



CITY OF PALM COAST RESIDENTIAL SITE DEVELOPMENT

STORMWATER MANAGEMENT, LOT GRADING, AND DRAINAGE REQUIREMENTS APPLICABLE TO BUILDING PERMITS ISSUED FOR RESIDENTIAL BUILDING ADDITIONS, ACCESSORY STRUCTURES, DRIVEWAYS (AND OTHER IMPERVIOUS SURFACES), TREE REMOVAL PERMITS, AND GRADING PERMITS

Requirements below are summarized from the *“City of Palm Coast Technical Manual, Engineering Design Standards, Section 300 – Stormwater Permit Requirements”* applies to building permits issued for the following:

- **Building Addition(s) greater than 300 sq. ft.** (aggregate*) Patio Covers, enclosed porches, lanais, room additions, roof extensions, and any other permit type for construction attached to the dwelling that increases the impervious floor and/or roof area of the dwelling by 300 sq. ft. or more.
Inspections Needed:
If the area is less than 300 sq. ft., a ROW FINAL INSPECTION is required.
If the area is more than 300 sq. ft., a ROW FINAL SURVEY, ROW FIELD SURVEY, and ROW FINAL are required.
- **Accessory structure(s) greater than 300 sq. ft.** (aggregate*) Pools, pool decks, screen (with impervious surface beneath), and other attached or detached accessory buildings and structures that add 300 sq. ft. or more of impervious floor or roof area to the property.
Inspections Needed:
If the area is less than 300 sq. ft., a ROW FINAL INSPECTION is required.
If the area is more than 300 sq. ft., a ROW FINAL SURVEY, ROW FIELD SURVEY, and ROW FINAL are required.
- **Structural slabs/foundations greater than 300 sq. ft.** (aggregate*) Structural concrete intended for support of future building/structure construction, support of above-ground pools, spas, and hot-tubs, and similar.
Inspections Needed:
If the area is less than 300 sq. ft., a ROW FINAL INSPECTION is required.
If the area is more than 300 sq. ft., a ROW FINAL SURVEY, ROW FIELD SURVEY, and ROW FINAL are required.
- **Non-structural surfaces greater than 300 sq. ft.** (aggregate*) Concrete, asphalt pavement, pavers, and similar impervious surfaces for patios, parking pads, recreation/sports courts, and similar impervious surfaces.
Inspections Needed:
If the area is less than 300 sq. ft., a ROW FINAL INSPECTION is required.
If the area is more than 300 sq. ft., a ROW FINAL SURVEY, ROW FIELD SURVEY, and ROW FINAL are required.

*Aggregate means any single building addition, accessory structure, structural or non-structural impervious surface, additional impervious surface added to a building, building addition, accessory structure, structural or non-structural impervious surfaces, and any combination of the above that results in an aggregate increase of impervious surfaces, any time after construction of the home.

- **Final Survey:**

A **final survey**, also known as an **as-built survey**, is a land survey conducted after construction is complete to document the exact location, dimensions, and condition of all improvements on a property. Its purpose is to verify that the completed work matches the approved site plans and complies with building codes, zoning regulations, easements, and property boundary requirements. Final surveys are often required by lenders, title companies, and local permitting authorities before issuing a **Certificate of Occupancy**, ensuring the property is safe, compliant, and accurately recorded in the public record.

- **The Final Survey is prepared.**

The final survey shall be signed, dated, and sealed with a raised seal by an active Florida-licensed professional surveyor and Mapper. Depending on the project's complexity, it may also require certification by a Licensed Professional Engineer. The signature and date must appear directly beneath the raised seal.

The surveyor uses precise instruments to record the *as-built* conditions of the property: the house location, elevations, drainage, setbacks, and any improvements. The signed and sealed survey is submitted to the city for inspectors to verify compliance before final approval.

- **The purpose of the Final Survey:**

It is to provide an accurate, certified record of how the property and construction were built. Think of it as the "report card" at the end of a project.

Here's what it does:

Verification – Confirms that the building is situated in the correct location, within property lines, setbacks, and easements.

Elevation & Drainage – Documents lot grades and drainage flow so stormwater moves as intended and doesn't cause flooding.

Compliance – Shows everything matches the approved site plan and meets code requirements.

Approval – Provides inspectors with the necessary information to grant final sign-off or a Certificate of Occupancy.

Permanent Record – Becomes the official "as-built" survey kept on file for future reference.

The purpose is to prove, with professional accuracy, that what was built is exactly what was approved.

- **Lot Grading (Improve Properties).**

What must be on the lot grading plan:

The scope of activity: What specific work is to be done on the property?

