Mr. Brad Martin, P.E. Martin Engineering 1060 Lynnhaven Pkwy, Suite 111 Virginia Beach, VA 23454

> RE: Mini Price Warehouse 4300 & 4340 West Broad Street File No. 5025; POD-031-09

Dear Mr. Martin:

The Department of Public Utilities has completed a review of the water and sewer plans that are part of the plan of development submitted to the Planning Department on September 16, 2009.

DPU recommends approval of these plans by the Planning Commission.

Please address the following comments before submitting the construction plans for signature.

## General

- 1. The City of Richmond provides water and sewer service to the existing facility. This new facility will continue to receive water and sewer service from the City. Therefore, utility construction must comply with requirements of the City of Richmond DPU.
- 2. Since County Code requires that DPU approve the adequacy of fire protection for this plan of development, the following must be provided:
  - ISO fire flow calculations must be correctly determined and shown on the plan.
  - Sufficient hydrants shall for the calculated necessary fire flow(NFF) and shall be located to meet maximum hose lay requirements (350') and minimum setback requirements (50' from building) in accordance with DPU Standards.
  - Engineer shall provide verification from the City of Richmond DPU that the NFF can be provided to the site.

## Sheet 4

3. Show evidence on the utility plan of a sprinkler system (i.e., fire line connection from main to building, etc.) for the entire building, as indicated by the site data building information and the ISO fire flow estimate calculations. The utility plan does not show a fire line connection to the building.

## Sheet D1

- 4. Since the City will provide water and sewer service, construction plans for water and sewer improvements will be as approved by the City of Richmond. All details including the meter service and hydrant details and the public utility water and sewer notes will be per City of Richmond standards.
- 5. Revise the ISO fire flow estimate calculations as follows:
  - The total floor area must be based on ground floor area plus 50% of other floors per ISO methodology.
  - Round the construction factor (Ci) value to the nearest 250 gpm.
  - Identify the buildings (direction,etc.) for which each exposure value applies. Show these buildings on the utility plan.
  - Calculations assumed a 50% reduction for a full building sprinkler system. Please provide evidence of this on the utility plan.
  - No more than 3500 gpm required fire flow can be provided without additional onsite water storage facilities.
  - At least one (1) hydrant will be required for every 1000 gpm in required fire flow. This requirement does not include any hydrant that might be necessary to charge the building sprinkler system.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4501 or Hyung (John) Yi at 501-4511.

Sincerely,

M. Clu

John Clark, P.E. Utilities Engineer

cc: Michael D. Sifen, Inc.

bc: R. Claytor

A. Seal, Tyrone Watkins

J. Yi

Planner, Greg Garrison

JLC/cww