Water Quality SWM Approach for Infield Areas

The infield area would be defined as contained within an access road / ramp or an area contained within bordering roads.

Here are four different potential scenarios with a SWM approach for each one that is acceptable to DNREC in achieving water quality (RPv) compliance:
*jurisdictional wetlands for these matters are basically defined as any areas marked on the plans within wetland delineation lines.

1. Non-jurisdictional wetland with no outlet
    a. This is basically considered as a retention/infiltration basin, which in turn would account for 100% RPv credit.
    b. The size of the basin is already set for a project such as this, but a check should be done of the current geometry to help insure that the ponding depth should be spread over as large an area as possible. The maximum ponding depth should be 24". It may be necessary to do some grading within the infield area to help insure that ponding is not occurring in one small section. And depending on the geometrics of the site, drainage/flooding considerations should be checked to help insure that the surrounding roadway will not be overtopped in a 100-yr rain (Fv / 1% storm) event.
2. Jurisdictional wetland* with no outlet
    a. The normal pool elevation has to be maintained, meaning that the RPv volume cannot inundate the wetland above the normal pool elevation for more than 48 hours.
3. Non-jurisdictional wetland with an outlet
    a. Depending on the particular site configuration or how the site can be designed and constructed, 100% RPv reduction can be achieved. This is done by providing storage for the RPv volume below the invert of the outlet.
    b. If a site cannot be constructed to this requirement and the site could be defined as a wet pond, then a RPv reduction can be achieved as per current DNREC regulations concerning the alternative methodology of a minimum 48 hours between initial and final outflow AND the peak discharge <5x the total runoff divided by 48 hrs converted to CFS.
4. Jurisdictional wetland* with an outlet
    a. The RPv volume has to be detained the same as the alternative methodology, but also has to be fully released within 48 hours, so as to not "harm" the surrounding wetland vegetation.
5. For all of the above options, 100% of the inflow must have pretreatment and can consist of one of the below options or a combination thereof. Each of these options has a reference to DNREC 3.06.2 Post Construction Stormwater BMP Standards and Specifications.
    a. Vegetated channel (Specification 8, Vegetated Channel)
    b. Grass filter strip (Specification 9, Sheet Flow to Open Space)
    c. Forebay (minimum 10% of RPv volume)
    d. Sand filter (Specification 11, Stormwater Filtering Systems)
    e. Other practice as approved by DelDOT (Specification 15, Proprietary Practices)

If you got through the DURMM analysis and it shows the runoff reduction requirement is more than 1", then you have the option of using the alternative methodology of compliance based on 1" of runoff. If you have OLOD areas, they can be analyzed as separate subareas in HydroCAD and sum them with the LOD area to get the total contributing runoff to the BMP.