




# The CITY OF DAYTONA BEACH

— "THE WORLD'S MOST FAMOUS BEACH" —

## MEMORANDUM

DATE: July 18, 2018  
TO: James V. Chisholm, City Manager  
FROM: Dennis Mrozek, AICP, Planning Director   
SUBJECT: Minto Tomoka Parcel A – Large Scale Comprehensive Plan Amendment (DEV2017-132)

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A request by Robert A. Merrell III, Esquire, Cobb Cole, on behalf of Scott Bullock, Consolidated-Tomoka Land Co., for approval of a Large Scale Comprehensive Plan Amendment, amending the Future Land Use Element, Neighborhood V, to increase the residential density and reduce the nonresidential intensity for 1614± acres of land located west of Interstate 95 and south of West Granada Boulevard/State Road 40 in order to allow the development of 3,250 dwelling units on the Property as well as allow 200,000 square feet of commercial uses. The Applicant desires to create an active adult community development through a Planned Development Agreement General (PD-G) rezoning, which is being processed concurrently with this application.

The applicant has requested that the Future Land Use Element **Neighborhood "V"** be amended as follows:

### **Neighborhood "V"**

(p) Issue: As identified by Policy 2.2.7 of the Future Land Use element, the 1,614+/- acre property lying South of West Granada Boulevard/State Road 40 and West of Interstate 95, as identified on Exhibit 1 attached to the application for DEV2017-132, is located within a designated urban area of the City. Development of this area shall achieve efficient use of land. The current density of one dwelling unit per gross acre is inconsistent with urban development patterns planned for this area.

(1) Policy: The property shall be permitted to be developed at up to a total of 3,250 dwelling units (2.01 DU/AC). Clustering or other low developments techniques shall be used to protect high quality environmental resources and preserve open space.

(2) Policy: Commercial uses shall not exceed a total of 200,000 square feet of gross floor area.

In addition to the above text amendment, an amendment to Issue (n) of Neighborhood V as follows is also proposed: (Maps M-1 & M-2)

**(n) Issue:** As identified by Policy 2.2.7 of the Future Land Use Element, the 4,318 acre property depicted on Exhibit m-1 is located within a designated urban area of the City and has frontage along major roads including LPGA Boulevard, SR 40, and I-95. The property is adjacent to the City of Ormond Beach which abuts the north side of SR 40 and part of the southwest quadrant of the I-95 interchange. Recognizing that SR 40 must accommodate regional trips and local trips within and between both municipalities and unincorporated portions of Volusia County, and has had historic LOS issues and is expected to continue to have such issues, the City shall demonstrate a commitment to limiting impacts to the SR 40 link between Tymber Creek Road and I-95 by working with adjacent jurisdictions, FDOT, and the MPO to plan for alternative corridors. (Ordinance #10-281)

The City will require that development of this area shall achieve efficient use of land and reduced infrastructure costs. The current residential density on portions of the property of one dwelling unit per one or more gross acres is inconsistent with urban development patterns and is inappropriate for lands within a City with central water and sewer. In addition, development will not occur instantaneously over the 4,318 acres, but rather will be developed at a rate determined by real market demand in compliance with the following development regulations. The following policies are intended to ensure that adequate infrastructure is provided in a manner timed to development and that the site is developed in a compact and contiguous manner so as to discourage urban sprawl, and that development methods compatible with adjacent uses and ecologically sensitive areas are utilized. The property shall be developed as one or more Planned Unit Developments and be restricted by the following policies and development standards:

**(1) Policy:** The future land uses of the 4,318 acres are Mixed Use, Low Intensity Urban (LIU) and Potentially Environmentally Sensitive (PES) as illustrated on the City's Official Future Land Use Map.

**(2) Policy:** Current densities and intensities for the planning area shall be based upon existing maximum development yield of the entire 4,318 acres. Therefore, at this time, density and intensity shall not exceed 2,539 units and 3,319,688 square feet of nonresidential. Schools, police stations and fire stations are not included in this maximum square footage threshold. To encourage growth in proximity to currently urbanized areas, residential development shall be directed to those areas labeled A and B depicted on Exhibit m-2. Notwithstanding the overall density limitations of this policy, the density of Parcel 1, as identified in Exhibit 1 attached to DEV2017-132, area B shall not exceed a gross density of 2 dwelling units per acre (DU/Acre) be dictated by that language in Issue (p), Policies (1) and (2) of this Neighborhood V, the remainder of area B shall not exceed a gross density of 2.0 dwelling units per acre (DU/Acre), and Area A designated as Mixed Use shall not exceed a gross density of 20 DU/Acre. Clustering of residential units shall be required. Notwithstanding the overall intensity limitations of this policy, non-residential uses shall not exceed 22.5% of the total acres and shall not exceed a floor area ratio of 0.3.

**(3) Policy:** The existing residential entitlements of the amendment area labeled C on exhibit m-2 are therefore transferred to areas A and B and the existing residential entitlements of the entire amendment area shall be developed on areas A and B. Area C may obtain additional residential development rights in the future through the City's Comprehensive Planning Process.

**(4) Policy:** Portions of the area labeled as area C on Exhibit m-2 were previously designated as Urban Transition (426 acres) and Low Intensity Urban (1,027 acres) with a Neighborhood V Policy allowing a density of 2 DU's/acre and restricting nonresidential uses to 22.5% of the total acres and a maximum floor area ratio of 0.3. This request reallocates all residential and a portion of the non-residential entitlements from area C to areas A and B. At such time as need is demonstrated and other justification is provided, the City may consider increasing the residential and non-residential entitlements within the parameters of these land use categories and other categories.

**(5) Policy:** It is anticipated that development of the preferred development areas will likely originate along SR 40 with non-residential development intended to serve the existing residential on the north side of SR 40 and future residential to the south. While it is impossible to predict the final development timeline for the subject parcels, it is anticipated based on market conditions that initial development will be non-residential in nature and developer will ensure that there is sufficient non-residential development to support job creation and adequate commercial services for the planned residential development as it occurs over time.

**(6) Policy:** The applicant shall reduce the impact on SR 40 by limiting the amount of retail development within 3000 linear feet of SR 40 to 653,400 square feet.

**(7) Policy:** Construction of Tymber Creek Road shall be conveyed to the development of Parcel 1, the 1,287 +/- acre property, which is within area B of the 4,318 acres. The developer of Parcel 1 shall complete construction of Tymber Creek Road to the extent that it is required to provide access to the development, but shall not be required to connect Tymber Creek Road to S.R. 40, as contemplated by the Right-of-Way Agreement Tymber Creek Road and Tournament Drive as recorded in Volusia County Records Book \_\_\_\_\_, Page \_\_\_\_\_. (the "Roads Agreement")~~No development orders shall be approved beyond 10,086 trips on the subject property unless either the Stagecoach Road or Tymber Creek Road extension from SR 40 to LPGA Blvd has been constructed. No development order shall be approved beyond 20,000 trips on the subject property unless both Stagecoach Road and Tymber Creek Road extensions have been constructed. The developer shall coordinate the construction of these roads with Votran to help facilitate stops. However, the owner of Parcel 1 shall be required to dedicate a one hundred thirty feet (130') right-of-way to allow the connection of Tymber Creek Road, to the extent that they control such property, as would be required for the connection. Developer shall waive the right to receive impact fee credits related to the Tymber Creek Road right-of-way dedication. The Owners of the 4,318 acres shall dedicate, a 120' wide right-of-way for Tournament Drive to the extent said owners own or control the right-of-way as shown on Exhibit B, attached to the Roads Agreement, and shall waive the right to receive impact fee credits related to the dedication. Dedication or conveyance of any right-of-way addressed above shall be triggered by the review and approval of engineering plans for the construction of the road for which the right-of-way is intended to be dedicated. Said owner or developer shall have 60 days from the approval of the engineering plans to dedicate said right-of-way.~~

**(8) Policy:** As referenced in the adopted development agreement between the applicant and Volusia County, executed on ~~December 28, 2005~~ \_\_\_\_\_, 2018, the applicant shall set aside sufficient rights-of-way for roadways and related retention areas for Tymber Creek Road, ~~Hand Avenue, and Stagecoach Road.~~ Dedication of rights-of-way for retention areas related to Tournament Drive, by those property owners owning or controlling land pertinent thereto, shall dedicate that land to provide the necessary facilities. However, dedication of retention areas on

the property shown on Exhibit "C", as attached to the Roads Agreement, shall be limited to those areas identified for dedication on the same exhibit.

**(9) Policy:** The developer will have a School Planning Capacity Enhancement Agreement in place by the time the new residential units exceed existing entitlements of 2,539 units. However, in the event that development of any of the 4,318 acres is age restricted, and the associated exemption is approved by the School Board, a School Planning Capacity Enhancement Agreement shall not be required for that portion of the 4,318 acres that is age restricted.

**(10) Policy:** At such time as the City of Daytona Beach desires to construct a public facility on the subject property, land owner or developer will provide a developable and accessible up to five (5) acre site subject to the applicable impact fee credits as provided by law. The land owner or developer will work with the City to locate a mutually acceptable site on the subject property. Until such time as the City of Daytona Beach desires to construct a fire station or other public facility which will serve the subject property, the property can be served via SR 40 by City of Daytona Beach Fire station #7 and by the City of Ormond Beach and Volusia County Fire Stations per the existing Interlocal First Responder Agreement.

**(11) Policy:** Parcel 1, as identified in Policy (2) herein, shall not be subject to the dedication requirements of Issue (n) Policy (10) above. However, 2.5 acres of Parcel 1, the location of which shall be agreed upon by the land owner or developer and City, shall be dedicated to the City for use as a fire station. The land owner or developer shall dedicate the 2.5 acres upon completion of the roadway that will provide access to the 2.5 acres and approval of the City's site plans for the fire station. Dedication of the 2.5 acres shall be subject to the applicable impact fee credits as provided by law.

**(12) Policy:** Water and sewer service shall be provided to the subject property in accordance with the City of Daytona Beach and the City of Ormond Beach Interlocal Wholesale Water and Wastewater Service Area Agreement. The City of Ormond Beach shall provide water and sewer as the wholesale provider to the portions of the subject site that are within its service area. If the City of Ormond Beach is unable to provide service, the City of Daytona Beach shall provide water and sewer service.

**(13) Policy:** Prior to approval of any site plan or subdivision plan, the applicant shall provide a master utility plan that identifies the potential location of utilities for that particular development area. The plan shall demonstrate that the service lines are appropriately sized and located. The utility master plan shall also include reuse water lines.

**(14) Policy:** Recognizing that SR 40 has had historic LOS issues from multijurisdictional sources and will continue to have such issues, further land use amendments or development orders by the City within neighborhood V will demonstrate a commitment of the City, landowners, and developers to limit impacts (in the short term and long term) to the SR 40 link between Tymber Creek Road and Interstate 95. Such demonstration may include one or more of the following:

- Assisting in the funding of studies that plan for alternative corridors to relieve SR 40, particularly the Hand Avenue Extension
- Assisting in providing alternative corridors
- Requiring a land use mix that encourages trip capture
- Coordinating with VOTRAN and other mass transit entities in processing development applications

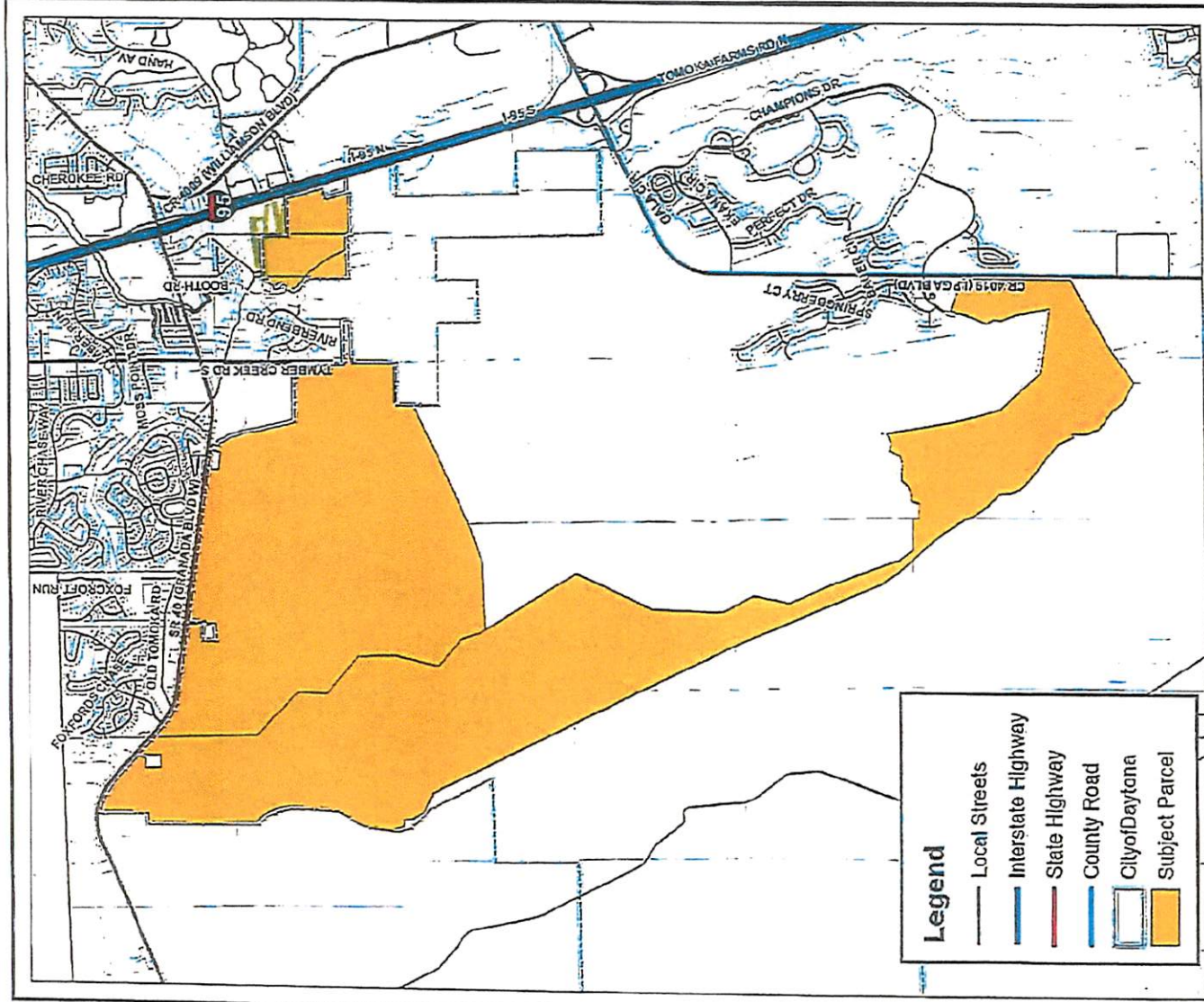
- Requiring multi-modal design features in development design including bike lanes, pedestrian paths and/or bus stops
- The landowner and its successors in title agree to work cooperatively with the City during the development review process to assure that adequate sites for municipal services (e.g., fire, police, etc.) are appropriately located.

