



**Planning & Development**  
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### Memo

Date: March 29, 2023

To: Planning Board  
Trillium Engineering

From: Michael G. Livingston, Town Engineer/Planner

Re: Seahorse Resort – Drainage Review Memo – Tax Map 135, Lot 13

### Drainage Analysis/ Model Review/Plan Review

#### Information Provided

- Stormwater Management Report dated December 28, 2022 by Arthur Colvin, Jr. PE #6065 and Eric Dube PE #12630 of Trillium Engineering Group
- Sheet C104 – Pre-Development
- Sheet C105 – Post-Development
- Sheet C106 – Offsite Watershed
- Sheet C101 – Proposed Grading & Drainage Plan
- Sheet C102 – Partial Proposed Site Grading & Utilities Plan
- Sheet C103 – Partial Proposed Site Grading & Utilities Plan
- Sheet C200 – Site Details
- Sheet C300 - Erosion Control Details

#### Methodology:

HydroCad utilized – good, Rainfall intensities are current – good, Type III – good, Pre vs Post Areas - good

#### Pre- Development

- Basins: Limits, good  
Areas and surface types, good  
Flow paths, good
- Basin A-C should connect to 4R vs WP

Analysis Points: Good, located at each point leaving the site

#### Pond:

WP- Existing Pond model needs additional volume up to 58.0 or 57.8+/- .25 yr. peak of 57.54 exceeds the current modelled top elevation of 57.0.

**Post- Development** Total area equal to Pre of 24.274 acre, good

**Basins:** Basin limits appear well modelled matching the proposed grading  
Surface areas appear accurate for the proposed development  
Flow paths appear appropriate for each basin.

- Basin A-C should connect to CB-1 vs WP

**Ponds:** Good modelling of each CB/DMH as ponds

- CB-1 modelled with a 12" outlet vs 18" on C102
- RW modelled with a 12" outlet vs 18" on C102
- CB-2(DMH-1) modelled with a 12" outlet vs 18" on C102
- RW peak elev.(25 yr.) at 59.64, adjacent EP at 59.05, flooding of road to be prevented, this will be compounded by the re-routing of A-C.
- CB-2 peak elev. 59.43(25 yr.), Rim at 60.5, but this will be increased with re-routing of A-C

WP peak elev. 57.71, new berm at 58.5, good.

- Spot elevations needed on top of berm, C102.
- Overflow modelled at elev. 58.4, C102 depicts as 58.0, spillway data detail needed on C101 & C200

DP1 peak elev. 52.89 (25 yr.), berm at 54.0, good

**Analysis Points:** same as Pre, good

## **Report/Results**

Report should be titled Site Plan vs Subdivision

Narratives are good

Summary Table and Conclusion on page 4 of the Report conclude that stormwater runoff will not have negative impacts. Pre vs Post results show reductions at the majority of storm events or insignificant changes. Table to be updated after the above model comments are addressed.

## **Design**

The drainage design depicted on Sheets C102 and C103 are well depicted and labelled.

Contours and spot elevations provided, good.

Adjustments may be needed to address the model comments above.

## **Erosion Control**

Sheets C102 and C103 depict sedimentation barrier locations, good.

- A stabilized entrance may be appropriate. A location on C101 should be added.

Sheet 300 contains notes and details to be adhered to. All measures are standard Best Management Practices (BMPs).

- A stabilized construction entrance detail should be added.