Permeable Paver Design Review Check List

Applicant: _____   Date: _____

Submitted By: _____   Project Location: _____

1) Drainage Area (DA) shedding to Permeable Pavement (including permeable pavement area)
   SF _____ **and Ac** _____ (attach map of DA with arrows showing how water flows to the pavers)
2) Percent of DA shedding to the Permeable Pavement that is Impervious _____ **%**
3) WQv _____ CF (show calculations below or attach)
   WQv = (Rv) x (P) x (DA) x 43,560 SF/ac x (1 ft/12in)   (See Iowa SW Mgt Manual)

4) Ratio of drainage area shedding to the Permeable Pavement to surface of Permeable Pavement area
   _____ : _____
   Drainage Area (Sq Ft)   Surface of Permeable Pavement (Sq Ft)

5) Surface Area of Permeable Pavement _____ SF (show calculations for minimum area needed App)

$$App\ (sq\ ft) = \frac{Q\ (cfs)\ x\ 3600\ sec/hr\ x\ 12\ in/ft}{10\ in/hr}$$

6) Minimum depth of rock storage area _____ Ft (show calculations below or attach)

$$Minimum\ Depth = \frac{WQv\ (cu\ ft)\ or\ design\ volume}{App\ x\ 0.35}$$

7) Pore space storage of rock base: _____ CF
        (Length _____ ft x Width _____ ft x Depth _____ ft of rock base x 35%)
8) Describe the type of pavement (type of paver, manufacturer, etc.):_____
   _____
   _____

9) Discuss soils investigation findings (i.e. texture, degree of compaction, percolation potentials, depth to
   water table, contamination etc.):_____
   _____
   _____

10) Describe the aggregate used (depth of layer / quantities / size / AASHTO or ASTM No. classification);
        a. _____
        b. _____
        c. _____

11) Provide calculations of aggregate quantities or attach a copy of the calculations: _____

_____

_____

12) If permeable pavement is less than 10 ft from a foundation describe water proofing methods: _____

_____

_____

_____

13) What is the maximum slope of the finished surface of the permeable pavement: _____ **%**

14) Is the bottom of the rock base greater than 1.0% slope? _____ If yes, describe how the slope at the bottom of the rock base will be modified to maximize storage (i.e. fabric checks, earth berms, etc. - if fabric checks are used, describe the material and flow through rate) _____

_____

_____

(Show calculations below or attach for volume of water stored)

$$V = 50 \; x \; \rho \; x \; W \; x \; \frac{D^2}{S_o}$$

$V = Volume\ of\ water\ stored\ uphill\ of\ a\ baffle\ on\ a\ sloped\ surface\ (ft^3)$

$\rho = porosity\ of\ aggregate\ (assume\ 0.35)$

$W = width\ of\ the\ aggregate\ perpendicular\ to\ the\ slope\ (ft)$

$D = height\ of\ the\ baffle\ (ft)$

$S_o = slope\ of\ the\ excavated\ bottom\ of\ the\ aggregate\ chamber\ (\%)\ (10\%\ is\ "10", not\ "0.10")$

15) Size of perforated drain tile: _____

16) Depth of tile from surface of the pavement: _____

17) How many inches is the tile above the bottom of the rock base: _____

18) Describe the outlet for the perforated drain tile: _____

_____

_____

19) Describe overflow (i.e. what provisions are provided should the system plug – where would water flow, how would it be conveyed): _____

_____

_____

20) Describe Erosion and Sediment Control measures used to protect permeable pavement if active construction will be taking place in the drainage area after installation: _____

_____

_____

_____

21) Please attach a map of the drainage area

22) Please attach a plan view, profile and cross sectional drawing

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FOR REVIEWERS USE ONLY

☐ Design appears to comply with the standards in the Iowa Stormwater Management Manual.

☐ Design does not appear to comply with the standards in the Iowa Stormwater Management Manual.

Comments: _____

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Name of Reviewer: _____ Date: _____

Signature: _____