

POLK COUNTY DEVELOPMENT REVIEW COMMITTEE STAFF REPORT

DRC Date:	November 7, 2024	Level of Review:	4
PC Date:	December 4, 2024	Type:	LDC Text Amendment
BoCC Date:	January 7, 2025	Case Numbers:	LDCT-2024-26
	January 21, 2025	Case Name:	Record Drawings and Appendix A Minor Changes
Applicant:	Polk County	Case Planner:	Erik Peterson, AICP

Request:	An LDC text amendment to Chapter 7, Section 704, Construction Plans, Chapter 8, Section 804, Construction Plans, Chapter 9, Section 980, Enforcement of Site Requirements, and Appendix A, Section A406 Inspection, Testing and Certification Requirements to remove the term “as-built” and replace with “record drawings”; amending Chapter 10, Definitions, to define “record drawings”; amending Appendix A, Section A203, Excavation, changing Florida Bearing Value to Limerock Bearing Ratio, delete Section A204, Soil Cement Standards; add Section A204, Road Design Illustrations, and consolidate Figures A6 thru A14 into one location; amending Section A207, Asphaltic Concrete Surface Course, by deleting subsection A207.G, Marshall Mixes Construction Methods; providing for severability; providing an effective date.
Location:	n/a
Property Owner:	n/a
Parcel Size (Number):	n/a
Development Area:	n/a
Nearest Municipality:	n/a
DRC Recommendation:	Approval
Planning Commission Vote:	Approval (Vote: 7-0)

Removes the term “as-built” and replace with “record drawings” in:

- Chapter 7, Section 704, Construction Plans,
- Chapter 8, Section 804, Construction Plans,
- Chapter 9, Section 980, Enforcement of Site Requirements, and
- Appendix A, Section A406 Inspection, Testing and Certification Requirements

Chapter 10 Definitions:

- Defines “record drawings” as: *drawings based on an as-built survey bearing the seal and signature of a professional engineer that reflect the modifications made to construction documents, documenting actual constructed conditions of the engineered plans (Level 2 Review).*

Amends Appendix A:

- **Section A203, Excavation:** changes Florida Bearing Value (FBV) to Limerock Bearing Ratio (LBR) and reduces subgrade tests from every 300 feet to every 600 feet
- **Deletes Section A204, Soil Cement Standards**
- **Deletes Section A207.G Marshall Mixes Construction Methods**
- Consolidates **Figures A6 thru A14** into one location: new **Section A204, Illustrations**

Summary:

Appendix A, the Polk County Technical Standards Manual, will undergo some changes in the upcoming year. This section of the Land Development Code (LDC) establishes the minimum engineering design standards applicable to all developments which are intended to promote the public health, safety and welfare by insuring that public and private infrastructure improvements are designed and constructed properly. County staff regularly meet with local engineering firms and site construction contractors to discuss better and more efficient ways to install infrastructure and prepare development sites for residential and commercial construction projects. These procedures and methods are embodied in Appendix A of the LDC. As a result of these ongoing discussions, County staff are drafting a series of changes to procedures and standards in the appendix. This is the first round of consensus amendments. These include the elimination of outdated construction methods, improvement of testing and measurement methods, and clarity of construction documentation.

In our research of local jurisdictions (See Table 1, page 7), staff found that many jurisdictions have site development standards and procedures manuals that are separate from their land development regulation ordinances. This gives the professional staff the ability to evolve certain construction standards outside of a legislated document. This is the case for Polk County Utilities (PCU). There is a separate Polk County Utility Code that is ratified by the Board but is not subject to the procedural requirements of Florida Statutes Chapter 125.66. This provides PCU with the flexibility to amend to the Utilities Code for technological changes, product advances, or innovations discovered through implementation without the rigorous and time-consuming ordinance amendment process. In the future, staff will bring forth an amendment to remove parts of Appendix A from the LDC and put them into a separate, more detailed standards and procedures manual that will not be a legislative document. For now, this amendment is necessary for proper implementation of current site development practices without having to approve administrative waivers as a workaround.

Data and Analysis Summary

Staff have reviewed development approvals and inspection records over the past ten years along with input from local paving and site construction contractors to determine that the standards for soil cement and Marshal Mixes is obsolete. Staff has researched the engineering and site development requirements in the land development regulations of 12 similar or abutting counties and Polk's two largest cities for their as-built certification requirements, code requirements vs separate site development procedures documents, and references to Florida Bearing Value (FBV) or Limerock Bearing Ratio (LBR).

This amendment applies to all land development within the unincorporated areas of the County regardless of the Future Land Use Map district, including the Green Swamp Area of Critical State Concern. Florida Commerce requires a 45-day review on all policy changes affecting development in the Green Swamp Area of Critical State Concern regardless of whether it has a direct relationship to the primary purpose of the Critical Area, which is aquifer recharge and protection. This amendment also applies to land development within cities when it takes access from a County road or utilizes County potable water, wastewater or reclaimed water services.