**(15) Policy:** The City shall continue to participate in intergovernmental coordination activities with FDOT, the MPO, Volusia County and/or the City of Ormond Beach and in subsequent planning of roadway improvements that may be associated with the development of neighborhood V. To contribute to the resolution of roadway capacity issues on SR 40 (which is not within the corporate limits of the City), the City shall not allow development within neighborhood V to proceed, beyond the development thresholds indicated in these policies until the two "reliever" roadways extending southward from SR 40 to LPGA Boulevard (~~Stagecoach Road~~ and the southerly extension of Tymber Creek Road and extension of Tournament Drive) are completed as required in policy 7. These improvements are presently shown in the Volusia County 2025 Thoroughfare Map and in the City's Future Traffic Circulation Map. These improvements shall be shown in the City's Capital Improvements Program after 2015, and shall be funded per the terms of the Development Agreement dated ~~December 2005~~ 2018 between the land owner and Volusia County entitled "Right of Way Agreement Tymber Creek Road". These improvements may be advanced by earlier funding. In participation with FDOT and other willing partners, the City may further engage in or jointly fund planning activity with respect to extraterritorial alternate corridors that provide further relief to SR 40, including Hand Avenue extension the Tymber Creek Road and Tournament Drive extensions.

**(16) Policy:** In addition to the coordination required under Policy (8), the City shall provide information to Volusia County and FDOT in conjunction with its consideration of approval(s) of Planned Unit Development(s) within neighborhood V, as to the estimated timing of construction, anticipated timing of roadway improvements that will connect to State or County roads, and other proposed roadway improvements to be made or approved by the City that may affect the LOS on County and State roadways.

~~(16) Policy: As referenced in the adopted development agreement between the applicant and Volusia County, executed on December 28, 2005, the applicant shall set aside sufficient rights-of-way for roadways and related retention areas for Tymber Creek Road, Hand Avenue, and Stagecoach Road.~~

Attached is the "Right of Way Agreement - Tournament Drive" and the "First Amendment to Right of Way Agreement – Tymber Creek Road and Stagecoach Road" that are referenced in above text change for Neighborhood "V" will need to be approved by the County and recorded before the second Public Hearing on September 19, 2018.



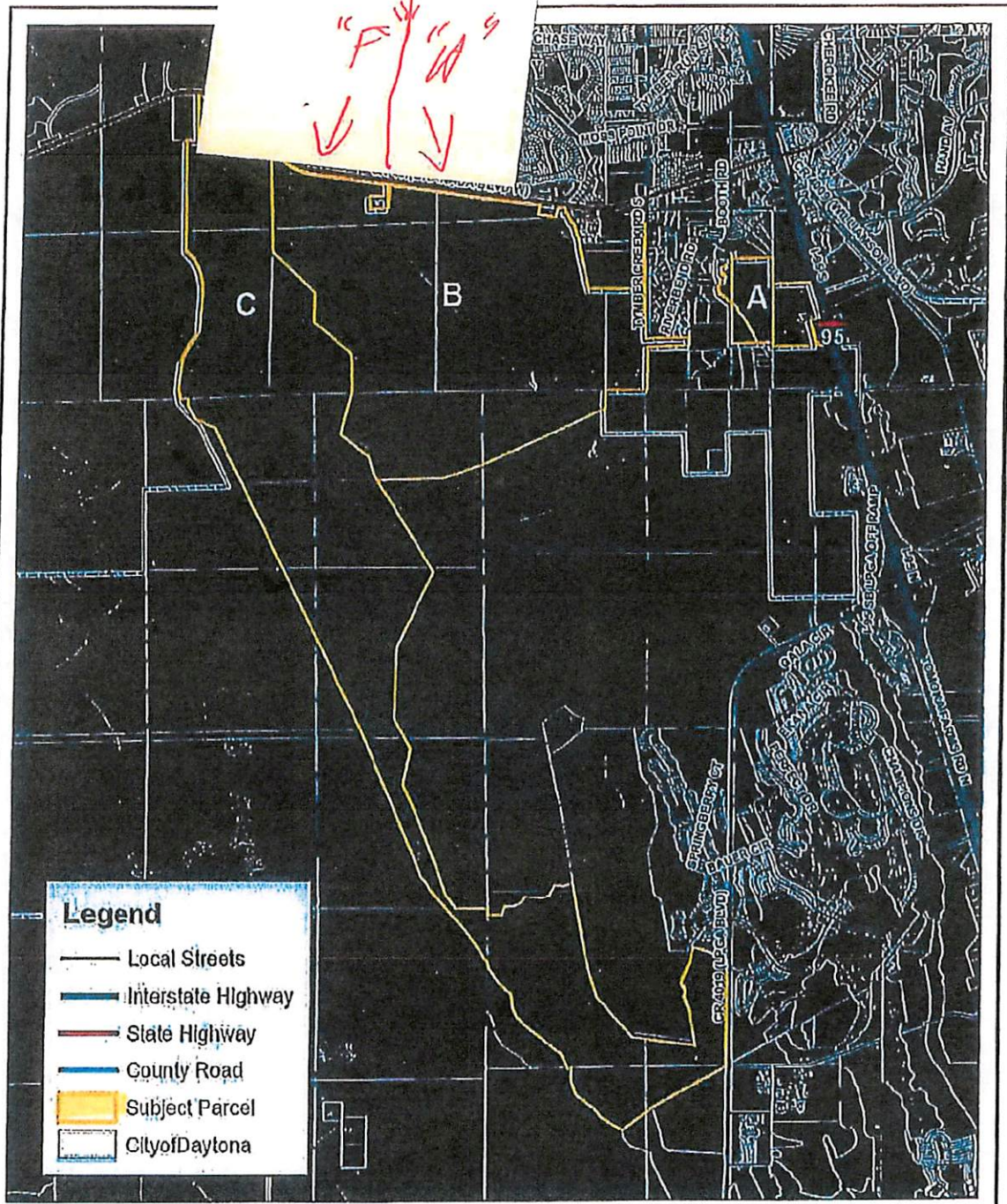
- Legend**
- Local Streets
  - Interstate Highway
  - State Highway
  - County Road
  - City of Daytona
  - Subject Parcel

**Neighborhood V - 4,318 Acres**  
**Exhibit m-1: Location Map**

Source: Volusia County and City of Daytona Beach GIS

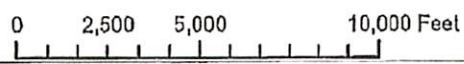
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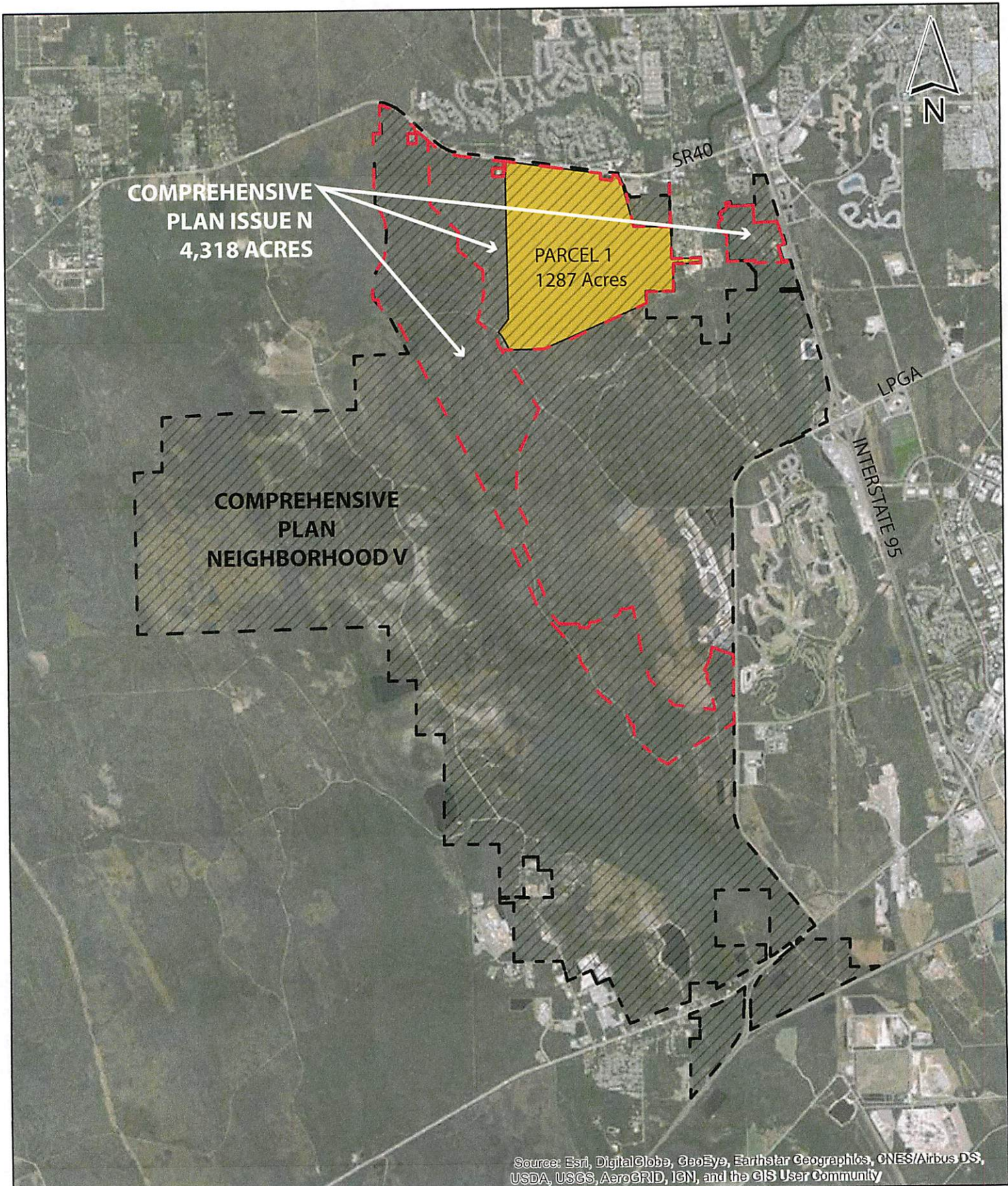
**Ivey** PLANNING INSTITUTE



**Neighborhood V - 4,318 Acres**  
**Exhibit m-2: Development Areas**

Source: 2004 DQQs, Volusia County and City of Daytona Beach GIS.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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# Exhibit 1 Daytona Beach, Florida

**ZEV COHEN**  
 ASSOCIATES INC  
 300 Interchange Blvd  
 Ormond Beach, FL 32174  
 ph 386-677-2482





**RIGHT OF WAY AGREEMENT  
TOURNAMENT DRIVE**

Section 1	Recitals
Section 2	Parties
Section 3	Term
Section 4	Right of Way and Land Required for Dedicated Stormwater Management System Facilities
Section 5	Consideration for Construction of Tournament Drive and Dedicated Stormwater Management System Facilities by Owner
Section 6	Design Standards
Section 7	Maintenance Obligations of the Parties & Maintenance Easements
Section 8	Restrictions on Use of Impact Fee Credits Issued
Section 9	Future Amendment to County Ordinances Affecting Fees
Section 10	Escrow and Recording
Section 11	Remedies
Section 12	Entire Agreement

RIGHT OF WAY AGREEMENT  
TOURNAMENT DRIVE

The County of Volusia, Florida (the "County"), and Consolidated-Tomoka Land Co., a Florida corporation ("CTLC"), Indigo Development LLC, a Florida limited liability company ("IDI") and Minto Communities, LLC, a Florida limited liability company ("Minto") collectively referred to as "Owner," hereby agree and covenant, and bind their respective successors and assigns as follows:

RECITALS

WHEREAS, Owner and the County desire to engage in a joint public/private effort in order to provide for conveyance of required right-of-way and dedicated stormwater management system facilities located outside of the right of way, delineate alignment of and establish standards for the design and future construction of Tournament Drive; and

WHEREAS, Owner is willing to donate the right-of-way and dedicated stormwater management facilities for Tournament Drive; and

WHEREAS, the County is willing to provide thoroughfare impact fee credits for construction of Tournament Drive once it is added to the thoroughfare road plan in the Volusia County Comprehensive Plan; and

WHEREAS, this Agreement serves a valid public purpose by facilitating efficient improvement of the county road system; and

WHEREAS, Owner and the County wish to provide the public with an efficient county road system, as more particularly set out in this Agreement (the "Agreement").

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, the recitals above, and other good and valuable considerations, the receipt and sufficiency of which are hereby mutually acknowledged by the parties hereto, the parties agree as follows:

1. Recitals. The above recitals are true and correct and incorporated by reference herein.
2. Parties. All references in this Agreement to Owner and all requirements and entitlements herein shall also mean, refer to, include and apply to Owner, its successors and assigns.
3. Term. The effective date of this Agreement shall be the date it is fully executed by both parties. The County shall execute the Agreement last, after approval by the county council. The "Term" of the Agreement shall be ten (10) years.

4. Right of Way and Land Required for Dedicated Stormwater Management System Facilities.

a. Within ninety (90) days of the effective date of this Agreement, Owner shall donate a corridor, as shown on Exhibit A-1, by fee simple warranty deed, with clear title, of a strip of land 120 feet in width to be used for the construction of Tournament Drive. The donation shall include that property subject to the easement recorded at Official Record Book 7359 Page 4912 and shall include a sixty foot wide strip of land adjacent to said easement, that begins at existing Tournament Drive at station 10 and extends north to station 70 at the boundary of Parcel A and B, as depicted on Exhibit A-1, so there is right-of-way that totals 120 feet in width. The above referenced easement, granted by Minto to CLTC, shall be released. Owner shall also donate by fee simple warranty deed a strip of land 120 feet in width from station 70 to station 196, at the intersection with State Road 40, as depicted on Exhibit A-1. The deeds and release of easement shall be executed within the ninety (90) days of the effective date of this Agreement, and held in escrow and recorded as set forth in Section 10.

b. Within ninety (90) days of the effective date of this Agreement, Owner shall donate by fee simple warranty deed, with clear title, the real property located outside of the right of way set forth in subsection 4a above, necessary to accommodate stormwater management system facilities for Tournament Drive designated tracts 1 through 10, as depicted on Exhibit A-2. The deeds shall be executed within the ninety (90) days of the effective date of this Agreement, and held in escrow and recorded as set forth in Section 10.

c. Reservation and conveyance of property pursuant to this Agreement is freely granted by Owner and shall in no way be construed as an action of eminent domain by County.