The location of site work: The drawings can range from simply identifying the area where the site work is to be conducted to showing existing elevations and Proposed elevations that are clearly displayed within an oval circle, specifying the height in feet and hundredths of a foot.

Proposed elevations: These indicate the direction of stormwater flow and are usually based on a topographic survey; higher numbers show water flowing toward lower numbers.

Proposed drainage patterns: Demonstrating how new elevations will manage stormwater. This is crucial for preventing runoff from affecting neighboring lots.

The primary drainage principle: For most properties, the rear yard is required to drain to the front roadside swale.

All flatwork: This includes impervious surfaces such as sidewalks, walkways, and air conditioning (AC) pads.

Lot grading plans: The Topographic Survey shall be signed, dated, and sealed with a raised seal by an active Florida Licensed Professional Surveyor and Mapper. Depending on the complexity of the project, it may also Certification is required by a Licensed Professional Engineer. The signature and date must appear directly beneath the raised seal.

Important considerations:

At the city's discretion, Complex grading plans, especially those for new construction, may need to be prepared and sealed by a Florida-licensed professional engineer, depending on the project's complexity.

Drainage easements: Any proposed improvements, including flatwork, must not obstruct drainage flow within any platted drainage easements.

Front yard swales: Properties are typically required to drain to the front yard swale unless an approved alternative system is designed. The city updated its technical manual in 2024 to emphasize the use of "W" swales on certain lots to improve drainage.

Prohibited actions: No flooding adjacent properties: It is strictly prohibited to grade a lot in a way that causes flooding or draining onto adjacent properties.

When a permit may or may not be required:

A permit may be exempt for minor work that meets all the following conditions:

A single load of fill dirt: One load of dirt is used—standard pick-up truck, not a dump truck.

Hand tools are used: The fill is spread using hand tools and a wheelbarrow.

The drainage pattern are not altered: The work does not change the existing flow of stormwater on the property.

The grade of the property is not substantially altered: The overall shape and slope of the land remain largely unchanged.

- **Lot grading (Vacant Lots) or Unimproved Lots.**

What must be on the lot grading plan:

Persons desiring to modify a vacant residential lot falling under the criteria of [Section 9.06](#) of the City Palm Coast [Unified Land Development Code \(LDC\)](#) will need to obtain a Lot Grading Permit and Right-of-Way Permit.

The lot, if vacant of any structures, must be directly adjacent to a lot with a permitted structure, and both lots shall be **under the same ownership**. To make changes before getting a building permit, you must own both the vacant lots you want to clear and the neighboring lot that already has a permitted structure.

Lot Grading Permit Required: is required if heavy equipment is being used to perform the site work. Heavy equipment includes graders, dozers, bobcats, and tillers to remove existing sod and grade the property.

The Topographic Survey: The Topographic Survey shall be signed, dated, and sealed with a raised seal by an active Florida Licensed Professional Surveyor and Mapper. Depending on the complexity of the project, it may also require certification by a Licensed Professional Engineer. The signature and date must appear directly beneath the raised seal.

The scope of activity: What specific work is to be done on the property?

The location of site work: The drawings can range from simply identifying the area where the site work is to be conducted to show existing elevations and Proposed elevations that are clearly displayed within an oval circle, specifying the height in feet and hundredths of a foot.

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Proposed drainage patterns: Demonstrating how new elevations will manage stormwater. This is crucial for preventing runoff from affecting neighboring lots.

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All flatwork: This includes impervious surfaces such as sidewalks, walkways, and air conditioning (AC) pads.

Lot grading plans: The Topographic Survey shall be signed, dated, and sealed with a raised seal by an active Florida Licensed Professional Surveyor and Mapper. Depending on the complexity of the project, it may also require certification by a Licensed Professional Engineer. The signature and date must appear directly beneath the raised seal.

Important considerations: At the City's discretion: Complex grading plans, especially those for new construction, may need to be prepared and sealed by a Florida-licensed professional engineer, surveyor, or landscape architect, depending on the project's complexity.

Drainage easements: Any proposed improvements, including flatwork, must not obstruct drainage flow within any platted drainage easements.

Front yard swales: Properties are typically required to drain to the front yard swale unless an approved alternative system is designed. The city updated its technical manual in 2024 to emphasize the use of "W" swales on certain lots to improve drainage.

Prohibited actions: No flooding adjacent properties: It is strictly prohibited to grade a lot in a way that causes flooding or draining onto adjacent properties.

Why is lot grading regulated?

Palm Coast regulates lot grading to prevent issues like flooding and damage to neighboring properties. Improper grading can negatively impact stormwater runoff and the stability of the land.

