

TOWN OF BRISTOL
COMMUNITY DEV.

2026 JAN 23 AM 10:30

SUPPORTING MATERIAL FOR

Spinard's Presentation before the Bristol Planning Board

Public Meeting on Proposed Gooding Ave. Hotel January 8, 2026

For Peer Engineer Review

There is a serious flooding problem downstream of the location of the proposed hotel

Table of Contents

The facts are:

- There is a bad flooding problem downstream of the proposed development that affects neighborhoods, Mount Hope High School, Gooding Avenue, Chestnut Street and Hope Street. (see pictures)
- The flooding issue is a concern of the neighborhood and Town, as expressed in the Petition signed by over 100 residents, and 35 opposition letters to RIDEM granting a wetland alteration permit. (see letters)
- One of the major functional values of wetlands is flood storage and mitigation of downstream flooding. (see slides)
- The Town of Bristol had commissioned a flood study, *Silver Creek Drainage Study*, Bristol, RI (Beta Engineers-Scientists, November 2007) to identify the flooding problem and recommend mitigation measures (see attached Study)

Infiltration

Infiltration used by the Applicant and agreed by RIDEM to reduce the volume of flood flow

Table of Contents

- **Copy of infiltration statement by Applicant “Stormwater Management Report.”**
- **Copy of RIDEM Engineer Review 6/30/2023**

Soil Textural Classification and Infiltration Rate

Table of Contents

- **NRCS Soil Survey and Soil Description and Test Pit Location**
- **2.0 Site Conditions 2.1 Soils Stormwater Management Report (DiPrete)**
- **Pittstown Soil Sample Photographs from test pit**
- **Soil testing sieve analysis**
- **Sieve analysis results**
- **Infiltration Rates based on *RI Stormwater Design and Installation Standard Manual*, Table 5.3 Design Infiltration Rates for Different Soil Textures**
- **3.5.1 Soils Stormwater Management Report (DiPrete) “soil has a texture of sandy loam**
- **RIDEM review of SITC soils (same as Applicant used) 6/10/2015**
- **Soil classification of Pittstown and infiltration for new high school Stormwater Management Report (Pare Corporation June 2025)**

Errors within HydroCAD stormwater system model

Table of Contents

- **Slide Stormwater Model System**
- **Slide Modeling Stormwater Management System HydroCAD**
- **Slide Runoff Hydrographs**
- **HydroCAD Routing Diagram comparing DiPrete and Recreated Models**
- **Summary HydroCAD analysis DiPrete 100-year storm event**
- **Summary HydroCAD analysis Recreated 100-year storm event**
- **Slide Model Shows Error Results when using the new infiltration rate of 0.27 in/hr**
- **Slide explanation of Error Messages**
- **Warning messages explained**
- **Detailed printout recreated HydroCAD analysis 100-year storm event with revised infiltration rate (0.27 in/hr)**

Downstream Analysis

Table of Contents

- **Slide - Known Flooding Problems and Coincident Peaks requiring a Downstream Analysis**
- **Slide – Possible Coincident Peaks**
- **Pertinent sections of the *RI Stormwater Design Manual and Installation Manual* related to Downstream Analysis**

Downstream Analysis – Wrong Method completed by Applicant

Table of Contents

- **Summary of RIDEM request for DiPrete to perform a Downstream Analysis**
- **RIDEM review by Engineer dated 1/04/2016 requesting downstream analysis**
- **RIDEM review by Engineer dated 12/12/2017 requesting downstream analysis**
- **DiPrete's response to RIDEM review by the Engineer dated 01/23/2018, requesting downstream analysis**
- **RIDEM review by Engineer dated 3/12/2018 (missing from RIDEM Wetland File) requesting downstream analysis**
- **DiPrete's response to RIDEM review by the Engineer dated 04/10/2018, requesting downstream analysis**
- **RIDEM review by Engineer dated 7/12/2022 requesting downstream analysis**
- **DiPrete's response to RIDEM review by the Engineer dated 1/04/2023, requesting downstream analysis**
- **Reach analysis using HydroCAD for downstream analysis**
- **RIDEM review by Engineer dated 06/30/2023 accepted DiPrete's analysis**
- **Graphic representative of Uniform and Non-Uniform Flow**
- **Section of HydroCAD Stormwater Modeling System Manual indicating that the HydroCAD is not to be used for determining constant river flow and flood elevations**
- **Comment on DiPrete HydroCADreach model results**

Downstream Analysis

- Downstream Analysis – HEC RAS
- Slide HEC RAS (River Analysis)
- Slide – Natural Streams Characteristics
- Slide – HEC RAS Silver Creek Cross Section
- Slide – HEC RAS Silver Creek Cross Section
- The Standard Step Procedure in HEC RAS
- HEC RAS Abbreviations
- Sample HEC RAS analysis printout
- Slide Silver Creek Flood Examination (Spinard)
- Silver Creek Flood Examination Report

Slide Storm Chamber SC-740 is being discontinued