5. Consideration for Construction of Tournament Drive and Dedicated Stormwater Management System Facilities by Owner.

a. During the Term of this Agreement, Owner or County may construct the Tournament Drive and dedicated stormwater management system facilities. Construction may take place in phases, resulting in completion of portions of the Tournament Drive at various times.

b. If and to the extent the County completes construction of a portion of a Tournament Drive or a dedicated stormwater management system facility during the term, Owner shall not be entitled to impact fee credits.

c. If and to the extent Owner completes construction of a portion of Tournament Drive or a dedicated stormwater management system facility during the term, the County shall grant to Owner thoroughfare road impact fee credits in

an amount equal to the then reasonable (but not to exceed actual) costs of construction for that portion of the Tournament Drive, as provided in Section 70-71, et seq., Code of Ordinances, County of Volusia. Minimum construction design standards shall be determined by the County Engineer at issuance of the use permit for Tournament Drive. Upon completion of a functional two-lane segment of Tournament Drive and dedicated stormwater management system facility, Owner shall be entitled to receive thoroughfare road impact fee credits from the County in an amount equal to the then reasonable but not to exceed actual costs related to:

- i.) design and permitting (but not legal fees related thereto).
- ii.) wetland mitigation (but not legal fees related thereto).
- iii.) actual completed construction of the improvements.
- iv.) signalization improvements at intersections of County arterial / collector road(s), if warranted.

d. There will be no credit for site related improvements made by Owner except as otherwise expressly allowed herein.

6. Design Standards.

a. The design plans for the construction of Tournament Drive and all stormwater management system facilities shall be approved by the County Engineer before any construction may commence.

b. Tournament Drive shall have a minimum design speed of fifty (50) miles per hour and a posted speed of forty-five (45) miles per hour. Posted speeds may be lower at the discretion of the County Engineer in limited sections of Tournament Drive as safety requires (e.g. near intersections of major roads).

c. All sidewalks or multi-use paths constructed by Owner shall be located outside of the County owned right of way, except where approved by the County Engineer.

d. Except as expressly agreed herein, nothing in this Agreement is intended to exempt, diminish or relieve Owner from otherwise complying with any requirements of the land development code of the City related to development of the real property served by the Tournament Drive.

e. All planning, permitting, location, construction methods and access points, including median openings (at a spacing of approximately 1320 feet) shall conform to "Florida Green Book" and County requirements and will be reviewed and approved by the County Engineer prior to construction. The plans shall be prepared in accordance with and governed by the current State of Florida, Department of Transportation Design Standards and the Project constructed in

accordance with the current Florida Department of Transportation Standard Specifications for Road and Bridge Construction. Plans shall be submitted for review by the County Engineer at 30%, 60% and 90% completion. The County Engineer's determination of design requirements shall be binding on the Owner.

7. Maintenance Obligations of the Parties & Maintenance Easements.

a. Tournament Drive shall be maintained by the County upon completion, unless and to the extent the City or DOT agrees to assume maintenance.

b. County shall maintain dedicated stormwater management system facilities located on property conveyed to the County by Owner.

c. Owner shall grant County a perpetual maintenance easement for access to Owner's real property located adjacent to any right of way or dedicated stormwater management system facility owned by County, if, in County Engineer's reasonable discretion such an easement is necessary to perform maintenance on the County owned improvements.

8. Restrictions on Use of Impact Fee Credits Issued Pursuant to this Agreement.

a. Impact fee credits issued arising from this Agreement shall be placed in a dedicated account and shall not be comingled with impact fee credits acquired by any means other than arising from this Agreement.

b. In the event Owner seeks to transfer the impact fee credits arising from this Agreement, it shall provide County with advance written notice of the amount of credit being transferred, the identity of the transferee and the account number to which the credits are being transferred.

c. Owner and/or any future holder of impact fee credits arising from this Agreement shall not be permitted to use impact fee credits issued pursuant to this Agreement for development outside of the geographic area defined as the "Project Vicinity" on Exhibit A-1. This provision shall survive the expiration or termination of this Agreement.

9. Future Amendment to County Ordinances Affecting Impact Fees. In the event that, for any reason, thoroughfare road impact fees are no longer required at some point in the future, the County shall not be responsible for providing a cash reimbursement to Owner for any outstanding impact fee credits granted through this Agreement, and Owner thus shall assume the risk of such a repeal of thoroughfare road impact fees. If the County enacts a mobility fee or other development related transportation fee, Owner shall be allowed to transfer any remaining balance into a credit account for such fee. This Section shall survive the termination or expiration of this Agreement.

10. Escrow and Recording. The deeds and easements for the right-of-way and stormwater parcels shall be held in escrow until the effective date of the City of Daytona Beach Comprehensive Plan Amendment for Minto Parcel A, tracking number DEV-2017-32, at which time they will be recorded with the Volusia County Clerk of the Court at Owner's expense.
11. Remedies.
  - a. In the event of a breach or potential breach of Owner's obligation to convey the real property in accordance with Section 4 above, County shall have the right to equitable relief first, including specific performance, regardless of the existence of an alternative adequate remedy at law. To the extent specific performance is impossible, the County shall have the right to seek all available remedies at law.
  - b. Except as otherwise provided in Section 9, which is intended to provide Owner's sole remedy for County action affecting Owner's right to granting of or use of impact fee credits arising from this Agreement, and except as provided in Subsection a. above, both parties shall have all rights and remedies provided at law or in equity in the event of a breach of this Agreement or a default hereunder.
  - c. In the event of any litigation arising out of this Agreement, each party shall bear its own costs and attorney's fees including any and all appeals.
12. Entire Agreement. This Agreement constitutes the entire agreement between the parties regarding Tournament. The terms herein shall govern and control over any conflicting ordinance.

**IN WITNESS WHEREOF**, the parties hereto attach their hands and seals to this Right of Way Agreement Tournament Drive, this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

COUNTY OF VOLUSIA

ATTEST

\_\_\_\_\_  
George Recktenwald  
Interim County Manager

\_\_\_\_\_  
Ed Kelley  
County Chair

[SEAL]

CONSOLIDATED TOMOKA LAND CO.

ATTEST

\_\_\_\_\_  
Daniel E. Smith, Corporate Secretary

\_\_\_\_\_  
John P. Albright, President

[SEAL]

INDIGO DEVELOPMENT, LLC

ATTEST

\_\_\_\_\_  
Daniel E. Smith, Secretary of MGRM

\_\_\_\_\_  
John P. Albright, President of MGRM

[SEAL]

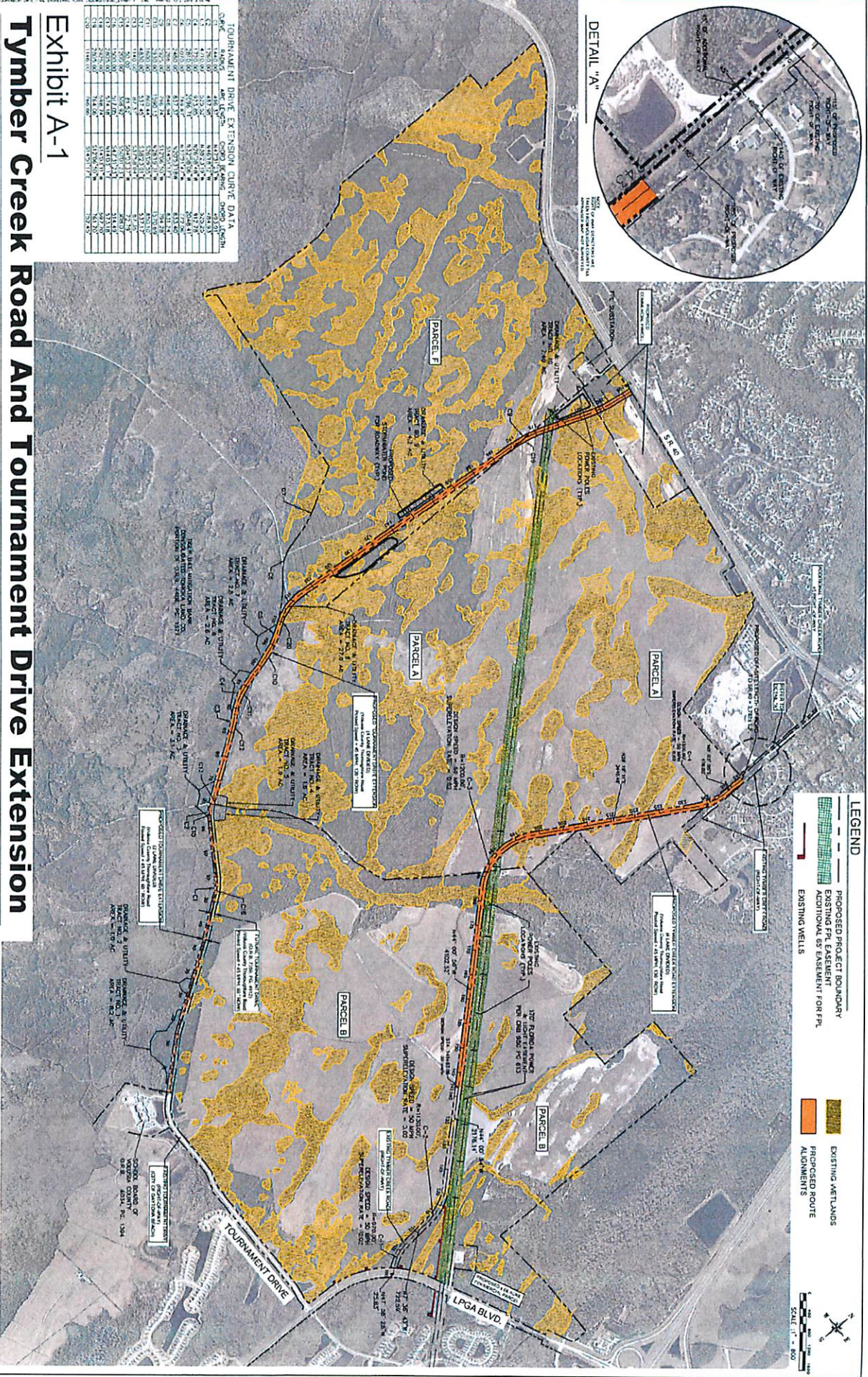
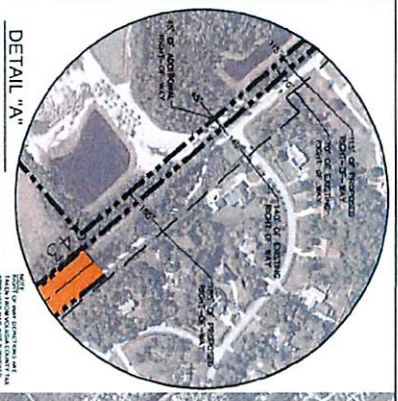
MINTO COMMUNITIES, LLC

ATTEST

\_\_\_\_\_

\_\_\_\_\_  
William Bullock, Division President

[SEAL]



**TOURNAMENT DRIVE EXTENSION CURVE DATA**

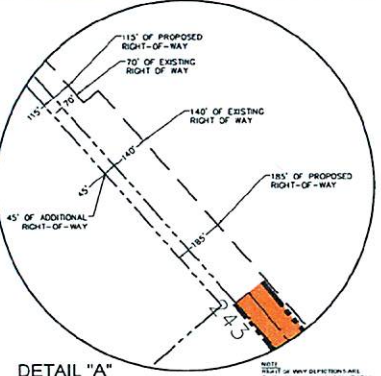
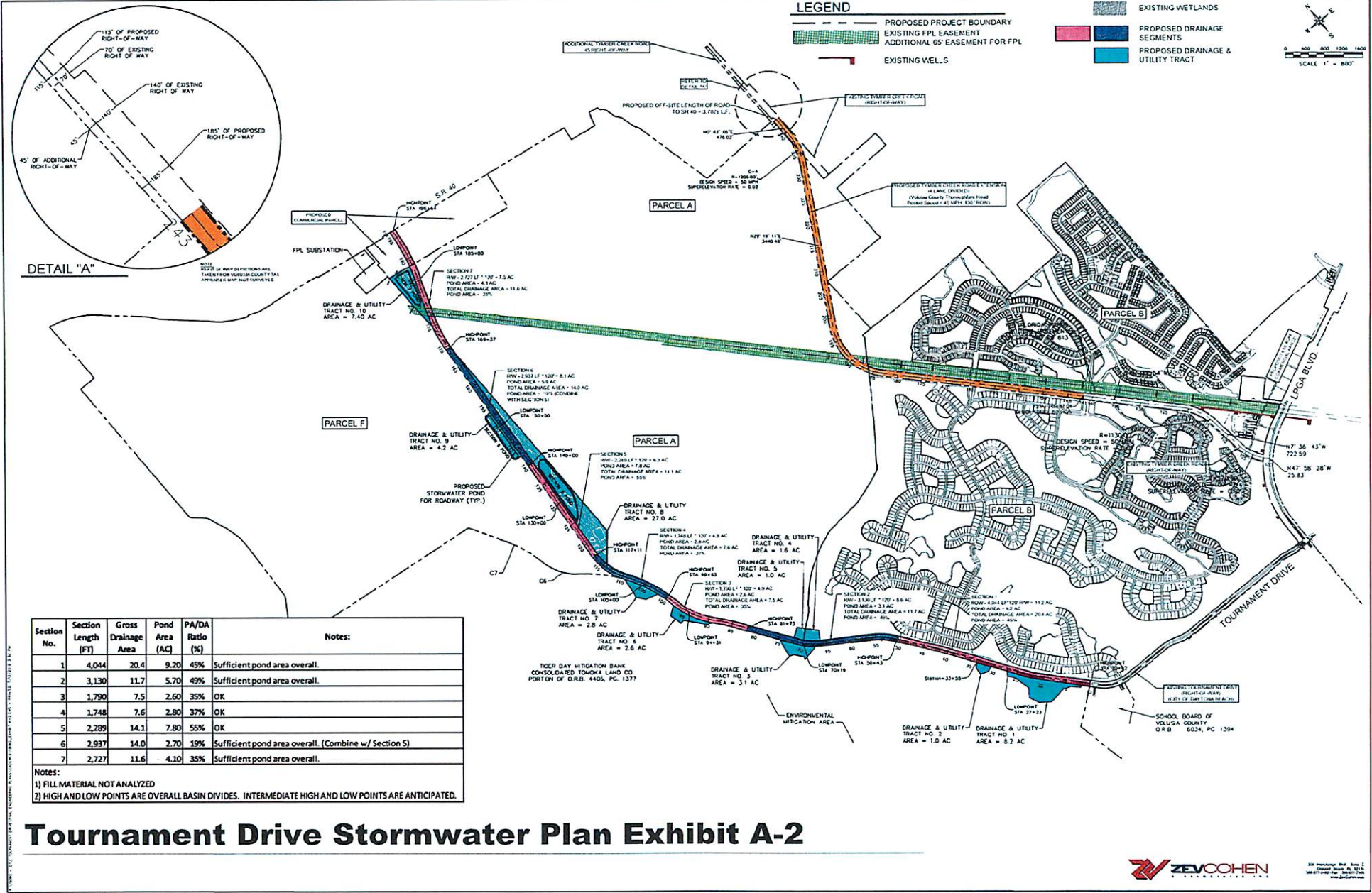
STATION	CHORD BEARING	CHORD LENGTH	CHORD BEARING	CHORD LENGTH	CHORD BEARING	CHORD LENGTH	CHORD BEARING	CHORD LENGTH
1+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
2+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
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13+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
14+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
15+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
16+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
17+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
18+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
19+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00
20+00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00	N 89° 59' 54" W	100.00

**Exhibit A-1**  
**Tymer Creek Road And Tournament Drive Extension**  
**Conceptual Alignment Plan / Project Vicinity**



100 Feet  
 0 100 200 300 400  
 SCALE: 1" = 800'





Section No.	Section Length (FT)	Gross Drainage Area	Pond Area (AC)	PA/DA Ratio (%)	Notes:
1	4,044	20.4	9.20	45%	Sufficient pond area overall.
2	3,130	11.7	5.70	49%	Sufficient pond area overall.
3	1,790	7.5	2.60	35%	OK
4	1,748	7.6	2.80	37%	OK
5	2,289	14.1	7.80	55%	OK
6	2,937	14.0	2.70	19%	Sufficient pond area overall. (Combine w/ Section 5)
7	2,727	11.6	4.10	35%	Sufficient pond area overall.

