AGENDA
DESIGN STANDARD MANUAL
PROFESSIONAL ADVISORY COMMITTEE
February 9, 2016–8: 30 a.m..
Escambia County Central Complex Building
3363 West Park Place

1. Call to Order.

2. Approval of the January 19, 2016 meeting minutes.

3. **Items for Discussion:**

   1. DSM and LDC changes requested by the Committee at the January 19, 2016 meeting.

   2. Scheduling of discussion of drainage easements and right-of-ways.

4. Scheduling of the next DSM-PAC meeting.

5. Adjournment.

DSM Professional Advisory Committee **2.**

Meeting Date: 02/09/2016

Submitted By: Debbie Lockhart, Development Services

Information

Recommendation:

Approval of the January 19, 2016 meeting minutes.

Attachments

Draft Minutes 01-19-16

D R A F T

RESUMÉ OF THE MEETING OF THE DSM PROFESSIONAL ADVISORY COMMITTEE
HELD January 19, 2016

CENTRAL OFFICE COMPLEX
3363 WEST PARK PLACE, ROOM 104
PENSACOLA, FLORIDA
(8:30 A.M. – 11:01 A.M.)

Present: Tim Day, Dale Long, Paul Looney, Jill Johnson, Heath Jenkins, Chris Curb, John Fisher

Staff Present: Horace Jones, Director, Development Services
Andrew Holmer, Division Manager, Planning & Zoning

Attendees: Colby Brown, P.E., Deputy Director, Public Works
Jeremy King, P.E.. Design Manager, Public Works

1. The meeting was called to order at 8:30 A.M.

2. Motion was made by Dale Long and seconded by Jill Johnson to accept the November 19, 2015 meeting minutes.

3. **Items for Discussion**

The Committee reviewed the suggested DSM and LDC changes in the order of the DSM table of contents.

Items discussed were:

1. Stormwater pond performance measures.
2. Roadway design standards.
3. Private wastewater systems and equipment within right-of-way.
4. Turn Lanes.
5. Central private wastewater collection systems prohibition.
6. LDC turn lanes.
7. LDC bridge definition.
8. LDC off-site and joint use parking.

A request was made for a future topic to be the issue of drainage easements and right-of-ways.

4. The next PAC meeting is scheduled for February 09, 2016 at 8:30 A.M.

5. Motion to adjourn was made by Dale Long and seconded by Chris Curb. The meeting adjourned at 11:01 A.M.

DSM Professional Advisory Committee **3.**

Meeting Date: 02/09/2016

Submitted By: Debbie Lockhart, Development Services

Information

Recommendation:

Items for Discussion:

1. DSM and LDC changes requested by the Committee at the January 19, 2016 meeting.

2. Scheduling of discussion of drainage easements and right-of-ways.

Attachments

Index of Changes

DSM

LDC

Supplemental Sheets

Index of changes

CHAPTER 1, Engineering

Article 1 - STORMWATER

1-1 Stormwater Management Systems

All projects requiring a Stormwater Management System (SMS) shall be designed to meet the following:

1-1.1. Stormwater Quality (treatment)

Projects that require a Stormwater Management System (SMS) shall at a minimum be **designed** to provide for the treatment of the first ½" of runoff which shall be recovered in 72 hours. The method of treatment shall comply with the design methods referenced in the latest edition of the Environmental Resources Permit Applicants Handbook Volume II.

1-1.2. Stormwater Quantity (attenuation)

Projects that require a Stormwater Management System (SMS) shall at a minimum be **designed** to provide for the following for the total contributing runoff area:

Provide attenuation of the runoff from a 100 year critical duration event, up to and including 24 hour duration, so that the post-development runoff rate does not exceed the pre-development runoff rate, when a positive discharge route is present.

or

Drainage systems in areas with no positive drainage outlet shall be designed to more stringent criteria to include retention up to and including twenty-four (24) hour, one hundred (100) year frequency storm with no offsite discharge. These systems shall remain private and will not be accepted by the county for ownership and maintenance.

or

For projects that abut the Gulf of Mexico, Escambia Bay, Pensacola Bay, Perdido Bay or their connected, tidally influenced bodies of water (i.e. Tarkiln Bayou, Chico Bayou, Bayou Texar, etc.) the County Engineer may reduce or waive the SMS from Stormwater Quantity requirements.

1-1.3 Stormwater Ponds and Impoundments

All stormwater ponds or impoundments shall comply with the design standards provided in the Environmental Resource Permitting Applicants Handbook, Volume II, Florida Department of Environmental Protection and Northwest Florida Water Management District.

~~**(a) Pond Slopes**~~

~~All ponds - It is encouraged that the banks of detention and retention areas slope at a gentle grade into the water as a safeguard against accidents, to encourage the growth of vegetation, and to allow alternate flooding and exposure of areas along the shore as water levels change.~~

~~Detention and retention basins, designed to impound more than two feet of water, must contain side slopes that are no steeper than 4:1 (horizontal to vertical) out to a depth of two feet below the control elevation. Alternatively, the basins can be fenced with a perimeter~~

~~fence to restrict public access if any slopes are designed to be steeper due to space limitations or other constraints.~~

~~Ponds to be dedicated to the county - Ponds for public dedication require, "Side slopes no steeper than 3:1 (horizontal to vertical). If side slopes are steeper than 4:1, then the basins shall be fenced with a six-foot high chain link perimeter fence.~~

~~**(b) Maintenance Access**~~

~~All proposed stormwater ponds or impoundments that are to be dedicated to the county for ownership and maintenance shall provide adequate access.~~

~~1. Access requirements shall include a minimum width of 15 feet to the detention and retention/detention area and shall have a minimum 14 foot wide access gate, as necessary. The access road to the retention/detention structure shall be unobstructed and shall be a minimum of 12 feet wide, constructed of graded aggregate a minimum of 5" thick, and underlain with geotextile fabric.~~

~~2. Retention/Detention structures (wet ponds) - Adequate access for maintenance purposes, shall include a minimum width of 15 feet for access around the perimeter of the retention area.~~

~~3. Detention structures (dry ponds) - A ramp for access to the bottom of the retention area for maintenance equipment shall be required with a slope not to exceed 6:1. The access ramp shall be a minimum of 12 feet wide, constructed of graded aggregate a minimum of 5" thick, and underlain with geotextile fabric. Also, the entire bank slope, from the bottom of the pond to a point three feet beyond the bank line, shall be sodded.~~

1-1.4 Pond Slopes, Fencing, and Maintenance Access

All ponds - Retention and detention sides shall slope at a gentle grade into the water as a safeguard against accidents, to encourage the growth of vegetation, allow for proper maintenance, and to allow alternate flooding and exposure of areas along the shore as water levels change.

