Ordinance Checklist for Low Impact Development
Site Planning and Design Techniques

The ***Rhode Island Low Impact Development Site Planning and Design Guidance Manual*** contains over 45 specific techniques that can be used by communities to avoid and reduce the stormwater impacts to water quality from development. Moreover these techniques can also preserve community character, reduce flooding and save developers and municipalities money. The Ordinance Checklist allows a community to quickly determine what specific low impact development (LID) site planning and design techniques they have adopted or may need to adopt to more effectively encourage LID practices for new development and redevelopment. The checklist is organized by three broad goals and ten objectives that are from the ***Rhode Island Stormwater Design and Installation Standards Manual*****.** Below each objective are recommended LID site planning and design techniques that can be incorporated into existing community ordinances to achieve the objective. Communities are encouraged to adopt any alternative techniques not listed below that can still meet the desired objectives. Moreover, not all site planning and design techniques are applicable to every community. For more information, detailed design standards, economic benefits, and case studies regarding each technique refer to the ***Rhode Island Low Impact Development Site Planning and Design Guidance Manual.***

GOAL: Avoid the impacts of development to natural features and pre-development hydrology.

Objective I: ***Protect as much undisturbed open space as possible to maintain pre-development hydrology and allow precipitation to naturally infiltrate into the ground.***

1. Has Conservation Development been adopted to protect open space and pre-development hydrology? (This will also help to comply with objectives II and III)
   _____ Yes _____ No _____ N/A

2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural landscapes?
   _____ Yes _____ No _____ N/A

3. Are limits of disturbance required to be marked on all construction plans?
   _____ Yes _____ No _____ N/A

4. Are there limits on lawn area for residential lots to protect undisturbed open space?
   _____ Yes _____ No _____ N/A

5. Are undisturbed vegetative areas required on new lots as visual screens?
   _____ Yes _____ No _____ N/A

Objective II: ***Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.***

6. Do regulations require or encourage new lots to exclude freshwater and/or coastal wetland jurisdictional areas, to the extent practicable?
   _____ Yes _____ No _____ N/A

7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?
   _____ Yes _____ No _____ N/A

8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?
   _____ Yes _____ No _____ N/A

9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetlands, and riparian corridors?
   _____ Yes _____ No _____ N/A

Objective III: ***Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.***

10. Has your community adopted an erosion and sedimentation control ordinance?
    _____ Yes _____ No _____ N/A

11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading and land-disturbing activities to the minimum needed for construction maintenance and emergency services?
    _____ Yes _____ No _____ N/A

12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?
    _____ Yes _____ No _____ N/A

13. Do you require permits before removing trees on new or redevelopment sites?
    _____ Yes _____ No _____ N/A

14. Have minimum tree preservation standards been established for new development?
    _____ Yes _____ No _____ N/A

15. Do capital improvement plans include tree planting as part of project budgets?
    _____ Yes _____ No _____ N/A

16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24 inch-diameter tree is removed it should be replaced with six four inch-diameter trees.
_____ Yes _____ No _____ N/A

Objective IV: ***Minimize soil compaction as a result of construction activities or prior development.***

17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?
_____ Yes _____ No _____ N/A

18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?
_____ Yes _____ No _____ N/A

GOAL: Reduce the impacts of land alteration to decrease stormwater volume, increase groundwater recharge and minimize pollutant loadings from a site.

Objective V: ***Provide low-maintenance, native vegetation that encourages retention and minimizes the use of lawns, fertilizers, and pesticides.***

19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?
_____ Yes _____ No _____ N/A

Objective VI: ***Minimize impervious surfaces.***

20. Did your community adopt compact growth ordinances such as conservation development, planned development or mixed-use development?
_____ Yes _____ No _____ N/A

21. Has your community identified growth centers where increased density is appropriate and encouraged?
_____ Yes _____ No _____ N/A

22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?