Notes:  
 1) FILL MATERIAL NOT ANALYZED  
 2) HIGH AND LOW POINTS ARE OVERALL BASIN DIVIDES. INTERMEDIATE HIGH AND LOW POINTS ARE ANTICIPATED.

# Tournament Drive Stormwater Plan Exhibit A-2

**FIRST AMENDMENT TO RIGHT OF WAY AGREEMENT  
TYMBER CREEK ROAD AND STAGECOACH ROAD**

The County of Volusia, Florida (the "County"), and Consolidated-Tomoka Land, Co., a Florida Corporation ("CTLC"), Indigo Development LLC, a Florida limited liability company ("IDI") and Minto Communities, LLC, a Florida limited liability company ("Minto") hereby agree to amend the Agreement dated April 21, 2016 titled, "Right-of-Way Agreement Tymber Creek Road and Stagecoach Road," recorded at Official Record Book 7269 Page 2341 (the "Agreement") according to the terms herein.

1. The title of the Agreement and the term Qualifying Roads shall be amended to remove any reference to Stagecoach Road. Stagecoach Road will not be reserved, dedicated, deeded, or constructed as a county thoroughfare road as set forth in the April 21, 2016 Agreement. Exhibits A-1 and A-3 attached hereto shall replace Exhibit A attached to the Agreement.
2. Compensation set forth in sections 5 and 6 shall not apply to the conveyance of the property for the right-of-way for Tymber Creek Road in the conceptual alignment plan depicted in Exhibits A-1 and A-3 from station 165 extending north and east to station 243. The right-of way from station 165 to station 243 and the property owned by CTLC parcel identification number 14-31-36-00-00-025A (short parcel id 41360000025A) forty-five foot wide strip of land lying west of and adjacent to existing Tymber Creek Road (bounded on the west by property owned by Riverbend Community Church, Inc. parcel identification numbers 14-31-36-00-00-0256 and 14-31-25-00-00-0231) shall be conveyed by right-of-way deed as a donation to the county and such conveyance will not be compensated in any manner.
3. All right-of-way for Tymber Creek Road shall be deeded to the County no later than April 21, 2026, which date shall not be extended by further amendment to the Agreement. The County shall have the right to enforce the conveyance of the right-of-way through specific performance as set forth in Section 12. Upon recording of the deeds conveying all of the right-of-way for Tymber Creek Road, the Term of the Agreement set forth in section 4 shall be extended to April 21, 2036.
4. Road and driveway connection to Tymber Creek Road from adjacent property shall be evaluated and authorized based on the Volusia County Land Development Code as of April 21, 2016, which is attached hereto as Amendment Exhibit B.
5. This Amendment shall take effect upon the effective date of the City of Daytona Beach Comprehensive Plan Amendment for Minto Parcel A, tracking number DEV-2017-32.

**IN WITNESS WHEREOF**, the parties hereto attach their hands and seals to this First Amendment to Right of Way Agreement Tymber Creek Road and Stagecoach Road, this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

COUNTY OF VOLUSIA

ATTEST

\_\_\_\_\_  
George Recktenwald  
Interim County Manager

\_\_\_\_\_  
Ed Kelley  
County Chair

[SEAL]

CONSOLIDATED TOMOKA LAND CO.

ATTEST

\_\_\_\_\_

\_\_\_\_\_  
John P. Albright, President and CEO

[SEAL]

INDIGO DEVELOPMENT, LLC  
By: Consolidated-Tomoka Land Co.,  
Sole Member

ATTEST

\_\_\_\_\_

\_\_\_\_\_  
John P. Albright, President and CEO  
(of sole member)

[SEAL]

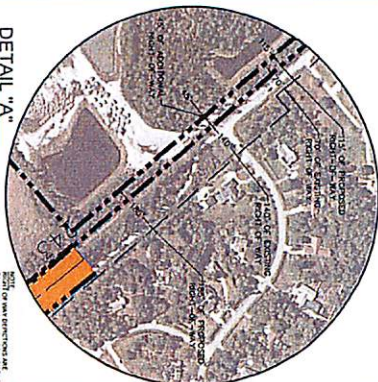
MINTO COMMUNITIES, LLC

ATTEST

\_\_\_\_\_

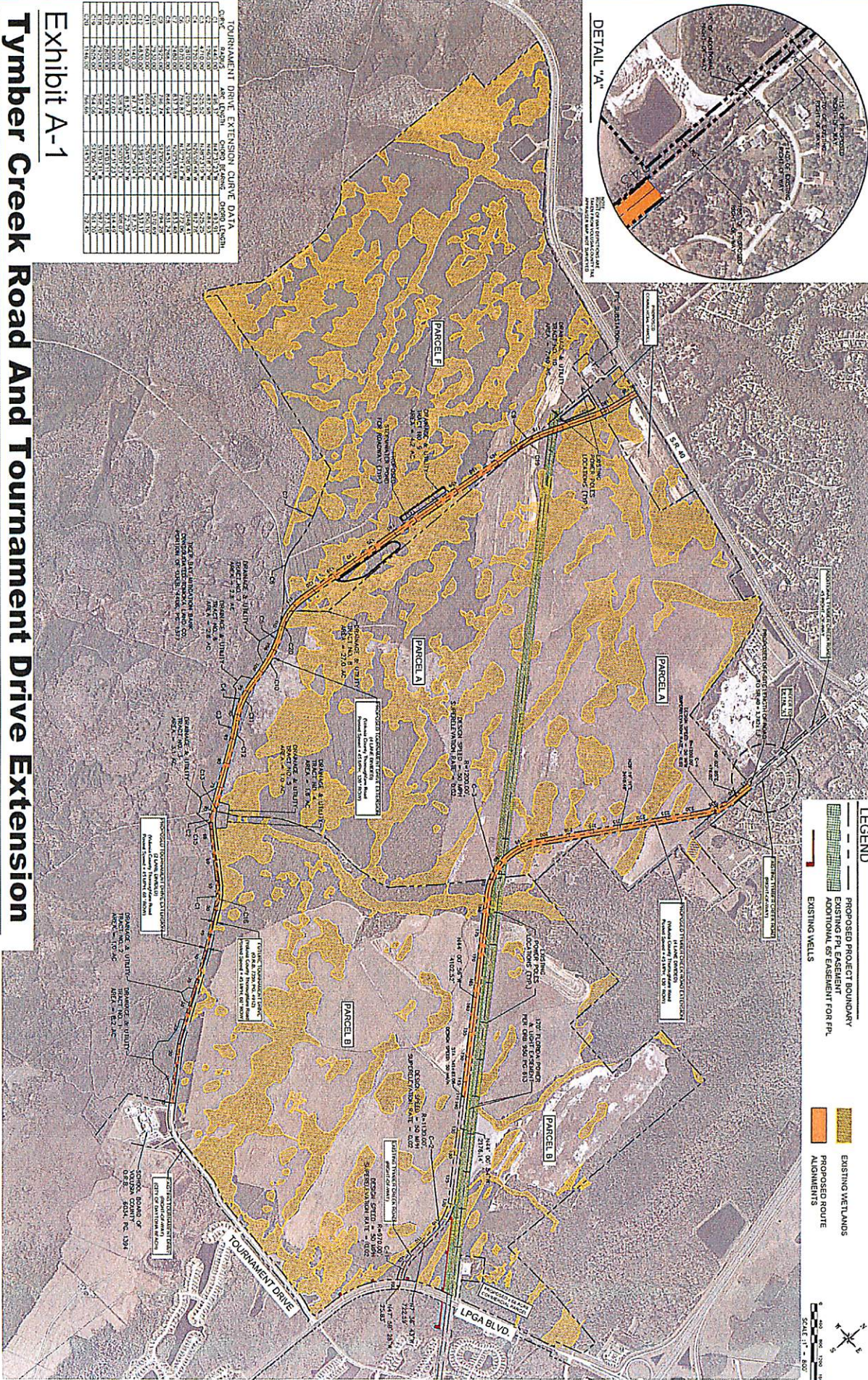
\_\_\_\_\_

William Bullock, Division President  
[SEAL]



**TOURNAMENT DRIVE EXTENSION CURVE DATA**

Curve	Stationing	Length	PC	PT	PI	Curve Length	Offset	Offset Length
C1	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C2	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C3	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C4	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C5	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C6	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C7	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C8	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C9	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C10	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C11	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C12	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C13	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C14	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C15	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C16	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C17	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C18	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C19	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00
C20	1745.00	141.50	1745.00	1886.50	1810.75	141.50	0.00	0.00

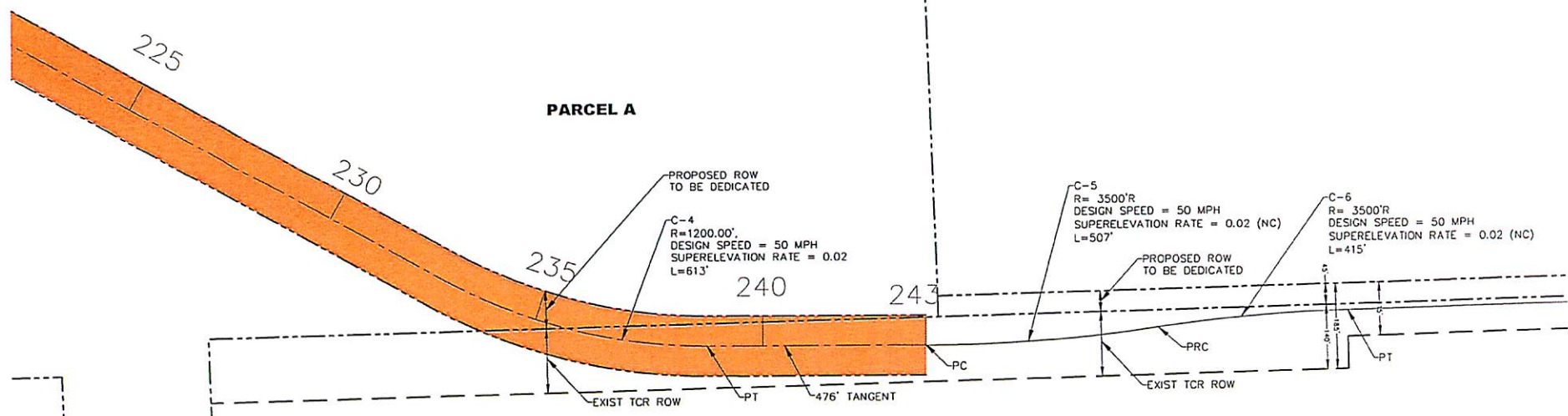
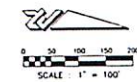


**LEGEND**

- PROPOSED PROJECT BOUNDARY
- EXISTING FPL EASEMENT
- ADDITIONAL OR EASEMENT FOR FPL
- EXISTING WELLS
- EXISTING WETLANDS
- PROPOSED ROUTE ALIGNMENTS

SCALE: 1" = 80'

**Exhibit A-1**  
**Timber Creek Road And Tournament Drive Extension**  
**Conceptual Alignment Plan / Project Vicinity**



**TYMBER CREEK ROAD**  
 DESIGN SPEED = 50 MPH  
 MIN (NC) RADIUS = 2,865'  
 MIN CURVE LENGTH = 400'  
 SUPERELEVATION RATE = 0.02 (NC)

**TyMBER Creek Road County R/W Tie In Exhibit A-3**

## Exhibit B

### DIVISION 4. - DESIGN AND CONSTRUCTION STANDARDS OF IMPROVEMENTS

#### Sec. 72-611. - General design criteria.

- (a) *Use of natural features.* The arrangement of structures, buildings, lots, blocks and traffic circulation systems and retention areas shall make the most advantageous use of topography, trees and other natural features.
- (b) *Consideration of soil and flood hazards.* A development order shall not be approved unless all land intended for use as building sites can be used safely for building purposes without danger from flood or other inundation or from adverse soil or foundation conditions or from any other menace to health, safety or public welfare. Lands shall not be subdivided and/or developed until proper provisions are made for protective flood control measures and water management facilities necessary for flood-free development and flood-free vehicular access to such sites. It is the intent of this provision that no filling or grade level change will be permitted which will cause adverse drainage, or public health or public safety impacts to any surrounding area.

The "County of Volusia Soil Survey" and any supplements thereto shall be used as a guideline in identifying soil properties, and for interpretations for various uses in terms of soil limitations and soil features adversely affecting a particular use. In addition, the "soil supplement and vegetative analysis" or supplemental soil borings are to be used in interpreting the basic properties of the soils in terms of their potential for a particular use.