Commercial and industrial sites/subdivisions

A. Private developments -
   1. Side slopes - Wet ~~or dry~~ or dry ponds ~~- When unfenced, s~~Stormwater basins designed to collect ~~impound~~ more than two (2) feet of water must contain side slopes that are not steeper than 4:1 (horizontal to vertical) out to a depth of two feet below the control elevation unless fenced to restrict public access.
   2. Fencing – Per engineer of record
   3. Stabilization – Per engineer of record
   4. Maintenance access – Per engineer of record ~~Alternatively, the basins can be steeper when fenced to restrict public access. A maintenance access ramp is not required. Side slopes shall be stabilized in accordance with the engineers of records recommendations.~~

B. Public developments -

1. Side slopes

A - Wet ponds - When unfenced, side slopes shall not be steeper than 4:1 (horizontal to vertical) out to a depth of two (2) feet below the control elevation. When fenced, side slopes shall not be steeper than 3:1 out to a depth of two feet below the control elevation.

B - Dry ponds - Side slopes ~~Stormwater basin side slopes~~ may not be steeper than 3:1, and must be fenced when steeper than 4:1 (horizontal to vertical).

2. Fencing - The required fence shall be six (6) foot high chain link meeting County technical specifications[1] and be installed along the perimeter of the pond parcel. Privacy fencing, or other fencing, may be used to supplement screening to the chain link fence provided it is located within a private fence easement and offset by a minimum of five (5)~~'~~ feet from the chain link fence for maintenance.

3. Stabilization

A - Wet ponds - Wet ponds shall be stabilized in solid sod above the permanent pool elevation, unless stabilization is obtained through incorporation of ~~a~~ littoral plantings. ~~Side slopes shall be solid sod from the bottom to 3' beyond the top of bank.~~

B - Dry Ponds - Side slopes shall be solid sod from the bottom to three (3)' feet beyond the top of bank ~~Wet ponds shall be stabilized in solid sod above the permanent pool elevation, unless stabilization is obtained through incorporation of a littoral plantings.~~

4. ~~A m~~Maintenance access - Required~~is required.~~ (See requirements for maintenance access, this section).

Residential subdivisions

Private and Public ~~developments~~ subdivisions

1. Side slopes

A - Wet ponds - When unfenced, side slopes shall not be steeper than 4:1 (horizontal to vertical) out to a depth of two (2) feet below the control elevation. When fenced, side slopes shall not be steeper than 3:1 out to a depth of two feet below the control elevation.

B - Dry ponds - Side slopes may not be steeper than 3:1, and must be fenced when steeper than 4:1 (horizontal to vertical).

2. Fencing - The required fence shall be six (6) foot high chain link meeting County technical specifications[1] and be installed along the perimeter of the pond parcel. Privacy fencing, or other fencing, may be used to supplement screening to the chain link fence provided it is located within a private fence easement and offset by a minimum of five (5)' from the chain link fence for maintenance.

3. Stabilization

A - Wet ponds - Wet ponds shall be stabilized in solid sod above the permanent pool elevation, unless stabilization is obtained through incorporation of ~~a~~ littoral plantings.

B - Dry Ponds - Side slopes shall be solid sod from the bottom to three (3) feet beyond the top of bank

4. Maintenance access - Required(See requirements for maintenance access, this section).

~~- When unfenced, stormwater basins designed to impound more than two (2) feet of water must contain side slopes that are not steeper than 4:1 (horizontal to vertical) out to a depth of two feet below the control elevation. Alternatively, the basins may be fenced however the side slopes cannot be steeper than 3:1. The required fence shall be 6' chain link meeting County technical specifications. Privacy fencing, or other fencing, may be used to supplement screening to the chain link fence provided it is located within a private fence easement and offset by a minimum of 5' from the chain link fence for maintenance. Side slopes shall be solid sod from the bottom to 3' beyond the top of bank. Wet ponds shall be stabilized in solid sod above the permanent pool elevation, unless stabilization is obtained through incorporation of a littoral plantings. A maintenance access is required. See requirements for maintenance access, this section.~~

~~Required m~~**Maintenance access** shall meet the following criteria.

1. Unobstructed ~~area~~access with a minimum width of fifteen (15) feet to the wet/dry pond ~~retention/detention~~ area constructed of graded aggregate a minimum twelve (12) feet wide, no steeper than 6:1 (horizontal to vertical) at least five (5) inches thick, and underlain with pervious geotextile fabric.
2. A concrete driveway from the roadway meeting County ~~technical~~ standards
3. Minimum fourteen (14) foot wide, six (6) foot tall double access gate at the pond parcel boundary line.
4. Dry ponds shall include a minimum twelve (12) foot wide access road into the bottom of the retention/detention basin no steeper than 6:1. The access shall be unobstructed and constructed of graded aggregate a minimum of five (5) inches ~~5"~~ thick, and underlain with pervious geotextile fabric.
5. Wet ponds shall have a minimum fifteen (15) foot wide access route around the top bank perimeter of the retention area with a cross slope no steeper than 6:1. Access onto the perimeter route shall have a slope no steeper than 6:1.

[1] http://www.myescambia.com/sites/myescambia.com/files/Escambia%20County%20Technical%20Specifications_02-01-15.pdf

1-1. 45 Conveyance Systems

All conveyance systems shall be **designed** to convey the runoff from a 25 year critical duration event.

(a) Curb & Gutter Systems

These systems shall be **designed** to convey runoff without exceeding the following:

3. The minimum pipe size shall be 18" in diameter or its equivalent arch or elliptical pipe.

4. Only Reinforced Concrete Pipe (RCP) shall be constructed under all proposed or existing paved roadways.

5. Proposed drainage easements for underground conveyance systems shall have a minimum width of 15 feet for when the proposed depth is equal to or less than 5 feet from pipe invert to proposed finished grade. Conveyance systems greater than 5 feet in depth from pipe invert to proposed finished grade shall be located in a drainage easement. Drainage easements shall have a 20' minimum width.

6. County Standard Inlet Capacities. Under normal flood conditions County standard inlets are designed to accept the following flowrates:

Type "A" Inlet	7-10 cfs
Type "A-1" Inlet	7-10 cfs
Type Modified "A" Inlet	14-20 cfs
Double "A" Inlet	14-20 cfs

FDOT inlets may be used as a substitute for County Standard Inlets provided the inlet capacity is accommodated by the specified inlet type.

1-1.~~5~~6 Exemptions

Projects that include the addition of 1000 sf or less of impervious surface which are not part of a large development plan shall be exempt from this chapter.

(a) Residential property improvements

Improvements such as driveways, buildings, pools, etc. and/or accessory structures that do not exceed 1500 sf shall be exempt from this chapter.

(b) Minor Subdivisions

Proposed subdivision of land into no more than five single-family lots, each fronting on and existing paved public or private streets, and complying with all of the following:

1. No adverse impacts. Impervious cover on the lots will not adversely impact wetlands or create adverse off-site impacts.
2. Impervious cover limits. Total lot impervious cover will not exceed 2000 square feet on lots less than one acre in size, or five percent of lot area on lots one acre or more.
3. Documented limits. Lot impervious cover limitations are permanently documented in the public records of the county, including the subdivision plat and any covenants and restrictions.

