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MEMORANDUM

TO: Nils Gerling, Chairman
Members, Tuxedo Planning Board

FROM: Jeffrey Marsden, P.E., Gary Loesch, P.E.

RE: **TUXEDO RESERVE-WATER SUPPLY AND WASTEWATER RESPONSE REVIEW**

DATE: April 14, 2009

CC: Andrew Dance, Related Companies
Tuxedo Town Board
Bonnie Franson, AICP
Thomas Egan, Esq., Planning Board Attorney
Larry Wolinsky, Esq., Town Attorney

In H2M’s continued efforts in reviewing the various documents submitted for the Tuxedo Reserve project application to amend the Special Permit and Preliminary Plan, the following additional comments and questions have come up in respect to the water supply and wastewater. This memorandum is being included as part of the Planning Boards letter to the Town Board, however it still requires review by the planning board.

Performance Standards - D. Sanitary Sewer

1. Wastewater Design Flow

A new column “Average Daily Domestic Sanitary Flow (gpd)” has been added. This column is unacceptable and needs to be deleted. The wastewater flow rates per housing unit based on the number of bedrooms that was previously adopted (and consistently used in numerous reports including the latest submittal) are to be used in determining wastewater flow rates.

Performance Standards - D. Sanitary Sewer & E. Water

1. Wastewater Design Flow & Water Demand

As indicated in the most recent review comments, the 0.1 gallon per sq. ft guideline for commercial / retail use is an acceptable guideline for “dry uses”, which is essentially what the initial application envisioned (commercial / retail with the exception of small 3,000 square foot deli). The recent submittals have included proposed uses that have the potential to require a significantly higher water demand and a corresponding generation of greater sanitary flows. The following information is needed relative to the proposed uses:

a.) Neighborhood retail & commercial has increased from 3,000 to 30,000 square feet - What are the proposed uses and corresponding square footage? If a restaurant or cafe is being proposed, please



submit the square footage, number of seats / tables and anticipated maximum occupancy. It would be advantageous for the applicant to submit this information at this time. The requested information can then be utilized to generate more realistic water demand and wastewater flow rates. Absent this information, it is likely that the Town would need to impose restrictions on the types of facilities and uses that would be accepted in the future which could severely limit the applicant's long term vision.

b.) The private community club has increased by a factor of four from 8,800 to 35,000 square feet. What facilities are being proposed as part of the community club? Is a floor plan available? Please provide information on the proposed:

- Facilities, uses and square footage – identify all areas that will result in a water demand.
- Locker rooms / showers / bathroom facilities.
- Restaurant / bar facilities – square footage, number of seats / tables and anticipated maximum occupancy.
- Catering - if yes, provide the anticipated maximum occupancy.

c.) Active Adult Social Club and Private Pool Club – please provide information on locker rooms / showers / bathroom facilities and all other facilities that will result in a water demand.

d.) Market Stand - Will there be any food preparation facilities or other facilities that result in a water demand?

Technical Memorandum dated March 13, 2009

Water Supply and Energy (Pages 38-39)

Table 21 excludes the water demand of 10,000 gpd that was previously allocated to the school. While a footnote was added documenting that the school site was not included, this table is inconsistent with the other documents submitted by the Tuxedo Reserve and therefore the school water demand should be added to the table. Changes that result from our comments and questions regarding the performance standards relative to the water demand for the 103,000 square feet of commercial / retail space also need to be incorporated into this table.

Sanitary Sewer Services (Pages 39-40)

Table 23 excludes the estimated wastewater flow of 10,000 gpd that was previously allocated to the school. This is inconsistent with the other documents submitted by the Tuxedo Reserve and therefore the wastewater flow from the school should be added to the table. Changes that result from our comments and questions regarding the performance standards relative to the wastewater flow rates for the 103,000 square feet of commercial / retail space also need to be incorporated into this table.

Comments on Applicant Responses to water supply and wastewater issues.

Comment 49 – As indicated in our prior comments, Tuxedo Reserve has proposed changes in the use and square footage of the proposed commercial / retail component of the project. This comment can not be closed until sufficient information is provided on the proposed 103,000 square footage of commercial / retail space. See requested information under our comments on the Performance Standards.

Comment 50 - This comment is still open.

Comment 51 - As indicated on prior comments, Tuxedo Reserve has proposed changes in use and square footage of the proposed commercial / retail component of the project. This comment can not be closed until sufficient information is provided on the proposed 103,000 square footage of commercial / retail space. See requested information under our comments on the Performance Standards.

Comment 227 - This comment was not addressed. Table 21 excludes the water demand of 10,000 gpd that was previously allocated to the school. While a footnote was added documenting that the school site was not included, it is inconsistent with the other documents submitted by the Tuxedo Reserve and therefore the school water demand should be added to the table. Changes that result from our comments and questions regarding the performance standards relative to the water demand for the 103,000 square feet of commercial / retail space also need to be incorporated into this table.

Comment 229 - Table 23 excludes the estimated wastewater flow of 10,000 gpd that was previously allocated to the school. This is inconsistent with the other documents submitted by the Tuxedo Reserve and therefore the school wastewater flow rate should be added to the table. Changes that result from our comments and questions regarding the performance standards relative to the wastewater flow rates for the 103,000 square feet of commercial / retail space also need to be incorporated into this table.

Comment 312 - Table 21 excludes the water demand of 10,000 gpd that was previously allocated to the school. While a footnote was added documenting that the school site was not included, it is inconsistent with the other documents submitted by the Tuxedo Reserve and therefore the school water demand should be added to the table. Changes that result from our comments and questions regarding the performance standards relative to the water demand for the 103,000 square feet of commercial / retail space also need to be incorporated into this table.

Comment 427 – This item can be closed - the applicant has agreed to the requested wastewater peaking factor and infiltration allowance.

Comment 428 – This item is still open - The applicant's response is unacceptable since the performance standard regarding the minimum separation distance between a water supply well and a sewer main is incorrect and needs to be changed to reflect the Orange County Dept. of Health requirements.

Comment 435 – The applicant provided justification for the maximum day demand factor utilized in the water supply calculations. The resultant water supply (375,520 gpd) and fire flow (240,000 gpd)

requirements yield a minimum water storage tank size of 615,520 gallons. However, closure of this item is subject to the applicant's submittal of the requested information regarding the proposed 103,000 square footage of commercial / retail space.

Comment 437 – The applicant provided justification for the maximum day demand factor utilized in the water supply calculations. The resultant water supply (375,520 gpd) and fire flow (240,000 gpd) requirements yield a minimum water storage tank size of 615,520 gallons. However, closure of this item is subject to the applicant's submittal of the requested information regarding the proposed 103,000 square footage of commercial / retail space.

Comment 462 – This item is still open and needs to be addressed by the applicant so that their vision as to how the proposed 103,000 square footage will be developed can be reconciled with the required project water demand and wastewater generation rates. To date, the applicant has requested that the Town accept a blended rate of 0.1 gpd per square foot. While this rate is sufficient for "dry" retail and convenience stores, office space, wet stores with out food processing, it is not the basis of design used for club and catering facilities, restaurants and wet stores with food processing. It is requested that the applicant submit the information requested in response to our comments on the performance standards. The requested information can then be utilized to generate more realistic water demand and wastewater flow rates. Absent this information, it is likely that the Town would need to impose restrictions on the types of facilities and uses that would be accepted in the future which could severely limit the applicant's long term vision.