- (c) *Finished floor elevation, utility lines and special considerations.* No development shall be approved that does not contain a suitable building site of sufficient elevation to permit construction utilizing a first floor elevation based upon the following:
  - (1) At least one foot above the 100-year flood-prone elevation, as determined by the CDE based upon the best available data. Where the floodplain of any stream or river is defined, development shall be approved only if all parts of the platted lots located within the floodway are expressly limited to open space uses. On-site drainage storage capacity shall be in conformance with division 8.
  - (2) Provided that building lots are a reasonable level or slope toward a street, road or right-of-way, the minimum finished floor elevation of any structure shall not be less than 12 inches above the lowest crown of that portion of any adjacent street, road or right-of-way. On lots which slope away from a street or road with continuous slope toward a lake, stream or water collection area and where positive drainage exists, the finished floor elevation of any structure, including garage areas, shall not be less than 12 inches above finished site grade measured at the highest contour that abuts the building unless specifically approved by the CDE and the DRC. Where necessary, swales shall be constructed to divert runoff water around any structure so as to not adversely impact adjacent property owners.
  - (3) Driveways or other areas of access to a building or structure shall be sloped so as to prevent the runoff of surface water into any building or structure, including garage and carport areas.
  - (4) Utility lines including, but not limited to, electric power and light, telephone and telegraph, cable television, water, sewer and gas, shall be constructed and installed beneath the surface of the ground unless it is determined by the DRC that soil, topographical or any other compelling conditions make the underground installation of such utility lines unreasonable and impracticable. The underground installation of bulk electric power supply lines, including but not limited to, transmission lines and primary distribution feeder lines, shall not be required.
  - (5) Special considerations shall be given in the layout of streets, lots, blocks, buildings and easements to the preservation of large and specimen individual trees; to preserving natural drainage methods and natural topography and landscape; and to providing screening, buffers or berms where developments abut noncompatible land uses.
- (d) *Monuments.* Permanent survey reference monuments shall be installed in all subdivisions and condominium plats in accordance with F.S. ch. 177, as amended. Additional monuments such as

## Exhibit B

along rear lot lines which do not abut the subdivision boundary may be required by the county registered land surveyor.

- (1) At least one corner of a development shall be designated by course and distance (tie) from a readily discernible reference marker such as a U.S. Government marker, section corner, or quarter-section corner. When such a monument or corner is not available, the tie shall be made to some permanent and readily recognizable landmark or identifiable point, physical object or structure, excluding trees.
  - (2) At least two monuments shall be installed as control corners within each block within the plat. The surveyor shall install additional monuments, if required by the county registered land surveyor, prior to final plat approval. All monuments shall be constructed of concrete and shall be at least four inches in diameter or square, and not less than two feet in length. Each monument shall have imbedded in its top or attached by a suitable means a metal plate of noncorrosive material marked plainly with the point, the surveyor's registration number, and the words "Permanent Reference Monument" or the initials "P.R.M." Monuments shall be set in the ground so that the top is flush with the finish grade.
  - (3) Property markers shall be installed in accordance with F.S. ch. 177, as amended.
- (e) *Impervious area and stormwater runoff.*
- (1) The area covered by structures and impervious surface shall not exceed 80 percent for any lot.
    - a. Pervious areas may be used to satisfy requirements for landscaping and setbacks, buffer strips, drain fields, passive recreation areas, or any other purpose that does not require covering with a material that prevents infiltration of water into the ground.
    - b. In the case of the use of an impervious material which does not cover all the surface to which it is applied, credit towards the computation of the pervious area shall be given according to the amount of percolation that is permitted.
    - c. Parking areas, whether paved with impervious material or not, shall be considered impervious.

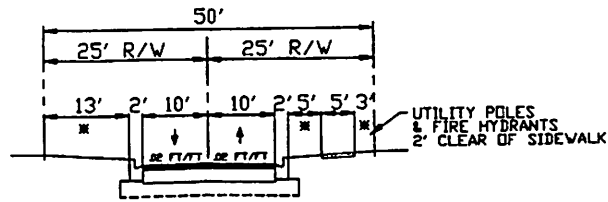
### **Sec. 72-612. - Streets.**

- (a) *General requirements for paved and unpaved streets.* All proposed lots or developments, except as provided in section 72-547 (Conservation subdivisions), and 72-548 (Unpaved road subdivisions), or for utilities such as cable substations, communication towers, etc., shall front on a paved street. Primary access to a subdivision or development shall be from a street paved to the standards of this section. This street, if not already paved, shall be paved by the developer from the entrance of the development to the nearest public paved street. The character, width, grade and location of all streets shall conform to the standards in this section and shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets. Construction and material specifications for streets shall conform to "FDOT Standard Specifications for Road and Bridge Construction," except as otherwise may be stated herein or depicted below:

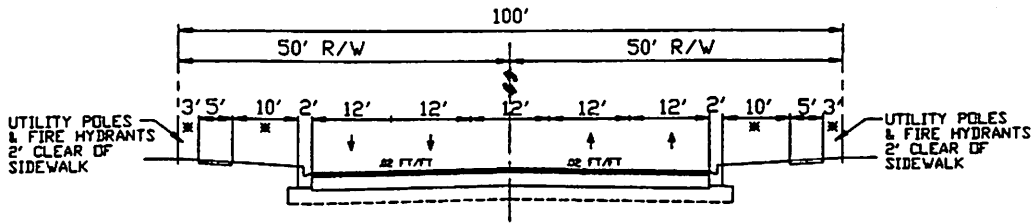
### **TYPICAL ROADWAY SECTIONS**



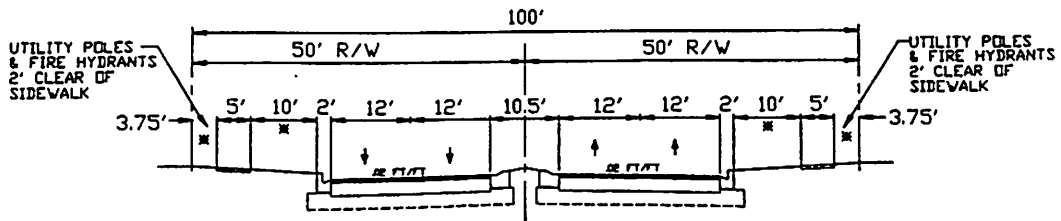
# Exhibit B



TWO-LANE LOCAL STREET, URBAN

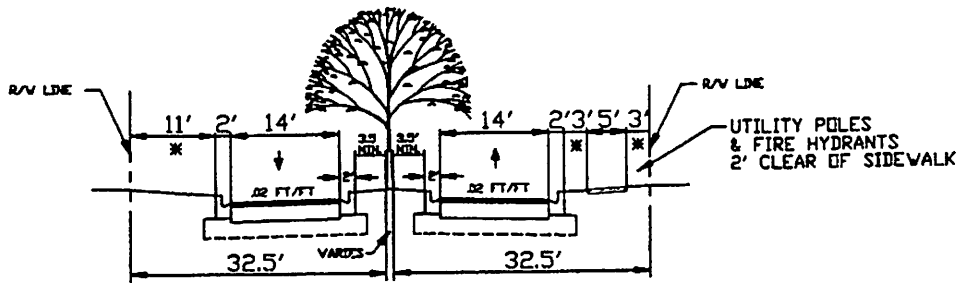


FOUR-LANE URBAN ARTERIAL OR COLLECTOR  
Median Turn Lane



FOUR-LANE URBAN ARTERIAL OR COLLECTOR  
Raised Median  
\*Seed and Mulch

# Exhibit B

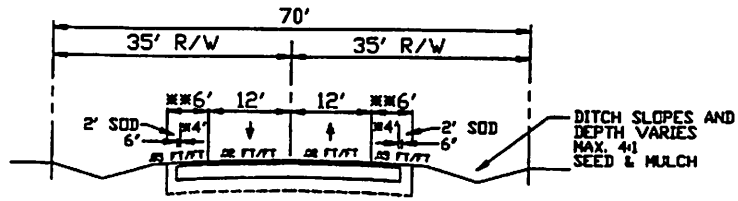


## TWO LANE LOCAL STREET URBAN, WITH ISLAND SEPARATOR

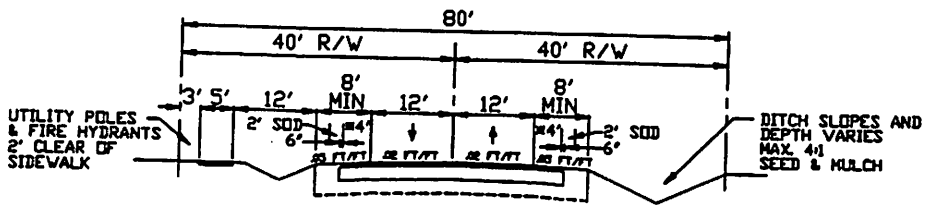
Note: Minimum width of island is 4' without obstructions [such as posts & trees, etc.]

\*Seed and Mulch

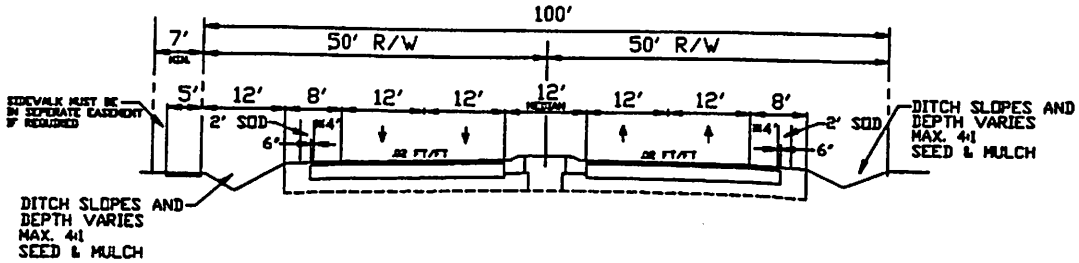
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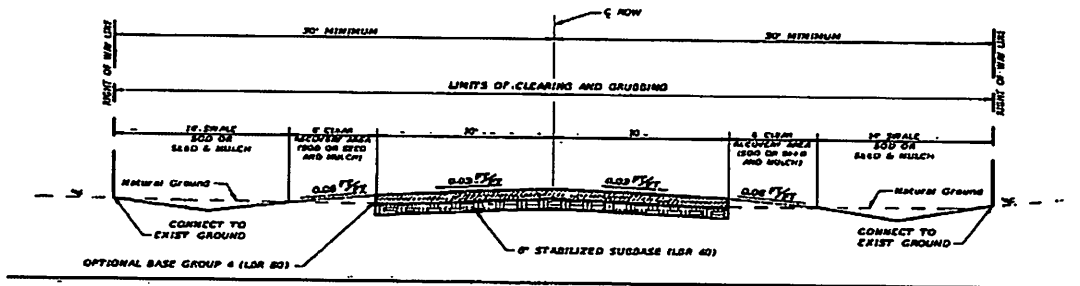
TWO-LANE LOCAL STREET, RURAL  
 \*\*8' for 750 ADT and Above



TWO-LANE RURAL COLLECTOR



FOUR-LANE RURAL ARTERIAL OR COLLECTOR  
 \*4' Paved Shoulders Optional



UNPAVED PRIVATE ROAD TYPICAL SECTION  
 Design Speed 30 MPH

Notes:

## Exhibit B

Optional base group 4 (LBR 80)

6" Stabilized subbase (LBR 40)  
(FDOT Design Standards latest edition or base approved by CDE)

Optional base group 4

4" Type B 12.5 Reclaimed asphalt pavement

6" Graded aggregate including gravel and rock

9" Sand clay mix

6" Cemented coquina

6" Limerock - including #57 stone

The stabilized subbase may be replaced by a 2-inch increase in the depth of the base.

The road elevation shall be a minimum of one foot above the 100-year floodplain.

- (1) Thoroughfares in developments should be planned in conformity with chapter 2, the traffic circulation element of the comprehensive plan.
- (2) All newly platted streets intended to serve residential uses shall be public except for private unpaved roads approved under section 72-547 (Conservation subdivisions) or section 72-548 (Unpaved road subdivisions). The DRC may also recommend and the county council may approve private streets for security purposes only, provided all such streets meet all design and construction criteria of this article, a permanent security post or posts are provided, and a condominium or homeowners association is created with all duties and powers necessary to ensure perpetual maintenance of such private streets. All streets shall be constructed to the exterior property lines of the development unless they are permanently terminated by a cul-de-sac or an intersection with another street.
- (3) Newly platted streets intended to serve business or industrial uses may be private if approved by the DRC. In such cases, all streets shall meet the design and construction criteria of this article unless overriding conditions, such as sharing entrances or parking areas, require different design criteria.
- (4) *Design and construction standards:*
  - a. Street capacities shall be determined by the standards established by the "Transportation Research Board Highway Capacity Manual".
  - b. The geometric design of streets shall conform to the minimum standards established by the "FDOT Minimum Standards for Streets and Highways", except where changes are specified herein.
  - c. The construction of streets and work in the public right-of-way shall conform to the "FDOT Standard Specifications for Road and Bridge Construction", except where changes are specified herein.
  - d. The determination of traffic generation rates for a particular development shall conform to the latest edition of the "ITE Trip Generation Manual", unless otherwise approved by the county traffic engineer (CTE).
  - e. Obstruction to visibility. At the intersection of any streets, no obstruction of any kind shall block the visibility of motorists between 30 inches and ten feet above the centerline grades of those intersecting streets within a triangular area of horizontal configuration as depicted in the "FDOT Roadway and Traffic Designs Standards Index No. 546", or as amended.

## Exhibit B

- (b) *Traffic impact analysis.* Unless waived by the DRC, the developer at his/her expense shall have a registered professional engineer qualified in traffic engineering prepare and provide the county with a traffic impact analysis when trip ends generated by the proposed development equal or exceed 1,000 trip ends per day, as determined from the "ITE Trip Generation Manual", or when determined to be necessary by the DRC, if less than 1,000 trip ends per day. The traffic impact analysis shall be submitted at the time of ODP or FSP review, and shall provide the following findings and appropriate methodologies utilized in determining the findings:
- (1) Total projected average daily trip ends for the proposed development;
  - (2) Design capacity of the accessed street(s);
  - (3) Average projected peak-hour trip ends generated by the development;
  - (4) Analysis of projected on- and off-site traffic patterns and turning movements;
  - (5) Projected percentage of truck and bus traffic;
  - (6) Other related information as required by the DRC.
- (c) *Arrangement of streets.* The arrangement of streets in a development shall:
- (1) Provide efficient and orderly hierarchy of streets;
  - (2) Conform with official plans and maps of County of Volusia;
  - (3) Be integrated with the existing and planned street system of the surrounding area in a manner which is not detrimental to existing neighborhoods;
  - (4) Be such that the use of local streets by through or commercial traffic is discouraged;
  - (5) When necessary, as determined by the DRC, provide at least two separate and remote entrances to a development, unless other provisions, such as easements, are made for emergency ingress and egress, and provided that such entrances will not adversely affect the overall street system;
  - (6) Facilitate and coordinate with the desirable future development of adjoining property of a similar character and provide for local circulation and convenient access to neighborhood facilities;
  - (7) Local streets shall be patterned in such a way that continuous traffic from one collector to another collector is discouraged.
- (d) *Intersections.* Street intersections shall be laid out as follows:
- (1) Streets shall intersect at an angle of 90 degrees, unless circumstances acceptable to the DRC indicate a need for a lesser angle of intersection.
  - (2) Spacing of street intersections.
    - a. A collector may intersect an arterial, but only if aligned with and extending an existing collector which intersects the arterial, or at a minimum distance of 1,320 feet from the intersection of an existing collector and the arterial.
    - b. A local street shall not intersect an arterial unless unavoidable, in which case the local street may intersect an arterial, but only if aligned with and extending an existing local street which intersects the arterial, or at a minimum distance of 660 feet from any other intersection of the arterial.
    - c. A collector may intersect another collector, but only if aligned with and extending an existing collector, or at a minimum distance of 660 feet from any other intersection.
    - d. A local street may intersect a collector if spaced at a minimum distance of 660 feet from any other intersection or, in the case of a T-type intersection, at a minimum distance of 330 feet from any other intersection.

