

**Highlands County Engineering Department
Improvement Plan Checklist**

Development Name: _____

Date Received: _____

Submitted by: _____

Due Date: _____

This checklist is used for subdivision, mobile home parks, and campground improvement plans, and for miscellaneous right-of-way construction plans.

Y E N / S O A	N	Y E N / S O A	N
<u>Permits/Approvals</u>			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Copy of water management district permit and plans? 12.04.111 D-3 d			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Copy of Florida Department of Transportation Connection Permit? 12.04.111 D-3 d			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Copy of permit application to: 12.04.111 D-3 d, e			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. Florida Department of Environmental Protection?			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Army Corps of Engineers?			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Environmental Health Director (HRS)?			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Water Management District?			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Utility permit application when water or sewer lines are to be placed within the public right-of-way? 12.04.108 B & 12.09.104 B-2			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Permit application for construction within the public right-of-way when connecting to a County road? 12.04.108 A			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Flood Hazard Development Permit application? 12.03.110 H-9 & 12.12.503			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. A copy of an elevation certificate prepared by a registered engineer or professional land surveyor? 12.03.110 H-10 & 12.04.108 D			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Design based on an approved preliminary plat? 12.04.111			
<u>General Requirements</u>			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Fee attached? 12.04.101 H Receipt No. _____ Amount \$ _____			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Three (3) blue line or black line copies submitted? 12.04.102 A-3 & 12.04.111 D-1 c			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Sheet size 24" X 36" with 1/2" margins, and left binding side with 2" margin? 12.04.102 A-1			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Scale: no smaller than 1"=100'? 12.04.102 A-4			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. North arrow (north to top of sheet)? 12.04.102 A-5			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Sheet # and total number of sheets indicated on each sheet? 12.04.102 A-2			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Each sheet signed and sealed by a registered engineer or professional land surveyor certifying to his expertise? 12.04.111 D-2 b			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Development name & address? 12.04.102 B-1			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Date of preparation? 12.04.102 B-2			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Owner's name, address & telephone number? 12.04.102 B-3			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Engineer's name, address & telephone number? 12.04.102 B-4			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Certified Engineering Testing Laboratory's name, address & telephone number? HCTSM Section 2.106 B			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Metes and bounds description/legal description (property boundaries with line dimensions, bearings and curve data)? 12.04.102 C-1 a			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Location map? 12.04.102 C-2 d			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. STRAP description (reference to section, township and range, including subdivision name, block #s and lot or parcel #s)? 12.04.102 C-1 c			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Area of project in square feet and acres? 12.04.102 C-1 d			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Number of lots, and minimum lot size in square feet? 12.04.111 B-2 b, d			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Existing use on the property? 12.04.102 C-1 e			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Existing zoning according to the County Zoning Atlas? <u>12.04.102 C-1 f</u>			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Permitted land use according to Future Land Use Map? <u>12.04.102 C-1 g</u>			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Legend explaining symbols, abbreviations, etc.? 12.04.102 C-1 i			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Water and sewer type including name of service provider(s)? 12.04.111 B-2 e			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Certified copy of water distribution plans submitted, including the locations of proposed connections to existing facilities? 12.04.111 D-3 g			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Certified copy of sanitary sewer plans submitted, including the locations of proposed connections to existing facilities? 12.04.111 D-3 g			
<u>Plan Review</u>			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. A benchmark referenced to the National Geodetic Vertical Datum (NGVD)? 12.04.111 D-2 a			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Existing land use and zoning classification of all abutting property, including names and addresses of the owners? 12.04.102 C-2 e			

- 35. Existing easements and rights-of-way (widths, dimensions, curve data, type, etc.) or a note that there are none? 12.04.102 C-2 b
 - 36. Existing utilities shown or note there are none?
 - 37. Lands to be dedicated or reserved for all public and private uses including rights-of-way, easements, special reservations, etc.? 12.04.111 B-3 a
 - 38. Location of all water courses, water bodies, floodplains, xeric uplands, wetlands, cutthroatgrass seeps, historical and archaeological resources, cones of influence for potable wells, aquifer recharge areas, soil types, and vegetative cover or a note that there are none? 12.04.107 C-3 i
 - 39. Location of all wellheads supplying public potable water systems as defined in Chapter 17-550, F.A.C. and regulated by F.D.E.P. within 600 feet of property line or a note that there are none? 12.04.105 C-15
 - 40. **Provisions to be made for adequate control of erosion, sedimentation, dust, and debris during all phases of clearing, grading, and construction?** 12.04.107 C-3 e
 - 41. The street names of all abutting rights-of-way? 12.04.107 C-3 g
 - 42. Centerline, edge of pavement (or traveled way for unpaved roads), and centerline of side swales or ditches for all abutting streets and roads, with elevations? 12.04.107 C-3 h
 - 43. All existing and proposed structures (including fences, culverts), labeled as to type, height, composition, and intended use? 12.04.107 C-3 j
 - 44. Locations of all proposed permanent signs, with details? 12.04.107 C-3 l
 - 45. Locations of the nearest existing and all proposed fire hydrants? 12.04.107 C-3 m
 - 46. Statement that all underground utilities within the roadway are to be installed prior to placement of base?
 - 47. Statement that all lots have a buildable area?
 - 48. Statement that all construction and plantings in the non-access buffer easements are to be a part of the initial improvements?
 - 49. Statement that all swales and ditches, complete with erosion controls, are to be a part of the initial improvements? 12.12.501 C-4
 - 50. Statement that all test results are to be submitted by the testing laboratory directly to the office of the County Engineer? 12.04.109
- Setbacks from Natural Surface Water Bodies and Wetlands
- 51. Setback is the lesser of 50' or 40% of the average depth of site from a natural surface water body perpendicularly measured from the SHWL? 12.12.203 A

