3.13 INFRASTRUCTURE AND ENERGY COMMENTS AND RESPONSES

3.13.1 Introduction

As documented in the DEIS, "[t]he Stateline Retail Center would be serviced by private wastewater Subsurface Sewage Treatment Systems (SSTS) and private community water supply systems. Electrical service would be provided by New York State Electric & Gas (NYSEG)." Since the submission of the DEIS, the project engineer has updated the Wastewater Report (Appendix G) to be consistent with the modified proposed action and provide additional detail relating to the wastewater flows and SSTSs.

Wastewater and sewage service would be provided by on-site facilities that would be constructed as part of this project. Design flow for the proposed project is estimated at 4,900 gallons per day (gpd) for the retail component and 1,200 gpd for the office building.

As previously noted, the engineer's Wastewater Report documents the test results and details of the design of the wastewater treatment facilities. The wastewater design flow is based upon actual water usage at facilities similar in design and usage as the proposed Project. The retail portion of the Project is proposed to be comprised of dry retail, office space, personal service, a cafe, community space and a pharmacy. Water use and wastewater discharge would therefore be primarily associated with restroom usage. The Project includes several water conservation techniques, including the use of water saving fixtures, and low-flow toilets, to reduce water use and therefore wastewater flow. In addition, the irrigation system will collect and store roof runoff for care of the landscaped areas.

The reference design standards for water and wastewater flows provide estimates of water usage covering a broad range of usage categories. The New York State Department of Conservation (NYSDEC) publication "Design Standards for Wastewater Treatment Works, 1988" provides two alternatives for establishing design flows: hydraulic loading rate tables or water usage data. A daily design flow rate must be calculated using either method. The daily design flow rate is a conservatively high estimate of daily flow used by the engineer in the design of the water and sewer infrastructure.

The wastewater design flows provided in the attached report are based upon actual water usage of facilities similar for the representative uses with the exception of the office building and community use/office/personal services facility. In the last two instances design flows are based on the appropriate hydraulic loading rate. The NYSDEC requires a factor of safety when employing the actual water usage information. This factor of safety is built into the hydraulic loading rates provided by the State. Refer to Appendix G for all details relating to the project wastewater flows and treatment systems.

3.13.2 Comments and Responses

Comment 3.13-1 (Mr. Don Cuomo, Public Hearing, July 14, 2008): [W]hat's the plan for accessing the SSTS?

Response 3.13-1: *The proposed action (DEIS and FEIS) includes minor improvements to the existing farm road that runs between US Route 6 and the farm field that will be the site of the SSTS. The improvements will be done in conformance with an avoidance*

plan developed by the Principal Cultural Resources Investigator, the Project Engineer, and the Applicant. As described in the DEIS:

> *"The existing traveled way, approximately eight feet wide at its narrowest point, would be upgraded to 12 feet in width and stabilized with 6" of crushed stone. In the vicinity of the southern foundation the existing traveled way will be widened eastward toward the stone wall to avoid any cultural resources adjacent to the foundation remains to the west. The entire length of the access road will be lined on both sides with orange construction fencing to prevent disturbance to the adjacent areas. The proposed upgrades to the access road would not significantly impact the cultural resources identified in Area A."*

Comment 3.13-2 (Mr. Don Cuomo, Public Hearing, July 14, 2008): How are you going to get the effluent over there?

Response 3.13-2: *Raw sewage from each of retail Buildings A, B, C and D will be captured in septic tanks. The septic tanks will remove solids by settling them to a precast concrete duplex pump station. Effluent will then be pumped from the pump stations through a 2" to 3" force main and into the main SSTS area. As noted in the DEIS:*

> *"The installation of the force main would result in a short-term impact to Watercourse NYC-B and its buffer, located to the west of the eastern SSTS. The pipe and watercouse crossing are necessary to convey wastewater from the central developed portion of the property to the SSTS. A trench, approximately 3 feet wide and 4 feet deep will be excavated for the installation of the force main. Silt fencing, check dams and other methods to minimize siltation and sedimentation will be utilized throughout the installation process. The disturbed area would be returned to existing grade and replanted with appropriate native vegetation."*

Since the submission, the Applicant has reviewed other methods of installing this force main to minimize or eliminate impacts to the regulated area. As a result, directional boring will be used to install the proposed force main under the existing watercourse between the proposed retail center and the SSTS area in the eastern portion of the site. These practices will permit the installation of the force main without creating disturbances to the stream bed, and eliminate the need for a permit from the USACE.

Comment 3.13-3 (Mr. Jesse M. Vazquez, PhD., Letter #2, September 28, 2008): What assurance does the DEIS report give to the residential community around the proposed site regarding the use of well? How do we know that tapping into bedrock wells at the proposed site will not have an adverse impact on those using wells for homes in the surrounding area? What will the immediate impact be, if any, and what might the long term consequences be for all of the wells in the surrounding community? This is worrisome; can we get assurances, supported by data, that this is not an issue? There is a sentence in the report that suggests that all of these figures are ball park figures based on other similarly sized retail and office facilities, however, underground well formations and sources can differ dramatically.

Response 3.13-3: *Three wells are proposed to supply the potable water required for the Proposed Action. The minimum yield for the proposed wells is five gallons per minute*

(gpm) per well. The proposed water usage for the project is equivalent to six, four bedroom, single-family residences. This water usage has not been identified as a significant issue due to the low proposed usage in relation to the size of the property and the fact that only one residential well is located within 200 feet of the subject property. The distance between the closest residential well and the on-site well is greater than 200 feet.

Comment 3.13-4 (AKRF, Letter #5, March 6, 2008): The applicant should investigate reducing the flows through the use of recycling systems. This would reduce the water use as well as the discharge volume to the absorption fields. The report says that this alternative was not investigated because it involves a WWTP, which the NYCDEP does not allow. The NYCDEP would allow such a practice as long as there is a subsurface discharge. It is an alternative worth investigating further.

Response 3.13-4: *A wastewater recycling system would require the construction, operation, and maintenance of a Wastewater Treatment Plant (WWTP). As noted in the comment a WWTP is permitted by the NYCDEP regulations as long as it terminates with a subsurface discharge. Although the introduction of wastewater recycling would reduce water usage and wastewater volumes it would come at a significant cost to the project. The Applicant has investigated the incorporation of this system into the project. On account of the substantial cost related to its implementation and maintenance it is the Applicant's opinion that its use cannot be justified.*

The Applicant has allocated significant land area for the siting of a subsurface sewer treatment system (SSTS) and has performed extensive field testing and analysis in support of its design. The findings indicate the SSTS will meet regulatory requirements and mitigate wastewater related impacts to the maximum extent practicable, in accordance with Putnam County and New York State Health Department requirements.