## Exhibit B

- e. The minimum spacing requirements of this section may be reduced upon a finding by the DRC that, given the particular conditions of the proposed development, such reduction will not compromise operational and safety standards or cause undo hardship.
- (3) Property lines at street intersections shall be rounded with a minimum radius of 25 feet. A greater radius shall be required for angles of intersections less than 90 degrees.
- (4) If required by the CDE, the right-of-way width and pavement width shall be increased by at least ten feet on each side of an arterial street for a minimum distance of 150 feet from its intersection with another arterial street or thoroughfare, to permit proper intersection design.
- (e) *Minimum right-of-way and pavement widths.* New street minimum rights-of-way and pavement widths shall be as set forth in Tables II and III.
- (f) *Additional right-of-way and/or pavement widths.*
  - (1) Additional right-of-way shall be required for public safety and convenience, or to assure adequate access, circulation, parking and to provide turn lanes on any public road. Further, additional right-of-way may be required on existing or proposed thoroughfares if such thoroughfares are within the capital improvements element of the comprehensive plan.
  - (2) The thoroughfares shown on the thoroughfare system maps in chapter 2 of the traffic circulation element of the Comprehensive Plan of Volusia County or the jurisdiction in which the roads are located, which are either located within or provide primary access as provided in subsection (f) (1) above, shall be conveyed or dedicated to the public by deed, or if acceptable to the county or other appropriate jurisdiction, by grant of easement.
  - (3) Half streets shall be prohibited. Where a previously dedicated half street, paved or unpaved, abuts or is within a tract to be developed, the second half of the street shall be dedicated to the county and the full width shall be paved by the developer where the subject street is necessary for the development of the subdivision or overall traffic circulation.
  - (4) Additional right-of-way required at intersections. For the installation of traffic-control equipment, a chord based on a 30-foot radius curve at the intersection of the right-of-way lines, shall be provided at each thoroughfare intersection, and the area between the chord and the tangents of the intersecting streets shall be dedicated or, if acceptable to the county, granted by easement.
- (g) *Access to development.*
  - (1) Every lot or parcel shall have access from a publicly dedicated street, except as otherwise provided in subsection (a) of this section.
  - (2) Where development borders on or contains a right-of-way for a railroad, expressway, interstate highway, drainage canal or waterway, a street may be required approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land and in compliance with all provisions of this article.
  - (3) Reserve strips controlling access to streets shall be prohibited, unless dedicated to the public.
  - (4) Median openings. To assure traffic safety, capacity and control, median openings located on a thoroughfare shall be spaced the maximum distance apart that will allow safe and adequate traffic circulation.
    - a. *Location.*
      - 1. No median opening shall be spaced at a distance less than 660 feet from any other median opening unless specifically approved by the CTE on a finding that, given the particular conditions of the proposed development, such determination will not compromise traffic operational and safety standards.
      - 2. Dedicated public streets are given priority consideration for median openings.
    - b. *Design criteria.*

## Exhibit B

1. All median openings shall include at least 105 feet storage with 50 feet transition, unless otherwise acceptable by the CTE. Increased storage and transition lengths may be required to eliminate disruption of through-traffic flow.
  2. Final design of median openings shall be approved by the CTE.
- (h) *Street jogs.* Street jogs or centerline offsets between streets shall be no less than 150 feet.
- (i) *Culs-de-sac.* Cul-de-sac length shall be determined in the following manner: Twenty × typical lot width, with a maximum of 2,000 feet. Paved turnarounds shall be provided. In the center of the turnaround, an unpaved island, surrounded by a curb, improved with grass and landscaping that will not interfere with sight distance, may be provided. Center islands shall have a diameter of 17 feet.
- (j) *Street grade.* Minimum centerline grade for all streets with curb and gutter shall be 0.2 of one percent. Maximum centerline grades for streets range from three to eight percent depending on type and design speed and shall meet the recommended maximum grades in the FDOT "Green Book". The centerline may be flat for all swale sections provided the swale grade is a minimum of 0.2 of one percent.
- (k) *Minimum street elevation.* New streets shall be designed flood-free so as not to submerge, based on foreseeable flood stages. Generally, the minimum street centerline elevation shall be one foot above known or estimated flood stages of natural or manmade water bodies. Where flood stage recovery is expected to occur in less than one day (such as water sheds with positive outfall or tidal flood areas), the lowest edge of pavement elevation may be at the flood stage.
- (l) *Street names.* Proposed streets which are obviously in alignment with other existing or approved named streets shall have the same name as the existing or approved streets. In no other case shall the name of a proposed street duplicate or be phonetically similar to existing or approved street names, irrespective of the use of alternative suffixes, such as "street", "avenue", "boulevard", "drive", "place", "court", etc. Circle or loop streets shall bear the same name throughout. All street names shall require the approval of the department.
- (m) *Streetlights.* All proposed urban development shall provide for street lighting installation. A petition for creation of a special assessment district for street lighting shall be submitted in accordance with the provisions of chapter 110, article II, Code of Ordinances.
- (1) *Installation of street lighting.*
- Arterials.* Lighting units of 22,000 lumen along arterials must be spaced 100 feet to 150 feet on alternate sides of the street. All intersections must be provided with street lighting.
- Collectors.* Lighting units of 16,000 lumen along collectors must be spaced 200 feet to 250 feet on alternate sides of the roadway. All intersections must be provided with street lighting.
- Locals.* New streetlights of 9,500 lumen on local streets must be provided at intersections or at points along the street such as sharp curves or existing overlength culs-de-sac where streetlights would decrease the potential for accidents.
- (2) *Installation procedures.* Proposed street lighting along all public rights-of-way must be coordinated through the county. Streetlight installation orders are issued by the county department of public works to initiate the process and must be requested by the developer through the county as soon as street construction plans are complete. All costs for new street lighting on public streets must be paid for by the developer.
- (n) *Curbs and gutters:*
- (1) *General.* Except for rural developments, all streets shall be drained utilizing curb-and-gutter construction unless otherwise waived by the CDE.
- (2) *Width and permitted types.* The width of curb and gutter shall be a minimum of 24 inches and shall be either Florida State DOT-type or Miami curb and gutter, depending upon the flow to be handled. Environmental curb or a minimum 18-inch wide curb surrounding medians may be

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permitted by the DRC in developments where soil types and/or topography indicate this method to be preferable. All curbs designed to handle water shall incorporate an approved gutter design. There shall be a stabilized subgrade beneath all curbs and one foot beyond the back of curbs. No water valve boxes, meters, portions of manholes, or other appurtenances of any kind relating to any underground utilities shall be located in any portion of a curb and gutter section.

- (3) *Minimum grades.* The minimum allowable flow line grade of curbs and gutters shall be 0.2 of one percent, except in intersections where flatter grades shall be allowable. The tolerance for ponded water in curb construction is one-fourth-inch maximum.
- (4) *Other requirements.*
  - a. Plastering shall not be permitted on the face of the curb.
  - b. Joints shall be provided at intervals of ten feet, except where shorter intervals are required for closures, but in no case less than four feet.
  - c. No raised portion of any type of curb shall be constructed closer than 12 feet from the pavement edge of an intersecting road without curbs. After concrete has set sufficiently, but in no case later than three days after construction, the curbs shall be backfilled.
  - d. All cross-street valley gutters shall be constructed of concrete.
- (o) *Street construction specifications.*
  - (1) *Clearing and grubbing of rights-of-way.* The developer shall clear all traveled ways and recovery areas according to the "FDOT Standard Specifications for Road and Bridge Construction". Trees may be selectively cleared outside of the recovery area to accommodate the installation of the drainage, water and sewer systems, or any other utilities. Any such tree removal shall be in accordance with the requirements of division 10. All debris shall be removed by the developer from rights-of-way after construction.
  - (2) *Paving.*
    - a. All paving shall be done in accordance with "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards", except where changes are specified herein.
    - b. All unstable materials such as muck, peat, plastic clays or marls shall be removed from roadbed areas. The areas then shall be backfilled with suitable material, and the subgrade stabilized to a depth below the base as shown in Table I. Stabilization shall be to 75 pounds per square inch, Florida bearing value, for soils stabilized with clay, marl or other plastic-type materials and to 40 percent limerock bearing ratio for soils stabilized with shell, concrete screenings or other granular materials. The materials to be added for stabilization, if needed, shall be either high-bearing soil, sand clay, ground lime rock, or any other suitable material. (Muck shall not be used.) For rural sections, subgrade shall be stabilized to include the entire width of both shoulders to a depth of six inches. Where curb and gutter is utilized, subgrade shall be stabilized underneath curb to a depth of six inches and for a distance of four feet beyond the back edge of curbs where Miami or environmental curbs are used. For raised curbs, refer to stabilization requirements as used in "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards".
    - c. Written test results, provided by a competent testing laboratory, shall be submitted giving Florida bearing value sufficient to obtain uniform results for each and every type of soil appearing in the roadbed at or random locations designated by the county.
    - d. After the subgrade is mixed, brought to grade, and ready for base course construction, it shall be showing not less than 98 percent modified maximum density for samples taken not more than every 250 feet apart, alternating from side to center, thence to opposite side and back to center, etc., or, in addition, whenever the county may require, prior to commencing. Separate test results will be required if stabilization is performed under curb areas



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separately from stabilization of the roadbed, showing not less than 98 percent modified maximum density for samples taken not more than every 250 feet apart, alternating from side to center, thence to opposite side and back to center, etc., or, in addition, whenever the county may require, prior to commencing. Separate test results will be required if stabilization is performed under curb areas separately from stabilization of the roadbed.

(3) *Base courses.*

- a. Base course type and thickness shall be determined from Table I. All base courses shall be constructed in accordance with "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards".

TABLE I. ROAD DESIGN STANDARDS

	Arterial or over 10,000 ADT*	Collector or 2,000 to 10,000 ADT	Local 1,000 to 2,000 ADT	Local 0 to 1,000 ADT
<b>I.</b>	<b>Asphalt:</b>			
A. Surface <sup>1</sup> :				
1. Friction course <sup>2</sup>	1"	1"	—	—
2. Structural course <sup>3</sup>	2"	1½"	1½"	1" <sup>4</sup>
B. Base:				
Limerock or	10"	8"	6" <sup>4</sup>	6" <sup>4</sup>
Soil cement or	10"	8"	6" <sup>4</sup>	6" <sup>4</sup>
Asphalt	8"	6"	5" <sup>4</sup>	5" <sup>4</sup>
C. Subbase stabilizing	12"	10"	8"	6"
<b>II.</b>	<b>Concrete:</b>			
A. Pavement	9"	6"	6"	5"

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B. Subbase	Florida Department of Transportation Embankment Standards to be used for all concrete road construction. Top 12" layer shall be A-1, A-3 or A-2-4 AASHTO Classification, stabilized to LBR 40 or FBV 75, as recommended by the CDE. *Average daily traffic.
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<sup>1</sup> No recycled asphalt material shall be used in surface course asphalt.

<sup>2</sup> DOT Type FC1 or FC4 only shall be used for friction course.

<sup>3</sup> Type I asphaltic concrete or any current DOT structural course may be used.

<sup>4</sup> Minimum thickness. Standard DOT tolerance below dimension not acceptable.

- b. Following compaction, for limerock base courses, written test results shall be submitted showing not less than 98 percent modified maximum density for samples taken not more than every 250 feet apart, alternating from side to center, etc., or wherever the county may require.
- c. Tests shall be required for each layer if construction is in two layers. The contractor shall make borings in areas designated by the county inspector to enable measurement of thickness.
- d. Finished lime rock base courses shall be primed without delay and continuously maintained free of damage until the wearing surface is applied. The wearing surface shall be applied immediately upon completion, but, in no case, later than 15 days.

(4) *Wearing surface.*

- a. The material used for the wearing surface shall be a Florida DOT asphaltic concrete mix of types S-1, S-3 or FC, or Florida DOT modifications. The surface shall have a compacted nominal thickness in accordance with Table I.
- b. On all streets in commercial or industrial subdivisions, the wearing surface shall be constructed no less than one and three-fourth inches thick in any place.
- c. A certified copy of the design mix shall be approved by the CDE before being placed. Any deviation from this design requirement will be considered only after review and documentation of the special circumstances by the county. The maintenance of the completed road system shall be guaranteed for a period of one year.

(5) *Concrete streets.* Concrete streets may be permitted. Refer to Table I for specifications. Construction shall be in accordance with "FDOT Standard Specifications for Road and Bridge Construction" and "FDOT Roadway and Traffic Design Standards".

(6) *Unpaved roads.* Unpaved roads may be constructed in conservation subdivisions or unpaved road subdivisions subject to the following criteria and Table II Rural Development Requirements:

- a. New unpaved roads are permitted in conservation subdivisions or unpaved road subdivisions, provided the roads are designated as private roads, the unpaved private roads shall be set aside for common ownership and maintenance, which shall be borne by the lot owners using the unpaved private roads for access, and a "notice to future land owners" is recorded with the Clerk of the Circuit Court for Volusia County, as set forth in sections 72-547 and 72-548. The unpaved roads shall comply with the unpaved private road typical section as set forth in this section, and meet the unpaved roads standards in Table II Rural Development Requirements as set forth in this section.
- b. New unpaved private roads shall connect to a publicly maintained right-of-way or a privately maintained right-of-way that meets the design and construction standards in this

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division. The DRC may waive the design and construction standards for connections to existing unpaved roads upon finding:

1. The existing unpaved road base can bear the weight of a fire engine and ambulance without failing, as certified by a Florida registered professional engineer.
2. The existing unpaved road base can bear the weight of the additional residential trips generated by the proposed development, without failing, as certified by a Florida registered professional engineer.