- 52. Conservation Easement(s) shown? 12.04.112 D-6
 - 53. A note that "The Conservation Easement line shall be marked and posted prior to the commencement of construction on the site." ? 12.12.204 A-7
 - 54. A statement that "Existing topography and vegetation shall be retained within the Conservation Easement." or "Vegetation within the Conservation Easement shall be retained or reestablished if damaged during construction, as appropriate, so as to stabilize soil conditions along the boundary of development, to minimize siltation from eroded soils, and to control stormwater runoff from the developed area."? 12.12.204 A-2 & 8
- Groundwater and Wellhead Protection
- 55. WHPZs identified with reference to USGS Quadrangle maps or County's official map if available? 12.12.304 A
 - 56. Zone of Exclusion shown (200' radius circle centered on the wellhead)? 12.12.301 B
 - 57. Zone of Control shown (600' radius circle centered on the wellhead)? 12.12.301 B
 - 58. Assessment of the impact on groundwater quality? 12.12.403 B-3
- Stormwater Management Plan
- 59. A recent aerial photograph encompassing the project area and total land area? 12.12.403 A-1
 - 60. A topographic map of the site (the contour interval shall not be greater than one foot) showing existing hydrography and runoff patterns and off-site contributing areas? 12.12.403 A-2
 - 61. A soil map of the site and soil investigation report? 12.12.403 A-4
 - 62. Seasonal high water table elevations and method used to determine the elevations? 12.12.403 A-5
 - 63. A map of vegetative cover, if wetlands are present (may be shown on the aerial or soil map)? 12.12.403 A-6
 - 64. Grading plan describing the interface between the proposed development and abutting properties? 12.12.403 A-8
 - 65. A structure, road, and paving plan showing the location, elevations, dimensions, and specifications? 12.12.403 A-9
 - 66. An erosion and sedimentation control plan describing the type and location of control measures, and the stage of development they will be put into place or used, and maintenance provisions? 12.12.403 A-10
 - 67. Stormwater calculations indicating existing and proposed runoff included .on an 8 1/2" X 11" sheets? 12.04.107 C-4

- 68. Where development is proposed adjacent to a water body, a note stating "Except for maintaining existing lots where lake vegetation has been removed, removal of xeric upland vegetation along lake frontages shall be limited to the minimum necessary to achieve reasonable access to the water body." ? 12.12.403 B-5
- 69. Proposed channel, direction, flow rate, flow arrows, and volume of stormwater that will be conveyed from the site with a comparison to natural or existing conditions? 12.12.403 B-1
- 70. Detention and retention areas (including means for discharging contained waters - outfall structure, percolation, etc.), maintenance plans, and a statement of expected surface water quality changes? 12.12.403 B-2
- 71. Location of all water bodies (natural and artificial) to be included in the surface water management system with details of hydrography, side slopes, depths, and water surface elevations or hydrographs? 12.12.403 B-4
- 72. Any off-site right-of-ways or easements required for proper functioning of the system, also showing the outfall destinations with inserts for those areas outside the limits of the property, with elevations? 12.12.403 B-7
- 73. Deeds or Easements submitted for outfall outside the property boundary?
- 74. Minimum drainage easement widths provided as per Highlands County Technical Standards Manual, Section Three, 03.103.C.5
- 75. Stormwater management design provides for onsite percolation to the same extent as predevelopment conditions? 12.12.402 I
- 76. Velocity calculations and appropriate type of cover/erosion control provided in the drainage plan for conveyance facilities? 12.12.402 H
- 77. Roadside swales in the right-of-way have side and back slopes no steeper than 4' horizontal to 1' vertical? HCTSM SECTION 3
- 78. Maximum roadside swale depth maintained at 24" below the edge of shoulder? HCTSM SECTION 3
- 79. Drainage structures placed such that flooding of the shoulder or roadway property does not occur? HCTSM SECTION 3
- 80. Piping and appurtenances shown and designed in accordance with Technical Standards Manual, Section Four, 04.100. FDOT Drainage Manual, FDOT Roadway and Traffic Design Standards, and FDOT Standard Specifications for Road and Bridge Construction?
- 81. Manholes, catchbasins and headwalls shown, with elevations? HCTSM SECTION 3
- Transportation System Design
- 82. Complies with HCLDR'S Article 9, Section: 12.09.103. Access and Circulation?