4. Positive outfall. Each lot has a positive drainage outfall

1-1.~~6~~7. Other agency approvals

It is the responsibility of the applicant and the engineer of record to apply for and obtain all appropriate permits. Projects that are to be dedicated to the county for ownership and maintenance shall be required to provide all applicable permits prior to dedication.

1-2 Stormwater Management Plans

All projects requiring a Stormwater Management System (SMS) shall be required to submit a Stormwater Management Plan (SMP) which shall be prepared by, signed and sealed by a Professional Engineer actively registered to practice in the State of Florida. The PE shall certify that the SMS has been designed to meet the SMS requirements. The SMP shall include those items needed (i.e. maps, graphs, tables, calculations, photographs, narratives, explanations, etc.) which clearly demonstrate the intent of the Land Development Code and this Design Standards section have been met.

1-2.1 Methods

Innovative approaches to stormwater management are encouraged; however the SMP shall document compliance with the standards of this chapter and shall demonstrate control of erosion, sediment transport, stormwater quality, and stormwater quantity (flooding). Methods used for other than listed below shall require approval by the county engineer:

Urban Hydrology for Small Watersheds, Technical Release 55, US Department of Agriculture, Soil Conservation Service.

Environmental Resource Permit Applicants Handbook, Volumes I & II, Florida Department of Environmental Protection and Northwest Florida Water Management District.

Drainage Handbook: Drainage Connection Permits, Florida Department of Transportation.

Drainage Manual, Florida Department of Transportation.

1-2.2 Content

At a minimum, the SMP shall provide the following information:

(a) Existing Conditions

All existing conditions of the project site shall be detailed and include the following:

1. Stormwater flow - the direction, flow rate, and volume of runoff pre-development.

C Erosion Control Plan – The control of erosion and sediment transport shall be implemented based on the Best Management Practices (BMP's) designated in the Environmental Resource Permitting Applicants Handbook, Volume II, Florida Department of Environmental Protection and Northwest Florida Water Management District.

E. Maintenance Plan

F. Overall lot grading plan for all proposed subdivisions in accordance with the Florida Building Code.

Article 2 – TRANSPORTATION

2-1 Roadway Design

All roads and bridges constructed within Escambia County, public or private, shall be constructed to meet the design and materials standards identified within the DSM and Escambia County Technical Specifications.

2-1.1 Minimum right-of-way widths of streets, alleys and easements for utilities and drainage.

Beltways – Beltways as designated by the County shall not be less than 300 feet wide.

Arterials - State highways and county arterials as defined in the LDC shall not be less than 100 feet wide.

Collectors - Collector streets, as defined in the LDC shall not be less than 80 feet wide.

Local streets - Local streets including temporary cul-de-sacs, shall be 50 feet if curb and gutter are utilized, or 66 feet if roadside swales are utilized.

Turning circles - Turning circles (permanent) at the end of cul-de-sacs or dead-end street shall have a right-of-way 100 feet in diameter.

Easements - Easements for utilities, where required, shall be at least ten feet wide, and where practical shall be centered on rear or side lot lines.

Alleys - Alleys normally shall not be platted within subdivisions. However, where they are acceptable to the overall development of a subdivision by the county engineer, they shall be platted to a width of not less than 20 feet or more than 30 feet.

Drainage easement - Drainage easements must contain underground piping and shall be platted to a width sufficient to accommodate the projected pipe sizes, and shown on the recorded plat but in no case shall such easement be less than 15 feet in width unless a variance is approved by the County Engineer.

Drainage right-of-ways - Open ditches and drainage swales must be constructed within public dedicated or deeded right-of-way with a minimum width of 15 feet and shown on the recorded plat unless a variance is approved by the County Engineer.

In a proposed subdivision or accumulation of subdivisions of 100 lots or more adjacent to an existing or platted subdivision where extension of proposed streets to the boundaries would dead end with no feasible street connections, there shall be at least two entrance streets into a loop street through the proposed subdivision which streets shall be connected to a paved road. For the purpose of this provision a loop street means the primary local road designed to move traffic through the subdivision. The developer may utilize a single ingress/egress point, provided however, that such point provides for separation of traffic entering and exiting the subdivision by means of a boulevard and shall run the entire length of the entrance road between the connecting road and the loop road. In addition, left and right turn lanes must be provided for the connecting road.

(c) Dead End Streets

Cul-de-sac or local dead-end street shall not exceed 1,200 feet in length, exclusive of the permanent turning circle at the end of that street; however, the county engineer may recommend approval of a cul-de-sac over 1,200 feet in length to serve odd-shaped parcels of land which cannot be developed in any other reasonable manner or to serve property that would otherwise be denied reasonable access caused by manmade or natural obstacles adjacent to such property.

(d) Utilities in road right of ways

Tehere shall be no private utilities located within the public or private right of way. No streets or roads under the two-year warranty will be allowed to be open cut, or jack-and-bored, unless specifically approved by the county engineer. To accomplish this requirement, common trenching is required whenever possible. If a determination is made that common trenching is not a feasible option, the developer will install conduit or make other appropriate arrangements for the utility not participating in the common trenching and the utility will be required to use the conduit. This shall require planning between the utility and the developer.

~~(e) There shall be no **private lift station(s)** or related appurtenances located within a public or private right-of-way.~~

~~(f) There shall be **no low pressure** related appurtenances located within the public or private right-of-way except to tie to a gravity sewer or force main owned and maintained by the local utility authority, directly adjacent to the residence being served.~~

2-1.7. Traffic control devices.

The developer shall install traffic control devices as specified by the County Engineer Such devices shall conform to provisions in the Manual on Uniform Traffic Control Devices and FDOT standards.

2-2 Access Management

Vehicular access to public roadways shall be accomplished by means of an improved access facility (i.e., driveway, private road, etc.) Unimproved and/or unrestricted access will not be permitted. All driveways and streets shall be designed and constructed pursuant to the design standards in the most recent edition of the "A Policy on Geometric Design of Highways and Streets" by the American Association of State Highway Transportation

(c) Turn restrictions

The County Engineer shall restrict turning movements into and out of any roadway or driveway where it is deemed necessary for the safe and efficient movement of traffic, and the decision is based on sound professional engineering practices. Roadway or driveway connections with restricted turn movements shall be geometrically designed so as to provide access only for the movements permitted.

(d) Median openings

The location of additional and relocated median openings shall comply with the standards of FDOT in F.A.C. ch. 14.97, as amended.

(e) Turn lanes

~~1.~~ Turn lane design shall be supported by documentation of the estimated volume of traffic using the lane, resulting queue length, and design speed of the roadway. ~~When existing conditions warrant, i.e., traffic volume, queue length, design speed of roadway, etc., the County Engineer shall require additional length or width of proposed turn lanes and/or modifications to existing lanes. Any rights-of-way required to accommodate the construction of turn lanes shall be provided at no cost to the county.~~ Warrants for turn lanes into un-signalized driveways or streets was developed to provide for proper access management and safety.

~~2. All commercial and multifamily development proposals shall provide deceleration lanes as required according to the FDOT Greenbook.~~

The applicant must develop a trip distribution report in accordance with industry standard guidelines using traffic count data provided by either FDOT, Escambia County, or the applicant that is no more than three years old.