(p) *Street name signs, regulatory signs, pavement markings, reflective pavement markers, traffic signals and pedestrian crosswalks.*

- (1) *General.* Required signs must be in place prior to county acceptance of the street. All signing and pavement marking shall be in accordance with the "USDOT Manual on Uniform Traffic Control Devices" and shall be approved by the CTE. Traffic control signs shall be fabricated using 3M brand "Scotchlite" sheeting (engineer grade) on minimum 0.080 gauge 5052-H38 aluminum blanks "U" channel posts, may be used for all signs smaller than 36-inch × 48-inch. All warning signs shall be 30-inch × 30-inch. If, at any time prior to final acceptance, an unforeseen need becomes apparent for signing or pavement markings that were not shown on the approved plans, the county reserves the right to require the additional sign(s) or markings in the interest of public safety and as a condition of county acceptance. Alternative materials for sign mounting may be approved by the CTE.
- (2) *Street name signs.*
  - a. Street name signs shall be a minimum of nine inches in height with lettering five inches in height on 3M brand "Scotchlite" sheeting (engineer grade) 0.080 gauge 5052-H38 aluminum; silver/white reflective upper and lower case lettering with green Scotchlite reflective background sheeting or equivalent with a minimum 30-inch length. Street name sign poles shall include a two-inch by 12-foot galvanized-type round support set in concrete, or a 2-1/2-inch × 12-inch - three lbs. per foot galvanized "U" channel post. Street name signs may be placed on the same pole above a "STOP" sign. Alternative materials for sign mounting may be approved by the CTE.
  - b. Thoroughfare intersections shall be provided with at least two street name signs on diagonally opposite corners.
- (3) *Regulatory signs.* Thirty-inch high intensity octagon "STOP" signs on 12-foot long, three lbs/ft. "U" channel posts (rail steel only) or three-inch diameter 12-foot long round aluminum posts shall be provided at every street intersection as a condition for acceptance of development paving and drainage improvements and shall be in place prior to final inspection. The developer shall furnish and erect regulatory signs as required by the CTE. Regulatory signs must conform to the specifications in the "USDOT Manual on Uniform Traffic Control Devices", and locations of signs shall be subject to approval by the CTE.
- (4) *Pavement markings.* All pavement markings and striping within public rights-of-way shall be thermoplastic and shall be installed in accordance with FDOT Standard Index #17346.
- (5) *Reflective pavement markers (RPM's).* RMP's shall be provided for all construction within public rights-of-way of all thoroughfares and shall be installed in accordance with FDOT Standard Index #17352.
- (6) *Traffic signals.* Traffic signals and other control devices shall be installed at locations determined by the DRC, where warranted, pursuant to any submitted traffic studies in accordance with "USDOT Manual on Uniform Traffic Control Devices". Signal design plans prepared by a qualified traffic engineer shall be provided for all new and existing signal modifications. The plans shall include appropriate intersection details at a one inch = 20 foot scale with signal head details, movement diagram, signal timing and system timing, pole calculations and a tabulation of quantities based on FDOT standard pay item numbers. Signals

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on State Roads shall meet FDOT requirements and shall be approved by the FDOT Traffic Operations.

- (7) *Pedestrian crosswalks.* Pedestrian crosswalk signing and marking, where used, shall be in accordance with the "USDOT Manual on Uniform Traffic Control Devices".
- (q) *Alleys.*
- (1) One-way alleys may be provided to serve residential, business, commercial and industrial areas and shall be a minimum of 30 feet in right-of-way width with 12 feet of pavement.
  - (2) Changes in direction of the alignment of an alley shall be made on a centerline radius of not less than 50 feet.
  - (3) Dead-end alleys shall be prohibited.
- (r) *Bridges.* Bridges shall be constructed to the width of the connecting roadway pavement, or such additional width as required by the CDE, with an additional allowance on each side for a pedestrian walk. Bridges extending over waterways shall have a center span and a vertical clearance as required by the CDE. Bridges shall be designed by a professional engineer and conform to AASHTO and ASTM specifications, which are incorporated herein by reference and made a part hereof, and any applicable federal and state requirements.

TABLE II. RURAL DEVELOPMENT REQUIREMENTS

	ARTERIAL	COLLECTOR		LOCAL STREETS		
	Two or Four Lanes	Four-Lane Collector	Two-Lane Collector	Local	Local/ Cul-de-Sac	Unpaved Roads
Volume	10,000—50,000 ADT	5,000—10,000 ADT	2,000—5,000 ADT	300(a)—2,000 ADT	0—300(a) ADT	0—250 ADT 251—500 ADT with alt emerg access
Access	Yes	Yes	Yes	Yes	Yes	Yes
Minimum design speed	50 mph(l)	45 mph(l)	40 mph(l)	30 mph(g)(l)	30 mph(g)(l)	30 mph(g)(l)
Intersection space minimum	660 ft.(b)	660 ft.(b)	330 ft.(b)	250 ft.(e)	250 ft.(e)	250 ft.(e)
Lanes	2—4	4	2	2	2	2
Minimum improved surface width	24 or 48 ft.(j)	48 ft.(j)	24 ft.(j)	24 ft.(j)	24 ft.(j)/43 ft.	20 ft.(j)(l)/43 ft.
Improved	40—50 ft.	40—50 ft.	40—50 ft.	30—40 ft.	30—40 ft.	30—40 ft.

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surfaced(l) radii						
Pavement mark/signing	Yes(d)	Yes(d)	Yes(d)	Yes(d)	Yes(d)	N/A/Yes(d)
Parking on street	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
Median	Yes(c)	Yes(c)	No	No	No	No
*Turn lanes	As required(f)	As required(f)	As required(f)	No	No	No
Traffic signal	As warranted	As warranted	As warranted	No	No	No
Pedestrian crossing	At signalized crossings	At signalized crossings	Intersection only	Yes(d)	Yes(d)	N/A
*Approach widening						
(Expand intersection)	Yes	Yes	Yes	No	No	No
*ROW	100 ft.	80 ft.	80 ft.	70 ft.	70 ft./68 ft. radius	60 ft./63 ft.
Design vehicle (geom.)	WB 60 & SU	WB 60 & SU	WB 60 & SU	WB 40 & SU	WB 40 & SU	WB 40 & SU
Corners of ROW	30-ft chord	30-ft chord	30-ft chord	30-ft chord or 25 ft. radius(k)	30 ft. chord or 25 ft. radius(k)	25 ft. radius
*Sidewalks	As required(h)	As required(h)	As required(h)	No	No	No

**Table Notes:**

- (a) Over 300 ADT may be allowed if an alternate emergency access is provided.

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- (b) Or alternate approved by the development review committee based upon land planning and traffic analysis. A minimum 1,320 feet spacing will be required between two signalized intersections.
- (c) Refer to section 72-612.
- (d) As delineated in the "USDOT Manual on Uniform Traffic Control Devices."
- (e) Or 150 feet for opposing offset T-type intersection.
- (f) Refer to subsection 72-619(e) (5).
- (g) Design speeds lower than 30 mph may be used for local, subdivision type roads and streets. Streets with a design speed less than 30 mph shall be posted with appropriate legal speed limit signs.
- (h) Refer to subsection 72-620(b).
- (i) See the Manual of Uniform Standards for Design Construction and Maintenance for Streets and Highways (Green Book).
- (j) See FDOT Standard Specifications for Road and Bridge Construction and Table I for the structural section.
- (k) Refer to subsection 72-612(d) (3) and subsection 72-612(f) (4).
- (l) Pavement is not required. 20 ft. refers to the stabilized surface width; see unpaved private road typical section.

\* Further explanation in provisions of this section

N/A = Not Applicable

TABLE III. URBAN DEVELOPMENT REQUIREMENTS

	Arterial	Collector		Local Streets	
	Two or Four Lanes	Four-Lane Collector	Two-Lane Collector	Local	Local/ Cul-de-Sac
Volume	10,000—36,000 ADT	5,000—10,000 ADT	2,000—5,000 ADT	300 <sup>(a)</sup> —2,000 ADT	0—300 <sup>(a)</sup> ADT
Access	Prohibited <sup>(b)</sup>	Prohibited <sup>(b)</sup>	Prohibited <sup>(b)</sup>	Yes	Yes
Minimum design speed	45 mph <sup>(m)</sup>	45 mph <sup>(m)</sup>	40 mph <sup>(m)</sup>	20 mph <sup>(g)(m)</sup>	20 mph <sup>(g)(m)</sup>
Intersection space minimum	660 ft. <sup>(c)</sup>	600 ft. <sup>(c)</sup>	330 ft. <sup>(c)</sup>	250 ft. <sup>(h)</sup>	250 ft. <sup>(h)</sup>
Lanes	2 or 4	4	2	2	2
Minimum pavement width	24 or 48 ft. <sup>(n)</sup>	48 ft. <sup>(n)</sup>	24 ft. <sup>(n)</sup>	20 ft. <sup>(n)</sup>	20 ft. <sup>(n)</sup> /43 ft. radius

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Pavement radii	40—50 ft.	40—50 ft.	40—50 ft.	30—40 ft.	30—40 ft.
Pavement mark/signing	Yes <sup>(e)</sup>	Yes <sup>(e)</sup>	Yes <sup>(e)</sup>	Yes <sup>(e)</sup>	Yes <sup>(e)</sup>
Parking on street	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
Median	Yes <sup>(d)</sup>	Yes <sup>(d)</sup>	No	No	No
Turn lanes	As required <sup>(f)</sup>	As required <sup>(f)</sup>	As required <sup>(f)</sup>	No	No
Traffic signal	As warranted	As warranted	As warranted	No	No
Pedestrian crossing markings	At signalized crossings	At signalized crossings	Intersections only	As required by CTE	As required by CTE
Approach widening (expand intersection)	Yes	Yes	No	No	No
ROW	100	80 ft.	80 ft. <sup>(p)</sup>	50 ft. <sup>(i)</sup>	50 ft. <sup>(i)</sup> /54 ft. radius
Design vehicle (geom)	WB 60 & SU	WB 60 & SU	WB 60 & SU	WB 40 & SU	WB 40 & SU
Corners	30-ft. chord	30-ft. chord	30-ft. chord	30 ft. chord or 25 ft. radius <sup>(o)</sup>	30 ft. chord or 25-ft. radius <sup>(o)</sup>
Sidewalks	Yes	Yes	Yes	Yes	As required <sup>(j)</sup>
Streetlights	Yes	Yes	Yes	Yes	As required <sup>(k)</sup>

**Table Notes:**

(a) Over 300 ADT may be allowed if an alternate emergency access is provided.

(b) Unless the spacing requirements of Table V-C are met.

(c) Or approved alternate by the development review committee based upon land planning and traffic analysis. A minimum 1,320 ft. spacing will be required between two signalized intersections.

(d) Refer to section 72-612.

(e) As delineated in the "USDOT Manual on Uniform Traffic Control Devices" and as required by the CTE.

(f) Refer to subsection 72-619(e) (5).

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(g) Design speeds lower than 30 m.p.h. may be used for local, subdivision type roads and streets. Streets with a design speed less than 30 m.p.h. shall be posted with appropriate legal speed limit signs.

(h) Or 150 feet for opposing offset T-type intersection.

(i) A 40-foot right-of-way width may be approved by the DRC provided a six-inch minimum vertical curb is used and upon a showing that all required improvements can be contained within the proposed 40-foot right-of-way or adjacent easements. Setbacks for structures shall be sufficient to permit a minimum of 25 feet of driveway depth from the closest side of the sidewalk to the structure.

(j) Refer to subsection 72-620(b).

(k) Refer to subsection 72-612(l).

(l) [Reserved.]

(m) See the Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways (Green Book).

(n) See FDOT Standard Specifications for Road and Bridge Construction and Table I for the structural section.

(o) Refer to subsection 72-612(d) (3) and subsection 72-612(f) (4).

(p) An internal subdivision functional collector may have a 60-foot right-of-way.

### **Sec. 72-618. - Off-street circulation, parking and loading facilities.**

(a) *Functional elements of off-street circulation system.* Parking spaces, drive aisles, driveways and reservoir areas are the basic functional elements of the off-street circulation system. Additional elements, including but not limited to, service roads, loading areas, bicycle parking areas, and mass transit loading (bus stop) areas within the proposed development, and left-turn lanes, right-turn lanes, traffic signals and marginal-access roads immediately adjacent to the proposed development, may also be required.

(1) Vehicular circulation must be completely contained within the property, and vehicles located within one portion of the development must have access to all other portions without using the adjacent street system.

(2) Parking stalls and aisles.

a. The minimum size (in feet) of a parking space shall be as follows:

9' × 19' - standard space

9' × 22' - parallel space

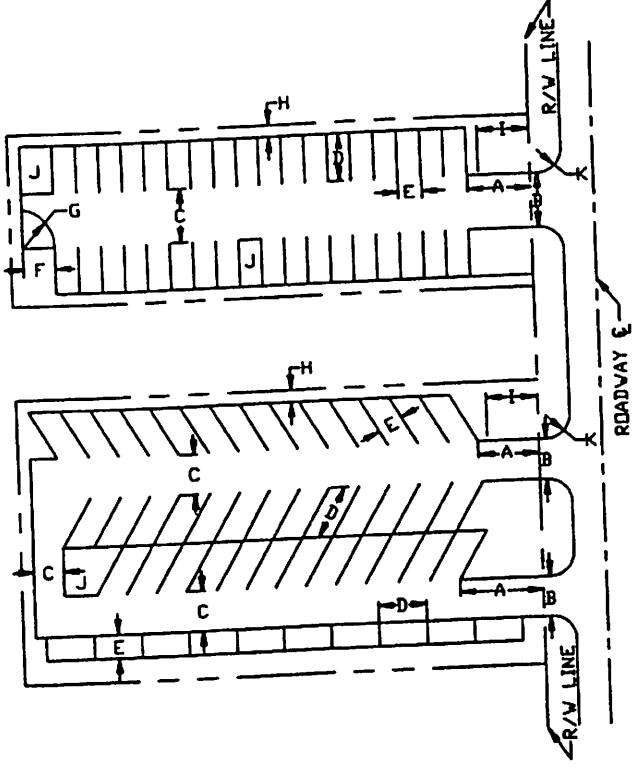
12' × 20' with a five-foot-wide adjacent ingress/egress aisle - handicap space

Parking and maneuvering areas shall be designed in accordance with the diagram and table below. A maximum of two feet of the length of any parking space may be grassed with use of raised curb or wheel stops.

### **PARKING DIMENSIONS**



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1 -	Reservoir Area - Refer to subsections 409.01 and 409.04 of this Code.
2 -	Driveway Width - Refer to subsections 409.01 and 409.04 of this Code.
All dimensions set out in 3 through 8 below are minimum dimensions.	
Dimensions of aisles and spaces for the following parking space angles are as follows:	
	Parking Space Angles - (DEGREES)    45   50   55   60   90   180
3 -	Drive Aisle -    13'   15'   16'   18'   24'   15'
4 -	Parking Space Depth -    18'   18'   18'   19'   19'   22'
5 -	Parking Space Width (Measured perpendicularly to the striping) -    9'   9'   9'   9'   9'   9'
6 -	Row End Backup Area Depth - 15'
7 -	Row End Backup Area Radius - 15'
8 -	Distance to Property Line or Building - 5' or as required by section 808, Volusia County Zoning

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		Ordinance, 80-8, as amended.
9	-	Landscaped Buffer Area - As required by section 808, Volusia County Zoning Ordinance, 80-8, as amended.
10	-	Landscaped Island/Row End - As required by section 808, Volusia County Zoning Ordinance, 80-8, as amended.
11	-	30' Radiums Minimum.