There are no conflicts with the Comprehensive Plan or Florida Statutes in the implementation of this amendment. POLICY 2.129-A2 of the Comprehensive Plan defers specific site development standards and permitting requirements to the Land Development Code. Chapter 163 and 177 of the

Florida Statutes address state regulations for infrastructure in the process for subdividing land. Staff found no inconsistencies with these statutes.

Findings of Fact

- *The request is a Land Development Code text amendment to Chapter 7, Section 704, Construction Plans, Chapter 8, Section 804, Construction Plans, Chapter 9, Section 980, Enforcement of Site Requirements, and Appendix A, Section A406 Inspection, Testing and Certification Requirements to remove the term “as-built” and replace with “record drawings”; amending Chapter 10, Definitions, to define “record drawings”; amending Appendix A, Section A203, Excavation changing Florida Bearing Value to Limerock Bearing Ratio, delete Section A204, Soil Cement Standards; add Section A204, Road Design Illustrations, and consolidate Figures A6 thru A14 into one location; amending Section A207, Asphaltic Concrete Surface Course, by deleting subsection A207.G, Marshall Mixes Construction Methods*
- *This amendment applies to all land development in the unincorporated area and in the cities where development accesses County roads or utilizes County water or wastewater services.*
- *POLICY 2.128-C1 of the Comprehensive Plan states “Through the implementation of its Land Development Code, Polk County shall regulate the subdivision of land in a manner consistent with the requirements of Florida Statutes to ensure:*
 - a. Legal access to public rights-of-way;*
 - b. Proper designation of rights-of-way and easements for roads, public utilities, and other public uses;*
 - c. The orderly provision of community services including police, fire, and emergency medical services, and;*
 - d. Compliance with local land use policies and regulations.”*
- *POLICY 2.129-A2 of the Comprehensive Plan states: Polk County adopted the Land Development Code in accordance with Section 163.3202(1), F.S., to consolidate all existing development regulations into a unified development code. The Land Development Code shall implement the policies and requirements of this Element, as well as all of the other elements of the Polk County Comprehensive Plan, and shall incorporate regulations, procedures, and standards which include:*
 - a. procedures for the review of development, to include, at a minimum:*
 - 1. Future Land Use Element compliance determination;*
 - 2. level-of-service determination (concurrency management system); and*
 - 3. the review of the subdivision of land;*
 - b. standards for the review of development, to include:*
 - 1. performance standards and/or zoning districts to implement the Future Land Use classifications of this Plan;*
 - 2. standards for the regulation of the subdividing of land;*
 - 3. standards for the regulation of on-site development, to include, but not limited to:*
 - (a) structure size;*
 - (b) setbacks, buffer requirements between adjacent incompatible land uses;*
 - (c) internal circulation and parking requirements;*
 - (d) access;*
 - (e) signage;*

- (f) lighting;
 - (g) fencing; and
 - (h) exterior storage of materials;
 - 4. standards for the regulation of off-site development, to include, but not limited to:
 - (a) acceleration and deceleration lanes, and
 - (b) the placement of off-site signs;
 - 5. enabling regulations to encourage the use of innovative development and construction techniques to benefit Polk County to include, but not limited to:
 - (a) water-use reduction techniques, to include the use of xeriscape plant materials;
 - (b) construction techniques to reduce the amount of on-site soil loss through water and wind erosion; and
 - (c) innovative techniques for the short and long term protection of environmentally sensitive lands, desirable open spaces, and bona fide agricultural areas, to include on-site density transfers and off-site transfer of development rights (TDR), if determined to be appropriate by the Board of County Commissioners.
 - c. regulations and procedures to address existing development and potential development, to include, but not limited to:
 - 1. existing non-conformities, including: uses, lots, structures, and site characteristics (parking, signage, access, etc.). Such regulations shall include provisions for the elimination or reduction of such non-conformities through abandoned or destroyed "grandfathered" discontinuance provisions and through the elimination of non-conforming zoning districts; and
 - 2. recognition of legal non-conformities to include: rebuilding rights; expansion rights; and use changes.
 - d. regulations and administrative procedures to address:
 - 1. variances and appeals;
 - 2. development and performance agreements;
 - 3. interpretation of the Comprehensive Plan and Land Development Code and;
 - 4. field confirmation of "development-limitation areas."
- Chapter 9, Section 932, Waivers to Technical Standards, of the Land Development Code lists Appendix A as a section that is eligible for administrative waivers.
- Planning Staff has researched the engineering and site development requirements in the land development regulations of 12 similar or abutting counties and Polk's two largest cities for their as-built certification requirements, code requirements vs separate site development procedures documents, and references to Florida Bearing Value (FBV) or Limerock Bearing Ratio (LBR).