Turn Lane Warrant Criteria is~~are~~ as follows:

1. Using the data obtained from the trip generation/distribution report, the following shall apply:
    a. **Right Turn lanes.** The developer shall construct right-turn lanes on a county roadway to serve right-turning movement entering a development when the estimated volume of such movement is 30 or more vehicles during any peak hour.
    b. **Left Turn lanes.** The developer shall construct left-turn lanes on a county roadway to serve left-turning movement entering a development when the estimated volume of such movement is 30 or more vehicles during any peak hour.
    c. **If turn lanes are not required under this ~~provision~~section 1, proceed to section 2.**

2. If turning movements per peak hour, as determined by the Trip Distribution Estimate, are 85% or greater of the warrants in section 1a or 1b, a certified un-signalized turn lane analysis shall be performed by a licensed Florida Professional Engineer using approved methodologies such as those in NCHRP Report 457, 659 or 193, and the Highway Capacity Manual software.

2-2.4 Modification of existing access

(a) Abandoned access

When an existing driveway or other type of access is abandoned, or not used to serve a redeveloped site, the developer or property owner shall remove all pavement or gravel and restore the road rights-of-way. Restoration shall include but not be limited to, grading, culvert removal and replacement of curbing, sidewalk and stabilization.

(b) Additions

Unless the project is de minimis, reconstruction and/or removal of existing access connections to current standards is required when a site is redeveloped or expanded and the number of average daily vehicle trip ends attracted/generated by the new use is increased by 50 percent or more of the previous use.

(c) Change of use

Alteration of existing access connections by the property owner shall be required by the County Engineer whenever the nature of business conducted at a location changes so as to cause a change in the traffic pattern on a roadway which is reasonably expected to cause undue disruption to traffic or present a safety hazard.

2-2.5 Internal site access design

(a) Parking area setbacks

Parking shall be set back from the property line at driveways so as to not interfere with safe ingress/egress of traffic. The set back distance should be determined according to the estimated speed and volume of traffic entering a driveway and shall meet all the visual clearance requirements.

(b) Drive-through stacking

Drive-in and drive-through developments shall provide adequate queue storage capacity based on the peak hour storage requirements of the project which is subject to the review and approval by the County Engineer.

2-2.6 Commercial traffic in residential areas

No permit, development order, or other approval shall be issued for any proposed commercial use which requests primary, secondary, or limited access onto a local street if that local street is fronted by more than 50 percent residential zoning in the following districts: LDR, MDR, R1PK, R2PK, measured in linear feet along the center line of the local street impacted by the proposed development. This provision will not apply when its strict application would deny all access to a parcel that is zoned for any commercial use.

2-~~3~~2.7 Bridges

Bridges shall be designed and constructed according to the latest editions and revisions of AASHTO LRFD Bridge Design Specifications (load-and-resistance factor design), FDOT Structures Design Guidelines and any approved interim specifications, and the FDOT "Florida Greenbook."

~~All bridges shall have a length, measured along the center of the roadway, of more than 20 feet between the inside faces of end supports. A multiple-span box culvert shall be constructed where the length between the extreme ends of the openings exceeds 20 feet.~~

Each bridge dedicated to the public shall be inspected by the FDOT, according to the National Bridge Inspection Standards (NBIS), 23 U.S.C. 151, and Florida Statutes (§ 335.074). If the intent is that the bridge ~~intends to~~ remains private, an Access Easement, dedicated to the ~~County~~public, shall be provided. ~~over the bridge.~~ The easement shall include the bridge length, 50 feet from each end of the bridge, and match the width of the road right of way. The County will establish a MSBU upon plat approval for any future maintenance or inspections required for private bridge(s). ~~Annual inspections for private bridges are required to be provided to the County Engineer. This due date will be the anniversary of the plat. If it is determined the inspection is late, the County Engineer will, without notice have the authority to perform the inspection and charge an MSBU to the homeowners or property owners benefiting from the private bridge.~~

Bridge plans certified by a Florida professional engineer must be included in the construction plans prior to approval. ~~Roadway plans will not be approved until the bridge plans have been approved.~~

Article 3 – Parking

3-1 Parking and Loading

3-1.1 Stall and aisle design

(a) Stall Dimensions

Standard parking stalls shall be 9 feet wide by 18 feet long for all but parallel parking. Parallel stalls shall be 9 feet wide by 23 feet long.

(b) Stall Angles

The angles of non-parallel parking stalls in relation to the alignment of the accessing drive aisle are restricted to 90, 60 or 45 degrees.

(4) **Utility street crossings.** See DSM Chapter 1, Street Layout section for details regarding utility street crossings.

(5) **Street lights.** The developer is encouraged to install street lights. A street lighting district may be established through the BCC for the installation, operation, and/or maintenance of lights according to the street lighting municipal services benefits units (MSBU) provisions of Chapter 70, *Local Public Improvements,* Part I, Escambia County Code of Ordinances.

(6) **Easements.** Drainage easements and rights-of-way shall comply with the stormwater management provisions of this chapter and DSM, Chapter 1, Stormwater Management Systems - Conveyance Systems section and Chapter 2, Roadway Design - Minimum Right-of-way widths section.

(7) **Water supply and sewerage.** The subdivision developer shall maintain a valid, unexpired reservation of capacity for water and/or sewer service from the provider whose franchise area serves the subject property. Letters of capacity executed by the service provider shall be provided, and such letters or forms shall constitute documentation of reservation of capacity.

~~**Sewer/Wastewater.**~~ No central private wastewater collection systems shall be proposed or expanded. All proposed sewer collection systems will require approval and acceptance by the local utility authority. If a low pressure sewer system is proposed, all items relating to the system, excluding the collector force main, shall be located on private property. Anything located within a public or private right of way ~~R/W~~ shall be owned and maintained by the local utility authority.

~~**Disclosure?**~~

~~(7)~~

(8) Provisions shall be made for the installation of fire hydrants and comply with the following:

a. No residence in any subdivision shall be more than 500 feet from a fire hydrant on a six-inch water line. Locations of fire hydrants shall be noted on the subdivision construction plans; or

b. Where a four-inch water line is located at the entrance to a new subdivision, the developer shall be required to install a six-inch waterline within the new subdivision with flush hydrants so that they can be replaced with fire hydrants when service at the entrance becomes adequate.

c. If public or community water systems service is not available or the existing water line is less than four inches, the developer shall install a six-inch waterline with stub-outs for fire hydrants unless the engineer of record finds the larger main size to be detrimental to the water quality in the development.

(j) **Public dedication.** The county encourages developers of residential subdivisions to request the dedication of subdivision streets and stormwater management

systems to the county, but those facilities may alternatively be dedicated to one or more owners of property within the subdivision. If the dedication of subdivision streets and stormwater management systems for public ownership and maintenance is proposed, the following conditions apply:

(1) Compliance. The facilities shall be designed and constructed in compliance with the standards of this chapter.

(2) All facilities. The streets will not be accepted without the stormwater management system or the stormwater management system without the streets. The facilities shall be dedicated in their entirety to the county.

