



Memorandum

To: Planning Board
Town of Kent

Attn: Russ Fleming
Chairman

From: Julie S. Mangarillo, P.E., CPESC

Subject: Erosion Control Permit

Date: March 14, 2013

Project: Chuang Yen Monastery
TM # 19-1-40.1

The following material was reviewed:

- Transmittal letter from Hudson Land Design, dated 2/18/2013
- Aerial Photo
- Swale capacity calculations, prepared by Hudson Land Design, dated 2/15/2013
- Disclosure of Business Interest Form
- Stormwater Bond Estimate, dated 2/19/2013

New comments are shown in **bold**.

The following is offered for consideration by the Board from a memo dated 9/5/2012:

2. Refer to Town Code Chapter 66, Steep Slope Protection and Stormwater Management §66-6:

- g. §66-6 B(2)(h) – Provide additional information regarding the rain barrels, associated underground piping and surface discharges. We recommend having multiple outlets for the rain barrel piping instead of discharging at one location. Currently the discharge from all of the rain barrels is discharged on the east side of the driveway.
- i. The cover letter dated 11/15/2012 indicates the rain barrels have been eliminated for visual reasons. Proposed roof gutters will be piped to a discharge location on the east side of the driveway. The comment above regarding the recommendation to have multiple outlets for the roof runoff remains valid, particularly with the elimination of the runoff detention provided by the rain barrels. The roof runoff piping discharge locations should mimic current conditions, with the runoff from Kuan Yin Hall roof being directed to the west of the driveway. Proposed roof drains are also shown being connected to the Dining Hall and Great Buddha Hall, but the size of the roof areas contributing is not shown.

There is no information provided downstream of the discharge point from the proposed drainage sump area. Is there a stabilized watercourse that can handle the concentrated flow from larger storms? With these large roof areas being collected and discharged in one location, flow

calculations may be required to determine that the discharge will have a non-erosive velocity and that there will be no downstream impacts.

Even though water quality treatment and runoff reduction are not required for this project, refer to the New York State Stormwater Management Design Manual, August 2010, Chapter 5, Section 3.5 for some guidelines on rooftop runoff.

- ii. The 1/11/2013 cover letter states, "the proposed swale discharges to an existing drainage ditch, which is now proposed to be widened and rock-lined to match the proposed swale. Though the survey did not pick up the limits of the ditch, the proposed improvement as measured in the field to be an approximate 160' extension of the proposed rock-lined swale, which then discharges to an existing, deep rock lined swale, which itself discharges to an existing watercourse on the property."

Provide additional documentation of the existing watercourse, such as an aerial map. The extent of the roof area to be connected to this gutter system is not shown. Only portions of the roofs for the Great Buddha Hall and Dining Hall are shown on the drawings. Indicate how much roof area will be contributing to the gutter drainage system.

Demonstrate that the additional roof area directly connected to the existing drainage swale will not cause erosion or downstream flooding, such as by providing pre and post construction peak flow calculations

Consider disconnecting some of the roof runoff to allow the runoff to infiltrate or create a longer flow path before reaching the existing drainage swale, such as in the garden area adjacent to the Kuan Yin Hall.

- iii. **The 2/18/2013 cover letter provides square footages for roof areas connected to the proposed drainage system. It indicates that the Dining Hall roof will not be connected.**
 - 1. **The Landscape Improvement Project Master Plan, revised 12/31/2012 and Erosion Control Plan, revised 12/31/2012 show piping coming from the Dining Hall. Clarify what that piping is picking up or remove it from the drawings.**
 - 2. **Add the roof square footages to the drawing.**
 - 3. **Show/label the additional roof area to be directed to the drainage swale compared to existing conditions (western half of Kuan Yin Hall roof).**

The following is offered for consideration by the Board from a memo dated 12/7/2012:

- 9. The applicant is responsible for full payment of actual costs of erosion control inspections. An initial inspection fee deposit of \$1000 is to be paid to the Town in accordance with the Town of Kent Fee Schedule.
 - a. The 1/11/2013 cover letter acknowledges this requirement.

New Comments:

1. On the aerial photo submitted, identify where and how the stream crosses the driveway. If possible, trace the general path of the stream to the pond.
2. Review the previously submitted Notice of Intent (NOI). Make sure it reflects the additional area of disturbance for drainage swale improvements. If revision is needed, submit a revised, signed copy.
3. Provide completed drawing sets and copies of the SWPPP.
4. We recommend the bond estimate of \$16,844 dated 2/19/2013, prepared by Hudson Land Design be accepted for the bond amount and recommended for approval by the Town Board.


Julie S. Mangarillo, P.E., CPESC

cc: Planning Board via email
Julie Butler via email
Neil Wilson via email
Bruce Barber via email
Jon Bodendorf, PE, Hudson Land Design, via email
12-261-197