Development Review Committee Recommendation:

The Land Development Division, based on the information provided with the proposed text amendment application, finds that the proposed text change request is **CONSISTENT** with the Polk County Land Development Code and the Polk County Comprehensive Plan. Staff recommends **APPROVAL** of LDCT-2024-26.

Planning Commission: at an advertised public hearing on December 4, 2024, the Planning Commission voted 7:0 for **APPROVAL** of LDCT-2024-26.

Analysis

Introduction

This amendment is intended for clarification and consistency of terms. It is also an opportunity to remove some obsolete sections and reorganize Appendix A, which is the Technical Standards Manual for certain infrastructure development such as streets, roads and drainage facilities. Ultimately, County Engineering, and Roads and Drainage staff are planning to remove the Technical Standards Manual from the LDC and provide a reference to it in its place. This will reduce the need for standard ordinance adoption procedures in order to change minor technical specifications. However, there are many other steps and amendments that will need to take place before such an amendment can be proposed. For now, this amendment contains **11 Sections**. **Sections 1, 10, and 11** are standard ordinance sections. **Sections 2-5 and 9** correct references to as-built plans where engineered record drawings are required. It also defines the term Record Drawings in accordance with legal terminology and the recommendations of the American Society of Civil Engineers (ASCE). **Section 6** deletes the obsolete soil cement standards and relocates all the road design illustrations in its place. **Section 7** deletes a reference soil cement measurement and strikes Florida Bearing Value (FBV) while inserting Limerock Bearing Ratio (LBR) in its place and changes the amount of subgrade tests required to fit the new measurement reference. **Section 8** deletes the obsolete Marshall Mix method and testing requirements. The following provides further explanation.

Record Drawings vs. As-built Surveys

As-built surveys after construction are important to provide an accurate accounting of the work that has been completed on a development project, but they are not the only record that is needed to account for the final finished product of a development contractor. Record drawings are created by the engineer of record on a development project under Level 2 Review to certify that the work produced by the contractor meets the specifications of his final plans. These drawings are based on an as-built survey but not the actual survey. The plans bearing the seal and signature of a professional engineer are the engineer's own construction documents affirming the actual constructed conditions of the engineered plans (Level 2 Review). The American Society of Civil Engineers (ASCE) believes that post-construction record drawings documenting the location and layout of civil engineering projects should be prepared following project completion under the direction/supervision of licensed professional engineers and/or professional surveyors. Complete post-construction record drawings are a document of the location and layout of civil engineering projects. Record drawings are the recommended method and provide a means to retain technical information in a central location.

Record drawings are required by Polk County Utilities Division, under the Utility Code, for acceptance of public infrastructure items such as lift stations, pumps and utility lines. They are required by Polk County Roads and Drainage Division for reimbursement of funds for capital improvements projects. Record drawings are required in six other parts of the Land Development Code (LDC). This amendment is for the purpose of internal consistency within the LDC and other County policies.

Soil Cement

Soil cement has become out of favor with pavement contractors in Florida because it is less cost effective than lime rock and often underperforms. It is brittle and prone to cracking. Any mistakes

during mixing or application process can compromise the roadway. It takes weeks to fully cure and may suffer damage if traffic returns to the roadway too early.

FBV vs. LBR

Florida Bearing Value (FBV) is an outdated test for this type of work and no longer used/accepted by the Florida Department of Transportation (FDOT). Limerock Bearing Ratio (LBR) has become the most common measurement in road construction. FBV is mostly used today in building foundation measurements.

Marshall Mix

The Superpave method is a performance-based approach to asphalt mixtures that considers traffic volume, climate, and pavement performance, while the Marshall method is more focused on aggregate selection and asphalt binder content determination. This is why it has become an obsolete pavement method.

Benefit-cost Analysis of the Amendment

Who does it help?

Clarity in an ordinance is helpful to all who use it. It provides more consistent details to the ordinance users. In this case, it is civil engineers, contractors, and site inspectors. The changes from FBV to LBR save the contractor money with fewer test requirements while not increasing potential harm to the public that will use the roads.

Who does it hurt?

There is no harm foreseen to any entity. Civil Engineers have always been required to certify that their plans were properly constructed. That is a part of their role in the development process and why their expertise is mandatory.

Soil cement has proven to be an inferior and more costly product. No one will miss its reference in the LDC. The Superpave method is preferred over Marshall Mix by engineers and contractors alike.

What is the cost?

A Business Impact Estimate pursuant to FS 125.66 (3)(a) has been prepared as an attachment to the casefile. Staff have analyzed potential costs for the civil engineers, contractors, and the public. It does not appear that any individual or organization will be burdened by this amendment.