(3) Permitting. The facilities will not be accepted without appropriate permitting of those facilities from all applicable local, state, and federal agencies, or proof of exemption.

~~**(4) Lift Stations.** No central private wastewater lift stations shall be proposed.~~

(k) Private ownership.

(1) Maintenance and taxes. If the streets and stormwater management system of a subdivision will remain in private ownership, the county shall not be responsible for the maintenance of those facilities or be the owner of an easement upon them. The subdivision developer shall create a homeowner's association or an alternative organization of owners of property within the subdivision and assign it the responsibility for maintaining the streets and stormwater management system and any other privately owned improvements as well as for paying the property taxes due on those lands.

(2) County authority. Any agreements establishing the persons responsible for maintaining the streets, stormwater management system, and other privately owned subdivision improvements, and for paying property taxes on the lands of those improvements, shall vest in Escambia County the authority to assess reasonable fees upon those persons for the payment of maintenance costs and property taxes for those lands in the event that the improvements and their lands are not maintained or that the taxes on the lands are not paid. These provisions shall also be in any restrictive covenants binding the property.

(3) Covenants and restrictions. Subdivision covenants and restrictions shall include the documents of the homeowner's association or an alternative organization of owners of property within the subdivision, identifying specific operation and maintenance responsibilities of the organization for streets, the stormwater management system, and all other privately owned improvements, including entrance signs and private recreation areas.

devices, etc. The general design and construction of all stormwater management systems shall be as indicated in the *DSM* Chapter 1, Stormwater Article and achieve the following objectives:

(1) Comply with regulations.

(2) Protect adjacent property.

(3) Incorporate upland runoff.

(4) Reduce pollution.

(5) Prevent hazards.

(6) Encourage regional stormwater management system.

(b) Resource protection. All stormwater management systems shall be designed and constructed to protect natural resources as per State requirements.

(c) System maintenance.

(1) General. All stormwater management facilities shall be designed for a minimum 50-year life (where standards are available) have low maintenance costs, and have easy legal access for periodic maintenance.

(2) Maintenance entity. Stormwater management systems shall be maintained by the owner, except where the county selects certain systems for county maintenance. All areas and/or structures to be maintained by the county must be dedicated to the county by plat or separate instrument and accepted by the BCC. Systems to be maintained by the owner shall~~, nevertheless~~, have adequate easements to permit the county right-of-entry to inspect and, if necessary, take corrective action if the owner fails to maintain the system. In addition, the owner shall submit a copy of any outside agency inspections and/or reports for the County to evaluate in accordance with the County's MS4. ~~When~~ If the owner fails to maintain his system, the county ~~shall~~ may give the owner written notice of the nature of corrective action required. If the owner fails to take corrective action within 30 days from the date of the notice, the county may take the necessary corrective action, including placement of a lien on all property of the owner to recover the costs thereof. ~~The owner shall send copies of NWFWMD required stormwater system inspections to the County.~~

(d) Inspections. The owner shall initiate scheduling with the county for the following inspections:

(1) Erosion control. An erosion and sediment control inspection prior to any construction or other land disturbance, as may be required by county development approval, to ensure effective controls are in place according to the provisions of this article.

(2) Underground. An inspection prior to the burial of any underground drainage structure to ensure appropriate materials and installation.

(3) Subdivisions.

Connection to undeveloped property. See DSM Chapter 1, Roadway Design - Street Layout section.

(c) Ingress and egress. See *DSM* Chapter 1, Transportation article for details.

(d) Cul-de-sacs. See *DSM Chapter1, Roadway Design - Street Layout section* for details.

(e) Right-of-way widths. Right-of-way widths shall be provided as indicated in the *DSM Chapter1, Roadway Design- Minimum Right-of-way widths section*. The *DSM* shall detail right-of-way widths as it relates to arterials, collectors, local streets, turning circles, alleys, and partial widths

(1) Programmed widening. If a tract to be subdivided abuts any part of an arterial or collector street and the street is contained in an adopted capital improvement plan of the state or county and has a programmed widening by the state or county, the part of the public right-of-way necessary to comply with that programmed plan shall be set aside by the developer for dedication, unless the county chooses to negotiate mitigation measures, as requested by the developer.

.

(2) Non-Standard right-of-way donation. If a tract to be developed abuts any part of an arterial collector or local street (not meeting section 7 criteria) that does not meet the minimum ROW requirements, the developer shall set aside 50% of right-of-way necessary to comply with county ROW requirements.

(f) Pavement widths. Details regarding pavements widths as it relates to local streets, turning circles, and alleys are provided in the *DSM Chapter 1, Roadway Design - Minimum pavement widths section.*

(g) Intersections. The *DSM* provides criteria for intersection design, which contains specific requirements for angles, radii, visual clearance, and offsets. See DSM Chapter, *Roadway Design –Intersections section.*

(h) Design speed. Local streets shall be designed with a minimum design speed of 15 miles per hour (mph). Residential subdivision streets that service the cumulative development of 100 lots or more shall be designed with a minimum design speed of 20 mph.

(i) Crown elevation. See *DSM Chapter* 1, Roadway Design - Roadway Elevations section for details.

(j) Bridges. (See DSM Chapter ~~2~~1, Transportation – 2-1 and 2-3 for details. Annual inspections for private bridges are required to be provided to the County Engineer on the anniversary of the plat. If the annual inspection is thirty (30) days late, the County Engineer may, without notice, have the authority to perform the inspection and charge the cost of the insepction through the MSBU to the homeowners or property owners benefiting from the private bridge.

All private bridges constructed in Escambia County~~, public or private,~~ shall have a~~n~~ MSBU created to fund bridge inspections which will be managed by Escambia County. Should any

repairs be required ~~to maintain~~ for public safety, the County will issue notice to the bridge owner which will require corrective action. If repairs are not made within the time specified in the bridge report, ~~a reasonable time frame,~~ the bridge may be closed~~a mandatory MSBU will be imposed~~.

~~(1) **Design and construction.** Bridges shall be designed and constructed according to the latest editions and revisions of *AASHTO LRFD Bridge Design Specifications* (load-and-resistance factor design), FDOT *Structures Design Guidelines* and any approved interim specifications, and the FDOT "Florida Greenbook."~~

~~(2) **Public.** All public bridges shall be built with a minimum of 20 feet between abutments.~~

~~(3) **Inspection.** Each bridge dedicated to the public shall be inspected by the FDOT, according to the *National Bridge Inspection Standards* (NBIS), 23 U.S.C. 151, and Florida Statutes (§ 335.074).~~

(k) Dedication. Consistent with the provisions of Article 3 of this chapter, subdivision streets cannot be dedicated for county ownership and maintenance without the concurrent public dedication of the subdivision stormwater management system. .

Sec. 5-5.4 Site access.

(a) General. Vehicular access to an adjoining public street shall be accomplished by means of an improved access facility, such as a driveway or private street, designed and controlled to provide safe and convenient access to the street. Neither unimproved nor unrestricted access is permitted. Site access shall comply with the standards of this section to accommodate vehicles and pedestrians as well as to provide traffic control. Unless otherwise specifically provided, the standards of this section do not apply to driveways for single-family dwellings.

