



ENGINEERING DIVISION

27 Sakonnet Ridge Drive
Tiverton, RI 02878
401.816.5385

March 21, 2021

Mr. Tim Fay, President
STONESTREET Corporation
1275 Wampanoag trail
East Providence, Rhode Island 02915

**RE: Baypointe Phase II/III & CEDA
New Sewer Pump Station
Wareham, MA**

Dear Mr. Fay,

As you are aware, the basis of design with respect to flows for the new pump station in Phase II/III was as follows:

- 1) The Existing Baypointe Pump Station has the following current contribution of flow: 20,000 gpd (this is a peaked number and includes existing residential flow plus the Stonestreet contribution based on average 2020 and 2021 water usage). An additional 2,640 gpd is proposed to be added to this station based on the eight (8), 3-bedroom units from Phase II/III (Title V @ 110 gpd per bedroom which is already peaked). The total proposed flow in the existing station would therefore be 22,640 gpd. This flow is pumped out of the station via a 4" diameter PVC line, through the golf course and out to Onset Avenue.
- 2) The remaining proposed Phase II/III units will discharge directly to the new pump station via a new gravity main. There are 110 bedrooms which would yield a flow of 12,100 gpd (Title V @ 110 gpd per bedroom which is already peaked).
- 3) The proposed CEDA development (52 units, 118 bedrooms) will account for a total of 15,620 gpd (Title V @ 110 gpd per bedroom which is already peaked). This flow is proposed to be transported over to the new gravity main in Phase II (Starboard Drive) via an EONE quadraplex low pressure pump chamber located on the CEDA property.



On January 26, 2022 a representative from Boydco and RDS Equipment, Inc. performed a draw down test on each of the two pumps at the existing Baypointe Pump Station. The drawdown test concluded that each pump operates at approximately 125 gpm. Based on this operating condition, the existing station in theory could handle up to 180,000 gpd of inflow which is much larger than the 22,640 gpd projected in post-development conditions referenced in our assumptions above.

Based on our most current project plans, the existing 4" PVC force main that discharges out of the existing Baypointe Pump Station will be rerouted out of the fairway about 1,300 feet from the existing station and enter the new pump station where it is then pumped out with the other flows from Phase II/III and CEDA and ties back into the existing 4" PVC force main at a point on the private property just prior to entering Onset Avenue. The change in this design configuration has been calculated to yield an increase of the outflow rate from the existing Baypointe Station to 200 gpm.

The proposed pump station in Phase II/III was previously designed to pump out at a rate of 135 gpm. The proposed flows from Phase II/III and CEDA equate to approximately 20 gpm, by calculation. In order to adequately accommodate the 200 gpm coming from the existing station, a new 8-foot diameter equalization manhole has been added to design and is proposed to be installed adjacent to the wet well of the new station in order to provide additional storage for the flows received directly from the existing station. The additional storage will allow the new station sufficient time to pump out all flows at the operating flow rate of 135 gpm. Installing the new 8-foot diameter structure per the most current plans, thus requires no change in the previously designed/approved pump station aside from the second inlet from the new structure.

The above design configuration has met all design criteria and conditions required for the new system including the contribution of the existing station.

Should you have questions or require additional information, please do not hesitate to contact my office.

Sincerely,
Principe Engineering, Inc.

A handwritten signature in black ink, appearing to read 'T. J. Principe, III, P.E.', with a stylized flourish at the end.

Thomas J. Principe, III, P.E.
President

xc: Town of Wareham Planning Department & Charles Rowley; Chris Briere, Boydco; File

