permitted expenditure for 1999 (\$90,000) is for filters that are part of the proposed upgrading of Unit 1 and Unit 2 for the production of public access quality effluent.

Based on the above information, we have the following observations regarding the year 1999 and year 2000 programs:

- a. We do not understand why there was a \$90,000 expenditure in 1999 for an item (filters) that has not been permitted.
 - b. Un-permitted expenditures for the year 2000 total \$1,403,951. This amount of expenditure must include significant construction activity. Given the fact that the FDEP permit application associated with this activity has not yet been submitted, it would appear unlikely that this level of expenditure will be achieved in the year 2000.
- B. For the year 2002 through 2007, total proposed plant additions per the schedule is \$10,141,704. This will reportedly increase plant capacity from 1.0 mgd (year 2001) to 3.2 mgd (year 2007), for an increase of 2.2 mgd. The corresponding cost per gallon is \$4.61, which is significantly higher than the cost per gallon figures shown in the table.
- C. In trying to determine how the cost per gallon figures contained in the schedule were derived, it would appear that "gallons added" was calculated by subtracting the current plant capacity from the capacity two years prior. Example calculations are as follows:

<u>Year</u>	<u>Projected Addition (\$)</u>	<u>Plant Capacity (mgd)</u>	<u>Capacity Two Years Prior (mgd)</u>	<u>Gallons Added</u>	<u>Cost Per Gallon Added</u>
2001	1,621,641	1.00	0.30	700,000	2.32
2002	1,780,283	1.20	0.55	650,000	2.74
2003	1,923,092	1.50	1.00	500,000	3.85
2004	2,034,975	2.00	1.20	800,000	2.54
2005	1,763,774	2.20	1.50	700,000	2.52
2006	1,493,956	2.70	2.00	700,000	2.13
2007	1,145,624	3.20	2.20	1,000,000	1.15

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Use of this methodology would appear to underestimate the actual cost per gallon added, since the denominator (gallons added) is apparently incorrect.

Marty, we trust that this preliminary analysis is of benefit. Please advise if you require any additional evaluations.

Sincerely,

Boyd Environmental Engineering, Inc.



James C. Boyd, P.E.

President

cc: Mr. Ralph Spano
Mr. Mike Burton

Sent via fax and U.S. mail, 1/03/00



EXHIBIT I

EXCERPT FROM WATER FACILITIES PLAN

Phase 2 distribution system improvements include a 16-inch water main extended westerly from U.S. 27 to Water Treatment Plant B, and a 20-inch water main extended westerly from Water Treatment Plant B to County Road 545 in Orange County.

Phase 2 improvements at Water Treatment Plant A include installation of a new chlorination facility and provision for the addition of fluoride and polyphosphate.

Phase 3 improvements will include two (2) 1,200 gpm wells at the future Water Treatment Plant B and one (1) additional 1,200 gpm well at Water Treatment Plant A. The proposed improvements will also include the installation of a 250,000 gallon elevated storage tank. A fourth 1,350 gpm high service pump at Water Treatment Plant A, and a 3,000 gpm high service pump will be installed at Water Treatment Plant B.

Phase 3 distribution system improvements include a 16-inch water main extended southerly along County Road 545 approximately 1.3 miles to a County Road, and a 12-inch water main extended westerly along the County Road to connect to an existing 12-inch water main in the Summer Bay development near the southeastern corner of Southlake Utility service area.

Phase 4 improvements include installation of two additional 1,200 gpm wells and one 3,000 gpm high service pump at Water Treatment Plant B.

Phase 5 improvements include installation of one additional 1,200 gpm well and one additional 3,000 gpm high service pump at Water Treatment Plant B.

1.5.2 Total Cost for Selected Plan

The total cost for the selected plan is summarized in Table 1-1.

Phase	Construction Cost	Total Project Cost
1	*	*
2	\$2,638,000	\$3,297,500
3	\$1,704,000	\$2,130,500
4	\$514,000	\$642,500
5	\$284,000	\$355,000
Total	\$5,140,000	\$6,425,500

* Current Improvements are to be financed by Southlake Utilities

EXHIBIT II
SCHEDULE FROM WATER FACILITIES PLAN

**Table 7-3
Selected Plan for Water Supply System Improvements**

Phase/ Year	Improvements	Projected Max Day Demand (MGD)	Total Well Capacity (MGD)	Firm Well Capacity (MGD) ¹	Firm HS Pump Capacity (MGD) ¹	Storage Requirement (MG) ²	Available Storage (MG)
2/ 2000	<ul style="list-style-type: none"> • Construction of WTPB with 300,000 gallon ground storage facility, high service pumping facility with three (3) 1,350 gpm high service pumps, two (2) 15,000 gallon hydro tanks, and chlorination facility • Raw water main to connect Well E to WTPB • Installation of two (2) 1,200 gpm wells at WTPB • Installation of Chlorination facility at WTPA • Fluoride and polyphosphate equipment at WTPA and WTPB • Installation of 20-inch water main to convey water from WTPB to Orange County and 16-inch water main to convey water from WTPB to existing water main at U.S. 27 	5.36 ¹	10.37	6.91	7.78	0.111	0.443
3/ 2005	<ul style="list-style-type: none"> • Installation of 1,200 gpm well and raw water main at WTPA • Installation of two (2) 1,200 gpm wells at WTPB • Installation of a 250,000 gallon elevated tank • Installation of a 1,350 gpm high service pump at WTPA and a 3,000 gpm pump at WTPB • Installation of a 16-inch water main to create system loop 	8.10 ¹	15.55	12.1	11.66	0.169	0.443

**Table 7-1
Selected Plan for Water Supply System Improvements**

Phase/ Year	Improvements	Projected Max Day Demand (MGD) ¹	Total Well Capacity (MGD)	Firm Well Capacity (MGD) ²	Firm HS Pump Capacity (MGD) ³	Storage Requirement (MG) ⁴	Available Storage (MG)
4/ 2010	<ul style="list-style-type: none"> Installation of two (2) 1,200 gpm wells at WTPB Installation of 3,000 gpm high service pump at WTPB 	11.13 ¹	19.0	15.55	15.98	0.231	0.443
5/ 2015	<ul style="list-style-type: none"> Installation of 1,200 gpm well at WTPB Installation of 3,000 gpm high service pump at WTPB 	14.16 ¹	20.74	17.28	20.3	0.295	0.443

¹ Projected demand is estimated for 2005
² Projected demand is estimated for 2010
³ Projected demand is estimated for 2015
⁴ Projected demand is estimated for 2020
⁵ Firm well capacity based on one well off-line at each plant
⁶ High service pumping capacity based on largest pump off-line at each plant
⁷ Storage requirement based on 30 minute chlorine contact time