(b) County requirements. There is no intent to conflict with or duplicate state highway access permitting, but connections to the state highway system will be evaluated during LDC compliance review for consistency with county requirements.

(c) Visual clearance. See *DSM Chapter 1, Roadway Design –Intersections section* for details.

(d) Access Location. Driveways proposed to access a street shall either be aligned with, or offset from, existing and planned driveways, median openings, and streets on the same and/or opposite sides of the street to be accessed. See DSM Chapter 1, Roadway Design – Access Location for more details. .

(e) Driveway paving. Driveways that connect to a paved street shall be paved to the right-of-way.

(f) Internal access. Proposed development along arterial or collector streets shall provide access routes within the development for all uses such that a return to the arterial or collector street is not necessary to access another use within the development.

(g) Multiple street frontages. When a lot or parcel is located at a street intersection or otherwise fronts more than one street, vehicle access for all uses on the lot, including single-family dwellings, may be limited to the roadway with the lowest traffic volume, least operational impact, or lowest functional classification, provided that the restriction is consistent with existing FDOT standards. Potential traffic impacts to residential neighborhoods shall be considered when applying this restriction. Non-access easements may be required on site plans and plats to implement this restriction.

(h) Modification of existing access.

(1) Unused access. See *DSM Chapter 1, Access Management - Modification of Existing access section* for details.

(2) Additions. See *DSM Chapter1, Access Management - Modification of Existing access section* for details.

(3) Change of use. See *DSM Chapter 1, Access Management - Modification of Existing access section* for details

(i) Commercial traffic in residential areas. See *DSM Chapter* 1, Access Management - Commercial Traffic in Residential Areas section for details regarding proposed zoning districts.

(j) Fire department access. Fire department access shall be provided and maintained for every use according to the current standards of the National Fire Protection Association (NFPA) as administered by the Escambia County Fire Marshal.

(k) Cross access easements. All new commercial developments along roadways with an approved access management plan shall provide cross-access easements and connections to adjoining commercial properties.

Sec. 5-5.5 Traffic Control.

(a) Controls required. Site plans, subdivision construction plans, and other development approvals shall require the reasonable placement of traffic control signs, pavement markings, traffic signals, and other traffic control devices along any street, at any driveway, or within any development, as detailed by the *DSM*.

(b) Traffic signals. *DSM Chapter 1, Access Management - Traffic Control section* contains information regarding the assignment of responsibility for traffic signals. The *DSM* also contains including provisions for signal study, construction costs' responsibility, and optional signal criteria.

(c) Turn restrictions. See *DSM Chapter 1, Access Management - Traffic Control section* for details.

(d) Median openings. See *DSM Chapter 1, Access Management - Traffic Control section* for details.

(e) Turn lanes. The developer shall perform ~~construct right and/or left turn~~ a turn lane~~s~~ analysis on a county roadway to serve ~~any turning movement entering~~ a development ~~when the estimated volume of such movement is 60 or more vehicles~~

~~during any~~ which generates peak hour trips that are, equal to, or greater than 50. Such turn lanes, and required supporting right-of-way, ~~shall be provided by the developer at no cost to the county and meet all county standards. Such t~~Turn lane~~s~~ criteria is in DSM Chapter 1, Article 2-2-3. ~~shall be provided by the developer at no cost to the county and meet all county standards as indicated in the DSM. *DSM Chapter* 1, Access Management - Traffic Control section provides design criteria for turn lanes on county roads and deceleration lanes.~~ Trip Generation figures for the development shall be determined by the Institute for Transportation Engineers Trip Generation Manual (ITE-TGM). ~~I~~If a county roadway, serving a development, is included in the county's Capital Improvement Program or the Florida-Alabama Transportation Planning Organization Corridor Management Plans, the improvements indicated in such plans shall be provided by the developer.

Sec. 5-5.6 Sidewalks and bikeways.

Sidewalks and bikeways will be installed in conformance with current ADA standards and all applicable guidelines (to include but not be limited to the latest editions of the FDOT Transit Facilities Guidelines and FDOT Roadway Standard Specifications). This is to support adopted bicycle and pedestrian plan routes and/or applicable grant programs to provide connectivity with existing sidewalks or as required by Florida Department of Transportation (FDOT).

(1) Sidewalks

a. **Site Frontage.** Sidewalks along the site frontage of a development site parcel are required as indicated in the DSM for all applicable commercial and residential developments. Sidewalks will be installed in conformance with current ADA standards and all applicable guidelines (to include but not be limited to the latest editions of the FDOT Transit Facilities Guidelines and FDOT Roadway Standard Specifications) and shall be constructed according to conditions specified in the *DSM Chapter 1, Access Management - Pedestrian Access section*. The developer has the option to either build the required sidewalk along the affected parcel frontage or contribute funds to the county for construction at a later date at the county's discretion (at the developer's request). Contributed funds shall be based on the county's latest pricing agreement.

b. **Transit Stop**. For any development with an entrance located 200 feet (immediately adjacent) of an existing and fixed transit stop, a sidewalk must be constructed (within the existing ROW) from the entrance of the development to the existing and fixed transit stop. The newly constructed sidewalk will be installed in conformance with current ADA standards and all applicable guidelines (to include but not be limited to the latest editions of the FDOT Transit Facilities Guidelines and FDOT Roadway Standard Specifications). In addition, to meet ADA standards, the sidewalk must be connected to any existing/planned sidewalks within the development.

(a) Bikeways. See DSM Chapter 1, Access Management - Pedestrian Access section for details.

Borrow pit. A site or parcel of property where soils, clays, gravel or other natural deposits on or in the earth are removed, or have been removed, for use by the property owner or another entity, typically with no processing except for screening to remove debris. A borrow pit may also be referred to as a mining site or a mineral or resource excavation or extraction site..

Bridge. A structure, including supports, erected over a depression or an obstruction such as water, ~~or a~~ highway or railway, or for elevated roadway, ~~; having a track or roadway~~ for carrying traffic or other moving loads~~;~~ , and having a~~n opening~~length, measured along the center of the roadway, of more than 20 feet between the inside faces of end supports. ~~under copings of abutments, spring lines of arches, or extreme ends of openings of multiple boxes or pipes (culverts) where the clear distance between contiguous openings is less than half of the interior width or diameter of the smallest of such contiguous openings.~~ A multiple-span box culvert is considered a bridge, ~~where~~ when the length between the extreme ends of the openings exceeds 20 feet as measured along the centerline of the road..

Broadcast station. A facility for over-the-air, cable, or satellite transmission of radio or television programs to the public and which may include studios, offices, and related broadcast equipment.

Buffer. A designated area with natural or manmade features functioning to minimize or eliminate adverse impacts on adjoining land uses, including environmentally sensitive lands.

Buildable area. The portion of a lot, exclusive of required yards, setbacks, buffers, open space, or other regulatory limits, within which a structure may be placed.

