SCHEDULE D – SUPPLEMENTAL NARRATIVE

EDGEMARTH HILL ROAD, WESTPORT, CT

1. **Explain/submit information showing why/how the proposed activity as located within Waterway Protection Lines will not cause flooding, drainage, erosion and/or related conditions hazardous to life and property and will not have an adverse impact upon the flood-carrying and water-storage capacity of the town's waterways, including but not limited to the impact upon flood heights, hydrological energy flow, maintenance of essential and natural patterns of water circulation, drainage and basin configuration and maintenance of fresh- and saltwater exchange through the placement of culverts, tide gates or other drainage flood-control structures. (sec.148-8)**

   The proposed activity will not cause flooding, drainage, erosion, or related conditions hazardous to life or property because all improvements are located within the limits of the existing private roadway and match existing grades, thereby preserving the current drainage patterns and watershed characteristics. The design does not involve any encroachment into the floodplain, reduction of flood-carrying capacity, or alteration of water storage areas within the town's waterways.

   The project improves hydraulic conditions by capturing and controlling roadway runoff through the installation of new catch basins, storm piping, and rip-rap energy dissipation structure sized to convey and safely discharge the 100-year storm event. These measures reduce uncontrolled surface flow down the steep roadway, thereby lowering erosive velocity and minimizing the risk of downstream scour or sedimentation.

   The proposed bio-swale, designed in accordance with the Connecticut Stormwater Quality Manual, will maintain natural water circulation and drainage basin configuration while promoting infiltration and sediment capture. No culverts, tide gates, or other flood-control structures are being installed or modified in a manner that would impede hydrologic energy flow or alter essential patterns of water exchange. The overall effect of the project will be to reduce peak runoff energy and enhance the protection of adjacent wetland resources.

2. **Explain/submit information showing why/how the proposed activity as located within the Waterway Protection Lines will not cause water pollution, erosion and/or environmentally related hazards to life and property and will not have an adverse impact on the preservation of the natural resources and ecosystems of the waterway, including but not limited to impact on ground or surface water, aquifers, plant and aquatic life, nutrient exchange and supply, thermal energy flow, natural pollution filtration and decomposition, habitat diversity, viability and productivity and natural rates and processes or erosion and sedimentation. (sec. 148-9)**

   The proposed roadway improvements will not cause water pollution, erosion, or environmentally related hazards because the project is designed to improve stormwater quality and control runoff before it reaches the adjacent wetland system. All work will take place within the existing roadway footprint, avoiding direct disturbance to wetlands, watercourses, or vegetated buffer areas.

Runoff from the repaved roadway will be collected by newly installed catch basins and conveyed via storm piping to rip-rap apron sized for the 100-year storm event, which will dissipate flow energy and reduce erosive potential. The discharge will flow into a vegetated bio-swale designed in accordance with the Connecticut Stormwater Quality Manual, which will promote infiltration, sedimentation, and nutrient uptake, thereby improving water quality prior to entry into the wetland system.

By intercepting and treating runoff, the project will reduce the transport of suspended solids, roadway pollutants, and deicing materials to surface waters, thus protecting aquatic and plant life, maintaining nutrient exchange processes, and preserving the natural filtration and decomposition functions of the downstream wetland. The bio-swale and stabilized outlet areas will help maintain thermal energy balance by dispersing flows through vegetated surfaces rather than direct pavement-to-water discharges. Habitat diversity, viability, and productivity will be preserved because no clearing or filling of wetland habitat is proposed, and improved stormwater management will reduce sedimentation rates and protect the ecological integrity of the receiving waters.