- 83. Complies with HCLDR'S Article 9, Section: 12.09.104. Roadway Design Standards?
- 84. Clear visibility triangle requirements at street intersections and driveways are met? 12.09.103 E & F
- 85. Complete specifications in accordance with Section 2 and Section 3, of the Highlands County Technical Standards Manuel are included for:
 - a. maintenance of traffic?
 - b. driveway ingress and egress maintenance?
 - c. clearing and grubbing?
 - d. earthwork?
 - e. rigid ditch checks?
 - f. riprap?
 - g. inspections, field measurements and laboratory tests?
 - h. tolerances?
 - I. stabilized sub-base and shoulders?
 - j. limerock or shellrock base?
 - k. asphalt?
 - l. pavement marking?
 - m. signs?
 - n. culverts, storm sewers?
 - o. grassing?
 - p. staked silt fences?
 - q. temporary prevention, control and abatement of erosion and water pollution?
 - r. guardrail?
 - s. concrete?
 - t. field engineering, surveying and right-of-way staking?
 - u. obstructions in right-of-way?
 - v. shop drawing submittals?
- 86. Road design and driveway specifications in compliance with Technical Standards Manual, Section Two, 02.200, 02.201, 02.202.
- 87. Cross-sections and specifications for all proposed pavement, retention ponds, swales, driveways, etc. shown? HCTSM SECTION 6
Plan and Profile Sheets
- 88. Road centerline with station marks shown?
- 89. Right-of-way lines with a portion of side lot lines shown?
- 90. Existing contour lines (dashed line) on a one foot interval?
- 91. Existing and proposed culverts shown with invert elevations and descriptions?
- 92. Ditch lines and direction of flow shown?
- 93. Existing and proposed inlets and manholes shown with top and invert elevations?

94. Driveway requirements (culvert or swale) for each lot or group of lots shown?

95. Location of each road name sign and stop sign shown?

96. Existing centerline grade (dashed line) of pavement shown?

Profile

97. Proposed centerline grade (dark solid line) of pavement shown?

98. All existing and proposed culverts, inlets and manholes shown?

99. Proposed ditch (right and left) centerline grade shown?

100. Calculated slope of proposed street centerline shown?

101. Vertical curves shown with elevations called out at the PVC, PVT, vertical PI, and intermediate stations? (This is required where algebraic differences of intersecting grades exceed the values given in the "Maximum Change in Grade without Using Vertical Curves" table in the most current FDOT Green Book.)

102. Invert elevations of all proposed culverts, inlets and manholes called out?

Cross Sections

103. Typical cross section for each street type?

104. Special cross section for entrance road?

105. Horizontal and vertical measurements shown?

106. Width, depth, density and FBV of subbase shown?

107. Width, depth, density and slope of base shown?

108. Asphalt type, width and thickness of surface?

109. Width, depth, density, FBV and slope of shoulders shown?

110. Ditch or swale side slopes and widths shown?

111. Erosion protection shown?

112. Right-of-way width shown?

113. Proposed curbs shown?

114. Dimensioned driveway cross section with subbase, base and surface requirements shown?

115. Proposed culvert shown?

Landscaping and Buffering

116. Landscape plan drawn at a scale no smaller than 1"=30' on sheet size 24" X 36", and includes dimensions, north arrow, date, title and project owner's name? 12.11.102 A-1

117. Proposed landscaping, including a plant legend, and the locations and names of any existing trees to remain shown? 12.11.102 A-1

118. Location of permanent vegetation protection devices such as barricades, curbing and tree wells shown? 12.11.102 A-1

119. Shows the required landscaping clearly differentiated from any additional landscaping provided? 12.11.102 A-1

120. Provides a chart indicating graphic plant symbol, botanical and common name, quantity, height, spread, spacing, native status, drought tolerance rating, and type of mulch to be used? 12.11.102 A-1

121. Provides a dimensioned cross-section of the transitional protective yard showing proposed trees, shrubs, walls, berms, and any ground cover or erosion control? 12.11.102 A-1

122. Shows slope, height and crown width on berm cross-sections, and shows complete construction details on wall and fence cross sections? 12.11.102 A-1

123. Complies with open space requirements of HCLDR'S, Article 11, Section: 12.11.100, 12.11.05 Landscaping Standards.

Irrigation Plan

124. Plan drawn at a scale no smaller than 1"=30' on sheet size 24" X 36", and includes dimensions, north arrow, date, title and project owner's name? 12.11.102 B-2

125. Plan shows main, valves, pump locations, pipe size and specifications, controller locations and specifications, back flow preventor and rain sensing devices? 12.11.102 B-2

126. Typical sprinkler zone plan indicating type, specifications, spacing and coverage? 12.11.102 B-2

127. Layout of drip irrigation or soaker hoses shown, if proposed? 12.11.102 B-2

128. Sprinkler heads irrigating high water demand areas are circuited on separate zones from those irrigating reduced water requirement areas? 12.11.102 D

Certifications

129. "This development is (or is not) within the 100 year flood plain." 12.04.108 C