Building. Any structure having a roof supported by columns or walls.

Building coverage. The total horizontal area measured within the outside of the exterior walls or columns of the ground floor of all principal and accessory buildings.

Building line. The innermost edge of any required yard or setback.

Building Official. The representative of the county appointed by the Board of County Commissioners to administer applicable building codes.

Building permit. A document issued by the Building Official authorizing the erection, construction, reconstruction, restoration, alteration, repair, conversion, or maintenance of any building or other structure in compliance with applicable building codes.

Bulk storage. Large capacity storage, as in warehouses, silos, and tanks, for massed quantities typically not divided into parts or packaged in separate units.

Bulletin board/directory sign. A sign which identifies an institution or organization on the premises of which it is located and which contains the name of the institution or organization or the names of individuals connected with it, and general announcements of events or activities occurring at the institution or similar messages.

Bus leasing/rental facility. A facility for the transient parking, storing, repairs, servicing, leasing, and/or rental of passenger buses or motor coaches.

DSM

2-2.7 Bridges

Bridges (as defined in the LDC) shall be designed and constructed according to the latest editions and revisions of AASHTO LRFD Bridge Design Specifications (load-and-resistance factor design), FDOT Structures Design Guidelines and any approved interim specifications, and the FDOT "Florida Greenbook."

Each bridge shall be dedicated to the public and shall be inspected by the FDOT, according to the National Bridge Inspection Standards (NBIS), 23 U.S.C. 151, and Florida Statutes (§ 335.074). For site plans only, ~~I~~if the intent is that the bridge remains private, an easement, dedicated to the public, shall be provided. The easement shall include the bridge length, 50 feet from each end of the bridge, and match the width of the road right of way. The County will establish a MSBU upon certificate of occupancy for any future maintenance or inspections required for the private bridge(s). ~~, an Access Easement, dedicated to thepublic, shall be provided. The easement shall include the bridge length, 50 feet from each end of the bridge, and match the width of the road right of way. The County will establish a MSBU upon plat approval for any future maintenance or inspections required for private bridge(s).~~ or a secondary access to the site shall be provided without a bridge.

Bridge plans certified by a Florida professional engineer must be included in the construction plans / site plans prior to approval.

LDC

<<The first paragraph was the old language before we considered doing all inspections and not requiring the HOA to provide it. The second paragraph was the new language we came up with. >>

(a) ~~**Bridges.** (See DSM Chapter1, Transportation – 2-1 and 2-3 for details. Annual inspections for private bridges are required to be provided to the County Engineer on the anniversary of the plat. If the annual inspection is thirty (30) days late, the County Engineer may, without notice, have the authority to perform the inspection and charge the cost of the inspection through the MSBU to the homeowners or property owners benefiting from the private bridge.~~

(a) Bridges. (See DSM Chapter1, Transportation – 2-1 and 2-3 for details). All ~~private~~ bridges constructed in Escambia County shall have a MSBU created to fund bridge inspections ~~which will be managed by Escambia County. Should~~and any repairs ~~be~~ required for public safety., ~~t~~The County will issue notice to the bridge owner which will require corrective action. If repairs are not made within the time specified in the bridge report, the bridge may be closed.

NOTE: Drew, this same LDC language needs to be in the Site Plan section of the LDC.

Current LDC - 5:26

Chapter 5
Article 5 Streets and Access
Sec. 5-5.5 Traffic Control

(e) Turn lanes. The developer shall perform ~~construct right and/or left turn~~ a turn lane~~s~~ analysis on a county roadway to serve ~~any turning movement entering~~ a development ~~when the estimated volume of such movement is 60 or more vehicles during any which~~that generates ~~peak hour~~ trips that are~~,~~ equal to~~,~~ or greater than 50 vehicles ~~/~~during any peak hour. Trip Generation figures for the development shall be determined by the Institute for Transportation Engineers Trip Generation Manual (ITE-TGM). ~~Such t~~Turn lanes, and required supporting right-of-way, ~~-~~shall be provided by the developer at no cost to the county and meet all county standards. ~~Such t~~Turn lane~~s~~ criteria is in DSM Chapter 1, Article 2-2.-3. ~~shall be provided by the developer at no cost to the county and meet all county standards as indicated in the DSM. *DSM Chapter* 1, Access Management - Traffic Control section provides design criteria for turn lanes on county roads and deceleration lanes. Trip Generation figures for the development shall be determined by the Institute for Transportation Engineers Trip Generation Manual (ITE-TGM).~~ If a county roadway, serving a development, is included in the county's Capital Improvement Program or the Florida-Alabama Transportation Planning Organization Corridor Management Plans, the improvements indicated in such plans shall be provided by the developer.

Current DSM

Chapter 1
Article 2 – TRANSPORTATION
2-2.3 Traffic Control

(e) Turn lanes

~~1.~~ A turn lane analysis shall be performed on a county roadway serving a development that generates 50 vehicles or greater during any~~/~~ peak hour ~~or greater~~. Turn lane design shall be supported by documentation of the estimated volume of traffic using the lane, resulting queue length, and design speed of the roadway. ~~When existing conditions warrant, i.e., traffic volume, queue length, design speed of roadway, etc., the County Engineer shall require additional length or width of proposed turn lanes and/or modifications to existing lanes. Any rights-of-way required to accommodate the construction of turn lanes shall be provided at no cost to the county.~~ Warrants for turn lanes into un-signalized driveways or streets ~~was~~are developed to provide for proper access management and safety.

~~2. All commercial and multifamily development proposals shall provide deceleration lanes as required according to the FDOT Greenbook.~~

The applicant must develop a trip distribution report in accordance with industry standard guidelines using traffic count data provided by either FDOT, ~~-~~Escambia County, or ~~-~~the applicant, provided that the data ~~that~~ is no more than three years old.

Turn Lane Warrant Criteria is~~are~~ as follows:

1. Using the data obtained from the trip generation/distribution reports, the following shall apply:
    a. **Right Turn lanes.** The developer shall construct a right-turn lane(s) on a county roadway to serve right-turning movements entering a development when the estimated volume of such movement is 30 vehicles or greater during any peak hour ~~or more. vehicles during any peak hour.~~
    b. **Left Turn lanes.** The developer shall construct a left-turn lane(s) on a county roadway to serve left-turning movements entering a development when the estimated volume of such movement is 30 vehicles or greater during~~/~~ any peak hour ~~or more. vehicles during any peak hour.~~
    c. **If a right or a left turn lane(s) is~~are~~ not required under ~~this provision~~section 1, proceed to section 2.**