How to apply for a permit:

Permit applications are submitted through the Palm Coast online permitting portal. The process requires submitting a permit application and various supporting documents, including detailed site and grading plans. It's highly recommended to consult the City's Technical Manual or Residential Site Division for specific requirements before starting any work.

- **DRIVEWAYS.**

A permit is needed when any of the following apply to the Driveways:

A site plan needs to be provided to the City of Palm Coast with the following specifications:

Provide clear notes on what the builder or homeowner will perform at that location.

If they are removing the existing driveway and installing a new one.

Provide a precise measurement of the setback from the property line.

If you are extending/expanding the driveway, please specify the number of feet to be extended or expanded on each side and need to specify if you are building a circular driveway.

The specification of the culvert pipe and dimensions need to be added to the site plan.

For a clear view of the design, go to: <https://www.palmcoast.gov/building>

CLICK ON BUILDING ICON, SCROLL DOWN THE PAGE UNTIL YOU FIND STORMWATER-RESIDENTIAL STORMWATER PERMIT REQUIREMENTS. CLICKS ON THE LINK.

OPEN THE PDF DRIVEWAYS- PRE POUR.

- **SWALE PLAN (GENERAL NOTES).**

City of Palm Coast will provide a swale plan design with the invert elevation of the culvert pipe that needs to be installed within 0.1(+/-) in the direction the stormwater runs.

The swale center line is typically located 8 feet from the edge of pavement, 5 feet from e.o.p. in the cul-de-sacs. Also, the cul-de-sacs require a 22.5 elbow.

The city required the old driveways with shotgun pipes to be brought up to the new standard when homeowners apply for a new permit.

The standards for a culvert pipe are going to be a 17x13 CMP (ALUMINIZED) OR 15" DIAMETER CMP (ALUMINIZED), or 15" HDPE PIPE, a durable, flexible, and highly impermeable plastic pipe made from high-density polyethylene.

If you require additional information, please refer to the Swale Plan Detail, located in the attachments or Technical Manual Drawing #300.g, or to the page mentioned earlier.

- **The inspections below needs to be scheduled in the order listed.**

Pre-Pour Inspection: This inspection verifies that the driveway and pipe are placed and formed correctly, and that the culvert pipe is within the elevation tolerance given by the City of Palm Coast Swale Plan Detail.

Final Survey or Lot Grading Plan: The Topographic Survey shall be signed, dated, and sealed by an actively licensed Florida Professional Surveyor or Mapper.

This inspection is conducted in the office and verifies that the stormwater drainage, as proposed by the original site plan, complies. The approved site plan is followed and meets all minimum City Stormwater drainage standards.

Field Survey: This inspection is performed on-site to visually check that the drainage pattern on the Final Survey is reflected in the field.

Final Apron / After Pour: An inspection to ensure that the concrete driveway, culvert, and road repair meet all minimum City requirements. Compacted dirt and sod must be placed around all edges of the poured concrete, including around the miter ends and the driveway shoulders, to prevent washout.

Final Stormwater: Visually inspect the entire site and surrounding properties to ensure that the builder has met all minimum standards regarding drainage, Right-of-Way (ROW), easements, vacant lots, ditches, and waterways.

Final ROW: This inspection ensures that any damage to the Right-of-Way has been restored to its original condition prior to the construction of any project that required the builder to traverse through it.

- **Tree Removal Permits:**

You need to apply for a tree removal permit from the City of Palm Coast if you plan to cut, remove, damage, or destroy a tree with a trunk diameter of 6 inches or more (or 4 inches or more if surveyed for credit) at 4.5 feet above the ground.

Do I need a permit to cut down a tree? Yes, you need a permit to cut down, remove, damage, or destroy by pruning any tree with a caliper of the trunk six inches or greater in diameter at a height of four and ½ feet above grade, or the caliper of the trunk four inches or greater in diameter at a height of four and ½ feet that has been surveyed for credit.

Permit Requirements: A permit is required for land clearing/filling. It is prohibited and unlawful to clear trees, fill land, excavate, or dredge any parcel of land prior to the issuance of a single-family building permit or a site development permit, unless otherwise stated in this LDC, or authorized by the Land Use Administrator. The building permit shall act as the tree removal permit.

When does a tree removal permit require a lot grading permit?

In the City of Palm Coast, you are required to obtain a Tree Removal Permit for any tree removal, regardless of whether a lot grading permit is also needed. A Lot Grading Permit is required separately for projects that modify the grade of a vacant residential lot as part of the development process. Still, a Tree Removal Permit is a distinct requirement for taking down trees.

Exemptions for tree removal in Palm Coast:

While the provided text states there are no permit requirements, the City of Palm Coast regulations indicate permits are necessary for most tree removals, including those on residential lots.