    A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?
    _____ Yes _____ No _____ N/A

B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?
_____ Yes _____ No _____ N/A

23. Are street right-of–way widths required to be less than 45 feet?
_____ Yes _____ No _____ N/A

24. Are driveway lengths and widths required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate?

A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?
_____ Yes _____ No _____ N/A

B. Do you allow pervious surfaces to be used for residential driveways?
_____ Yes _____ No _____ N/A

C. Do you allow shared driveways to be used in residential developments?
_____ Yes _____ No _____ N/A

25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales, where possible?
_____ Yes _____ No _____ N/A

26. Where curbs are needed, do you allow openings in curbs that allow runoff to flow into swales?
_____ Yes _____ No _____ N/A

27. Have flexible sidewalk design standards been adopted that limit impervious cover?

A. Is the minimum sidewalk width four feet or less?
_____ Yes _____ No _____ N/A

B. Do you require sidewalks on one side of the street only in low-density neighborhoods?
_____ Yes _____ No _____ N/A

C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?
_____ Yes _____ No _____ N/A

D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?

_____ Yes _____ No _____ N/A

E. Can pervious surfaces be used for sidewalks?
_____ Yes _____ No _____ N/A

28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?

A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?
_____ Yes _____ No _____ N/A

B. Can a landscaped island or native vegetation be within the cul-de-sac?
_____ Yes _____ No _____ N/A

C. Are alternative turnarounds allowed such as hammerheads or tees?
_____ Yes _____ No _____ N/A

29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?
_____ Yes _____ No _____ N/A

30. Do you allow pervious materials to be used for parking areas or overflow parking?
_____ Yes _____ No _____ N/A

31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?
_____ Yes _____ No _____ N/A

32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?
_____ Yes _____ No _____ N/A

33. Do off-site parking allowances exist to accommodate redevelopment and mixed-use compact growth?
_____ Yes _____ No _____ N/A

34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?

A. Are the minimum stall dimensions nine feet wide by 18 feet long?
_____ Yes _____ No _____ N/A

B. Is 20% or more of the parking lot required to have smaller dimensions (eight feet by 16 feet) for compact cars?
_____ Yes _____ No _____ N/A

35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?

A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?
_____ Yes _____ No _____ N/A

B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?
_____ Yes _____ No _____ N/A

C. Is 25-30% tree canopy coverage over on-site parking lots required?
_____ Yes _____ No _____ N/A

36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community basis?
_____ Yes _____ No _____ N/A

GOAL: Mange the Impacts at the Source.

Objective VII: ***Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.***

37. Have you amended regulations to require all development projects comply with LID pursuant to the *Rhode Island Stormwater Design and Installation Standards Manual?*
_____ Yes _____ No _____ N/A

38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales and filter strips to promote recharge and the treatment of runoff?
_____ Yes _____ No _____ N/A

Objective VIII: ***Break up or disconnect the flow of runoff over impervious surfaces.***

39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction and pollutant removal, where appropriate?
_____ Yes _____ No _____ N/A

Objective IX: ***Provide source controls to prevent or minimize pollutants in stormwater.***

40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?

_____ Yes _____ No _____ N/A

41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?
_____ Yes _____ No _____ N/A

42. Is street sweeping done regularly on community streets to limit pollutant transport to water bodies and reduce maintenance of catch basins?
_____ Yes _____ No _____ N/A

43. Are community road salt storage piles covered?
_____ Yes _____ No _____ N/A

44. Has a community waste water management district been adopted to encourage or require all septic systems to be inspected and maintained regularly?
_____ Yes _____ No _____ N/A

45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?
_____ Yes _____ No _____ N/A

Objective X: ***Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.***

46. Have regulations been adopted to encourage re-vegetation with native species, where possible?
_____ Yes _____ No _____ N/A

Bonus:

47. Did you revise your comprehensive plan to include the three goals and ten objectives above?
_____ Yes _____ No _____ N/A