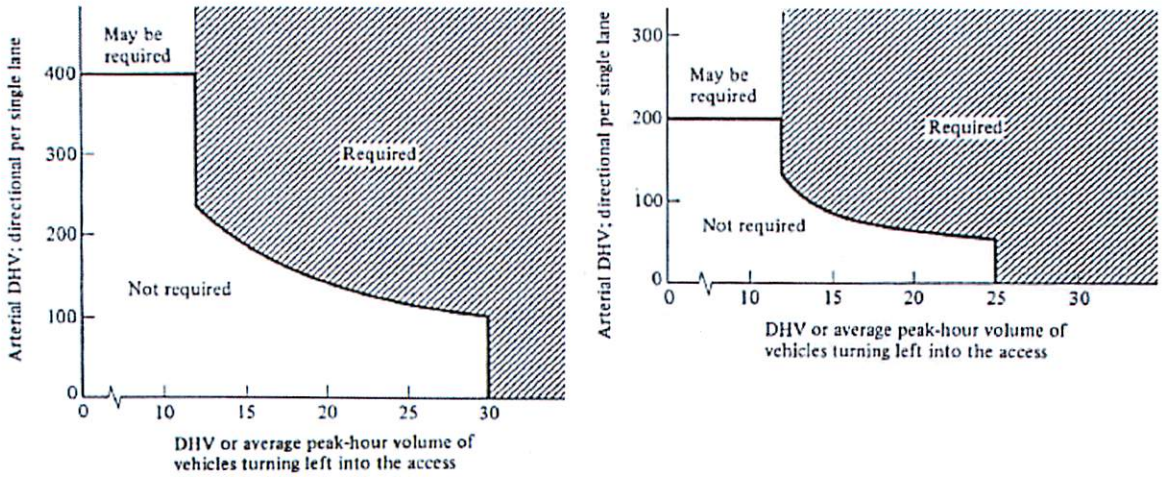
2. If the number of turning movements ~~per peak hour~~, as determined by the Trip Distribution Report~~Estimate~~, is~~are~~ 25.5 to 30 vehicles ~~/~~during any ~~any~~ peak hour~~85% or greater of the warrants in section 1a or 1b~~, a certified un-signalized turn lane analysis shall be performed by a licensed Florida Professional Engineer using approved methodologies such as those in NCHRP Report 457, 659 or 193, and the Highway Capacity Manual software.

Supporting Documentation:

LDC Warrant Trigger (how we achieved):

- 50 Vehicles/Hour from Development
  - Tried 5% of Roadway Capacity – Typical 2 Ln County Roadway (35mph and below = 48v/h) (40mph and above = 57 v/h)
  - We chose 50 vehicles per hour
  - This information is from FDOT Generalized Peak Hour Tables (out of Quality/LOS Handbook)
  - This aligns with Old Concurrency Manual which had a trigger of 50 vehicles per hour.

National Cooperative Highway Research Program



(a) 30–35 mph **(b) 40–45 mph**

Source: Koepke, F.J., and H.S. Levinson, *Access Management Guidelines for Activity Centers, NCHRP Report 348.* Copyright, National Academy of Sciences, Washington, D.C., 1992.

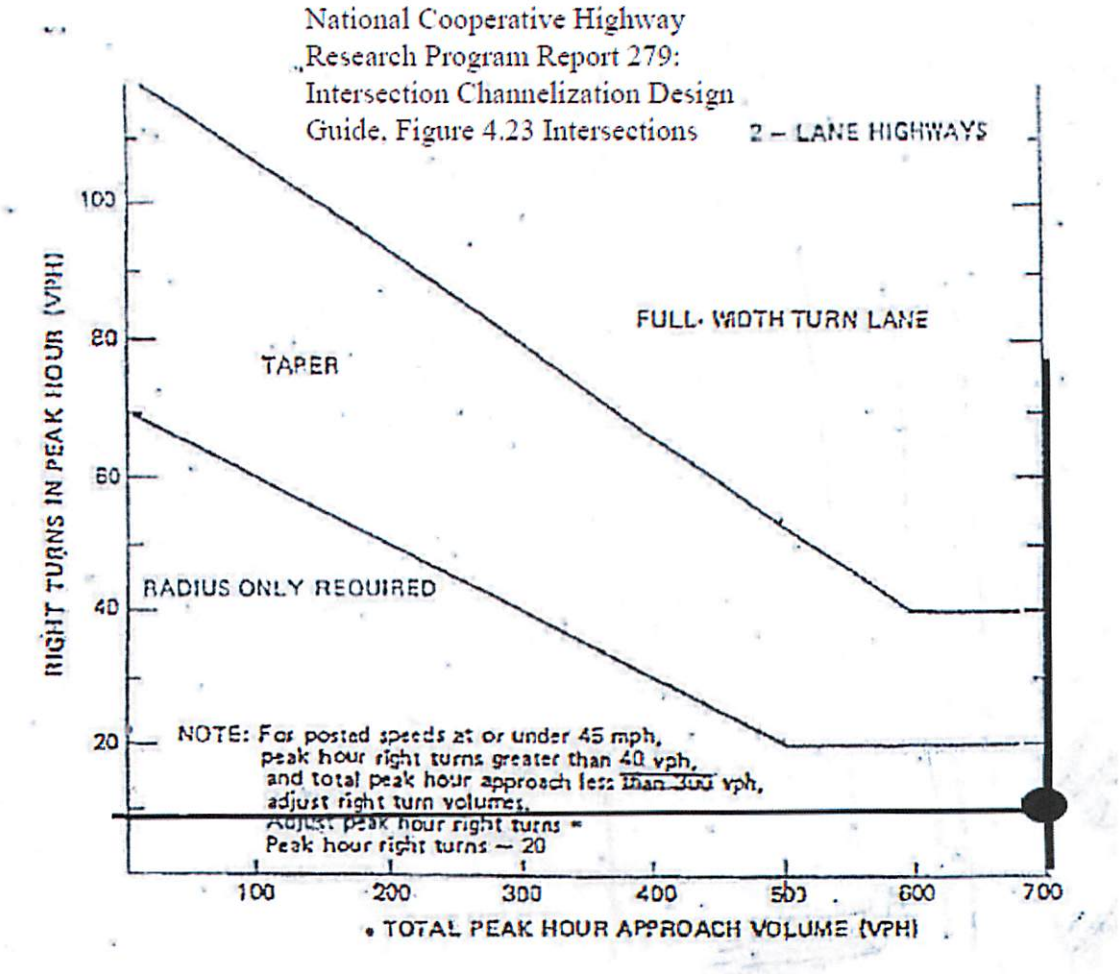
Figure 6. *NCHRP Report 348* (15) left-turn lane guidelines, 1992.

Left Turn Lanes

- 21% Crash reduction (Crash Modification Factor Clearinghouse – FHWA)
- Significant congestion reduction
- Santa Rosa requires left turn lane at 30 lots
- Cost for 100' left turn lane – approx $75,000 (Highest Est. from County Pricing Agreement)
- 25 vehicles at 1000 VPH – a left turn lane is warranted.

Right Turn Lanes

- 30% Crash reduction (Crash Modification Factor Clearinghouse – FHWA)
- Congestion reduction
- Santa Rosa requires right turn lane at 60 lots
- Cost for 100' right turn lane – approx $30,000 (Highest Est. from County Pricing Agreement)



DSM Professional Advisory Committee **5.**

Meeting Date: 02/09/2016

Submitted By: Debbie Lockhart, Development Services

Information

Recommendation:

Adjournment.

Attachments

No file(s) attached.