Regulatory History

Prior to the LDC, the details in Appendix A were part of a separate subdivision ordinance: Ordinance 79-39 adopted on November 6, 1979. The ordinance was amended 12 times prior to the land development code. Prior to the 1979 ordinance, there was Ordinance 70-01 and 71-03. Neither provided any specifics on roadway or site construction. It was at the discretion of the County Engineer. Prior to January of 1970, the state mandated construction requirements.

Limits of the Proposed Ordinance

This amendment applies to all land development located in the unincorporated area of the County and development within cities that access County maintained roads.

Since this amendment applies to residential lots or parcels within the unincorporated areas of the County regardless of the Future Land Use Map district, it includes the Green Swamp Area of Critical State Concern. Florida Commerce requires a 45-day review on all policy changes affecting development in the Green Swamp Area of Critical State Concern regardless of whether it has a direct relationship to the primary purpose of the Critical Area, which is aquifer recharge and protection. Therefore, this request will be reviewed by the Florida Commerce Community Planning Department Areas of Critical State Concern Program. Staff believes that this amendment will have no impact on the Critical Area since it does not allow the creation of new dwelling units.

Comparisons to other Jurisdictions:

Staff commonly survey counties on the I-4 corridor for regulatory comparisons because they are most closely similar to Polk. Some of the abutting counties are reviewed along with the two largest cities within the County (Lakeland and Winter Haven). Alachua and Duval counties are also reviewed because of similar demographic and urban-rural mixtures to Polk County. This method of selection creates a survey of 14 total local jurisdictions. Staff found that 11 of the 14 jurisdictions specifically require either record drawings to be certified by the engineer of record or require the engineer to certify all construction based on an as-built survey which is by definition record drawings.

Table 1

Jurisdiction <i>(Code citation)</i>	Are Engineer's certifications required based on as-built plans (aka record drawings)?	Is there a separate technical manual for site development standards outside of the LDRs?	Is FBV or LBR used as the standard measurement sub-base?
Alachua County <i>Section 407.86 & 407.141</i>	Yes.	Yes, <i>Construction and Inspections Standards and Procedures of the Public Works Department.</i>	LBR
Brevard County <i>Section 62-3203, 62-2842</i>	No.	No.	Neither
Duval County <i>Section 654.136</i>	Yes.	Yes, <i>Land Development Procedures Manual.</i>	In the <i>Land Development Procedures Manual</i>
Hardee County <i>Sec. 7.07.06</i>	Yes.	No.	None.
Highlands County <i>See Gator</i>	?	?	?
Hillsborough County <i>Section 4.1.5.1.4 Section 8.01.05</i>	Yes.	Yes, <i>Development Review Procedures Manual</i>	LBR
Lake County <i>Section 14.08.00</i>	Yes.	No.	Neither
Manatee County <i>Section 337.9</i>	Yes.	No.	Testing is based on staff direction.
Orange County <i>Section 34-202</i>	Yes.	Yes, <i>Manual of Standards and Specifications for Wastewater and Water Main Construction.</i> But not for roadway design and inspection.	Neither.
Osceola County <i>Article 4.11</i>	Yes.	No.	Neither.
Seminole County <i>Section 75.6</i>	No.	Yes, <i>Seminole County Public Works Engineering Manual</i>	Neither.
Volusia County <i>Section 72-657</i>	Yes.	No.	Neither.

Table 1

Jurisdiction <i>(Code citation)</i>	Are Engineer's certifications required based on as-built plans (aka record drawings)?	Is there a separate technical manual for site development standards outside of the LDRs?	Is FBV or LBR used as the standard measurement sub-base?
City of Lakeland <i>Section 9.6.3.8</i>	Yes.	Yes. <i>Engineering Standards Manual</i>	LBR
City of Winter Haven <i>Section. 21-192</i>	Submit, not certify	No.	No.

Half of the jurisdictions in the survey specifically refer to a separate non-legislative document that provides specific details of road and site construction. Almost all of them lacked specific construction details in their adopted codes. More than likely, every jurisdiction has some informal guidelines for road and site construction standards. Some of them refer to FDOT standards in their codes.

Sub-base testing methods are either measured in Limerock Bearing Ratio or not at all according to the survey. This issue is likely addressed in non-legislative policies in most jurisdictions.

Consistency with the Comprehensive Plan

POLICY 2.129-A2 of the Comprehensive Plan defers all details of site development to the Land Development Code. There are no construction specifics or references to as-built plans or record drawings.

Consistency with the Florida Statutes

The practice of engineering is regulated under Chapter 471 of the Florida Statutes.

Comments from Other Agencies: This ordinance was drafted by Land Development Engineering and Inspection staff, the Roads and Drainage Division, and recommended by the County Engineer.

Draft Ordinance: under separate attachment