- b. Any required off-street parking and loading area shall be surfaced with brick, asphalt, bituminous concrete, packed shell, or marl material, and maintained in a smooth, well-graded condition. Stabilized grass or other alternate materials may be approved by the LDM.
  - c. All required parking stalls shall have direct and unobstructed access from a parking aisle.
  - d. No parking stall shall directly abut a driveway.
  - e. Access for emergency fire vehicles shall be in accordance with NFPA standards.
  - f. All off-street parking areas shall be so arranged and marked as to provide for orderly safe loading, unloading, parking and storage of vehicles with individual parking stalls clearly defined, and with directional arrows and traffic signs provided as necessary for traffic control. All signs and pavement markings shall be in accordance with the "USDOT Manual on Uniform Traffic Control Devices".
  - g. Acceptable plans must illustrate that proper consideration has been given to the surrounding street plan, traffic volumes, proposed street improvements, vehicular street capacities, pedestrian movements and safety.
- (3) Driveways.
- a. All parking aisles shall connect to a driveway.
  - b. A parking lot which exceeds 60 parking stalls shall be designed with at least one, two-way directional driveway loop system connecting the point of entry of the parking lot to the parking stalls and the principal building.
  - c. The minimum distance from a driveway to a structure or property line shall be five feet.
  - d. Single-lane driveways shall be a minimum of 14 feet wide. Two-lane driveways shall be a minimum of 24 feet wide. Required widths shall be increased according to vehicle type or if the number of parking stalls connected or the number of trips generated justifies such increase.
  - e. Any off-street parking facility shall have either driveway approaches of sufficient width to allow for two-way traffic, or one-way driveways connected to aisles, parking areas or maneuvering areas in such a manner as to permit traffic to simultaneously enter and leave the property, facing forward at the same time. A driveway which is only wide enough for one-way traffic shall be signed for one-way operation.
- (4) Parking and loading areas to be curbed. Except for one- and two-family dwellings, all parking and loading areas shall be constructed with a six-inch raised curb or wheel stops located a minimum distance of seven feet behind the street right-of-way line and other property lines along sidewalks, safety islands, driveways, sight distance triangles, and other places as

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determined by the CTE. The raised curb shall be constructed in such a manner as to prevent vehicles from crossing sidewalks or other pedestrian walkways, other than by means of an approved driveway approach.

(b) *Additional functional elements.*

(1) *Off-street loading spaces.*

- a. Off-street loading spaces shall be designed to accommodate both the parking of and maneuvering of the design vehicle exclusive of those areas designated for aisles, driveways or parking stalls. Backing from or onto public right-of-way shall not be permitted. Off-street loading spaces shall be directly accessible from a street without crossing or entering any other loading space and may not extend into any street.
- b. Off-street loading space dimensional requirements. Each required off-street loading space shall have a minimum dimension of 12 feet by 40 feet and a minimum overhead clearance of 14 feet above the paving grade.

(2) *Handicapped parking spaces.*

- a. All handicapped parking spaces shall be accessible by a curb cut or curb ramp. Handicapped spaces and access aisles shall be paved and located at the closest practical point to the use or structure on the premises and so that it will not be necessary for individuals to access the space from behind other nonhandicapped spaces.
- b. Each handicapped parking space, regardless of the angle of design, shall have a minimum width of 12 feet, a minimum 20 feet in length with an adjacent five and parallel five-foot wide access aisle and shall comply with the standards specified in the Florida Accessibility Code for Building Construction, latest edition, published by the Florida Department of Community Affairs and F.S. § 316.1955.
- c. Each handicapped space shall be prominently posted with a permanent sign of a design specified in "Roadway and Traffic Design Standards", latest edition, published by the Florida Department of Transportation.

(3) *Off-street truck maneuvering.* Where a proposed development includes a truck loading operation and has access to a thoroughfare, adequate space shall be provided such that all truck maneuvering is performed off-street.

(c) *Vehicular reservoir areas.* Adequate reservoir capacity shall be required for both inbound and outbound vehicles to facilitate the safe and efficient movement between the public right-of-way and the development. An inbound reservoir shall be of sufficient size to ensure that vehicles will not obstruct the adjacent roadway, the sidewalk, and the circulation within the facility. An outbound reservoir shall be required to eliminate backup and delay of vehicles within the development.

- (1) *Design.* A reservoir area shall be designed to include a space of 12 feet wide by 25 feet long for each vehicle to be accommodated within the reservoir area and so that vehicles within the reservoir area do not block parking stalls, parking aisles or driveways of off-street parking facilities.
- (2) *Adjacent to thoroughfare.* The minimum number of vehicles required to be accommodated within a reservoir area of a parking lot adjacent to a thoroughfare shall be in conformance with Table IV.
- (3) *Adjacent to nonthoroughfare street.* The minimum number of vehicles required to be accommodated within a reservoir area adjacent to a nonthoroughfare shall accommodate at least one percent of the number of parking stalls served by the driveway. For parking lots with fewer than 100 cars, the reservoir area shall be able to accommodate at least one car.

TABLE IV. VEHICLE RESERVOIR AREA REQUIREMENTS  
Adjacent to Thoroughfare

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	Reservoir Area	
Type of Facility	Inbound Vehicles	Outbound Vehicles
<i>Vehicle-oriented services:</i>		
Drive-in bank	6 spaces per service position	1 space per service position
Drive-in beverage, food sales, and laundry pickup	3 spaces per service position	1 space per service position
Drive-thru restaurant service	8 spaces per service position	1 space per service position
Automatic car wash	10 spaces on approach to wash line	6 spaces between end of wash line and right-of-way of street
Self-service car wash	3 spaces on approach to wash line	1 space between end of wash line and right-of-way of street
Hospital	5 spaces or 1% of the total parking capacity (use the greater figure)	None
Service station	4 spaces per service position	1 space per service position
<i>Residential:</i>		
Gatehouse	5 spaces	1 space
<i>Nonresidential:</i>		
Attendant parking	10% of the total parking capacity of the facility	None
Self-parking	5 spaces or 1% of the total parking capacity (use the greater figure)	None
Ticket gate (ticket-dispensing machine)	4 spaces minimum	1 space
Cashier booth (tickets dispensed manually)	6 spaces minimum	1 space
Gatehouse (commercial)	5 spaces or 1% of the total parking capacity (use the greater figure)	2 spaces

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Note: 1 reservoir space is 12 ft. × 25 ft.

(d) *Accessibility to structures for vehicles other than automobiles.*

- (1) Structures intended for principal uses shall be made accessible to the following type of vehicles:

Residential uses, other than single-family or duplex: Single-unit truck (SU);

Commercial and institutional uses: Single-unit truck and semitrailer (WB-40) combination, intermediate;

Industrial use: Single-unit truck (SU) and semitrailer - full trailer combination (WB-60).

Definitions of, as well as, required specifications for the above vehicle types shall be those found in the "AASHTO Geometric Design of Highways and Streets".

- (2) All buildings other than single-family or duplex residences shall be accessible to fire apparatus from two sides. Fire engines shall be considered as a WB-40 as defined by the "AASHTO Geometric Design of Highways and Streets". The area required to meet the AASHTO design standards shall be paved or treated to ensure support to a 16-ton weight vehicle. This area shall be maintained free of trees and bushes and shall be clearly designated for this purpose. Access from one side may be accepted by the DRC where access from two sides is not possible.
- (3) Fire lanes shall be provided for all buildings which are set back more than 150 feet from a public road, or which exceed 30 feet in height and are set back more than 50 feet from a public road, and may be required for other buildings. Fire lanes shall be at least 20 feet in width with a minimum of five feet provided between the fire lane and any adjacent building. No parking shall be permitted between the fire lane and the building.
- (4) Required parking spaces, parking aisles and driveways shall not be used as loading or parking areas for any type of vehicle including emergency vehicles other than automobiles.
- (e) *Interconnected parking areas.* Nonresidential and multifamily developments fronting county or city collector, arterial, or state roads shall provide driveway improvements and driveway stub outs to property lines to facilitate existing and future interconnection of parking areas to adjacent sites.
- (1) Parking lot access driveways and driving aisles shall be designed and located to connect to adjacent properties or access roadways that serve the subject site and adjacent properties. All access points and interconnecting driveways shall be designed and constructed to accommodate safe and efficient vehicle travel between adjacent sites, as approved by the DRC.
- (2) All connecting driveway improvements shall be paved according to the applicable standards, including proper driveway widths, construction specifications and treatment of transition grades.
- (3) Pursuant to subsection 72-501(b) (3) c., the DRC may modify the interconnected parking area requirements at terminal points where nonresidential development abuts a residential development, or in circumstances where mixing different types of traffic (e.g., automobile versus truck) is undesirable; where separation of traffic is necessary for traffic safety; or where physical design constraints preclude interconnection of adjacent sites.

**Sec. 72-619. - Commercial, industrial and multifamily residential driveways.**

- (a) In order to provide the maximum safety with the least interference to the traffic flow on public streets, and to provide ease and convenience and ingress and egress to private property, the number and location of the types of driveways regulated pursuant to this section shall be designed relative to the intensity of use or size of the property served and the nature of the adjacent roadway.

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Such existing driveway approaches shall not be relocated, altered or reconstructed without prior approval. When the use of any driveway approach is changed by the owner/developer, making any portion or all of the driveway approach unnecessary, the developer of the property shall obtain a permit to abandon the driveway approach and shall, at his/her expense, replace all necessary curbs, gutters and sidewalks.

(1) Access shall be provided as follows:

- a. There shall be the minimum number of access points to adequately serve the development.
  - b. In order to provide ease and convenience in ingress and egress to private property and the maximum safety with the least interference to the traffic flow on thoroughfares, the number and location of driveways shall be regulated by the dedication of access rights to the county, and in accordance with subsection (b) (2), below and Table V of this article.
- (b) *Commercial, industrial and multifamily residential driveway design on a nonthoroughfare street.* The following requirements apply to driveways connecting development to a nonthoroughfare street:

(1) *General.*

- a. The driveway entrance shall be sufficient to allow access to the parking area without interference among vehicles entering and/or leaving and vehicles circulating in the parking lot.
- b. No driveway shall be constructed in the radius return of an intersection or within 50 feet of the tangent point of the radius return for an unsignalized intersection.
- c. If the closest intersection is or is likely to be signalized, then traffic movements to and from any driveway within 250 feet of an intersection with a collector or an arterial shall be limited to right turns only.
- d. The driveway design shall be in accordance with subsection (e) (2) of this section.
- e. Typical rural two-way commercial and multifamily driveway within minimum three-foot deep ditch:

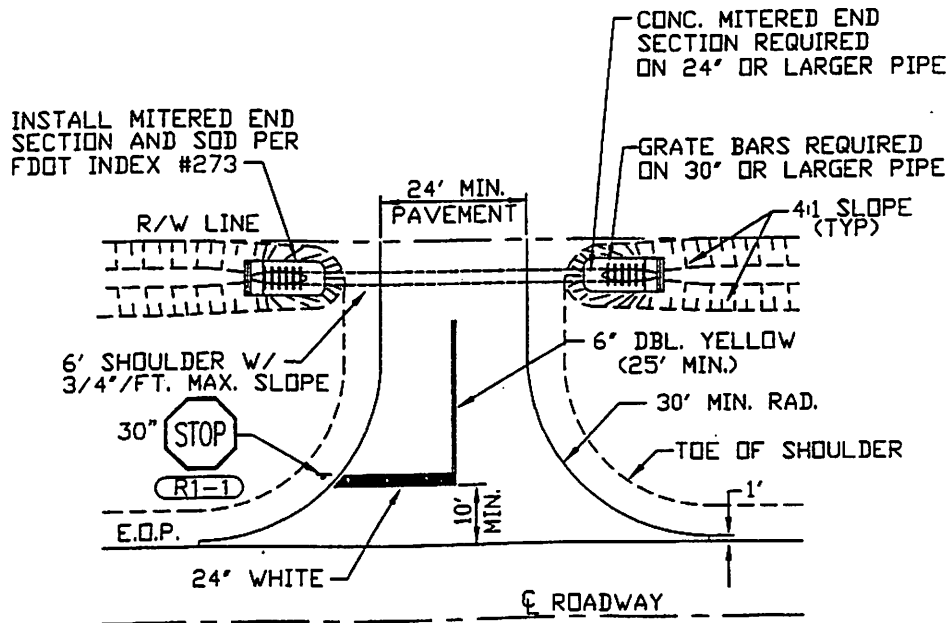
### TYPICAL RURAL TWO-WAY COMMERCIAL AND MULTIFAMILY DRIVEWAY WITHIN MINIMUM 3' DEEP DITCH

SCALE: 1" = 20'

#### Notes:

1. Refer to FDOT Standard Index #273 for mitered end section and sod detail also Index #515 (turnouts) for overall detail.
2. Sod all disturbed right-of-way.

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(2) *Number and location of driveway entrances.* In order to provide the maximum safety with the least interference to the traffic flow on public streets, and to provide ease and convenience in ingress and egress to private property, the number and location of driveways shall be regulated relative to the intensity of use or size of the property served and the amount of frontage which that property has on a given street, as follows:

- a. One driveway shall be permitted for ingress and egress purposes to a single property or development.
- b. Two driveways entering on a particular street from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between the two driveways equals or exceeds 100 feet.
- c. Three driveways entering on a particular street from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between adjacent driveways equals or exceeds 150 feet.
- d. Not more than three driveways will be permitted from a single property or development. However, in the case of extensive property development (property exceeding ten acres in total land area) and/or containing more than 1,000 parking stalls, additional driveways may be permitted provided all other requirements of this section are met and the minimum distance between adjacent driveways equals or exceeds 300 feet.

(c) *Sight distance.*

- (1) *Cross-visibility requirements at the intersection of driveways and public right-of-way.* If a driveway intersects a public right-of-way, there shall be no sight obstruction within a triangular area of property on both sides of a driveway formed by the intersection of each side of the driveway and the public right-of-way line with two sides of each triangle being ten feet in length from the point of intersection and the third side being a line connecting the ends of the two other sides.

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- (2) *Cross-visibility requirements at pedestrian crosswalks and other areas of pedestrian concentration.* If a crosswalk intersects a vehicular access aisle, driveway or public right-of-way, there shall be no sight obstruction within a triangular area of property on both sides of a crosswalk or walkway formed by the intersection of each side of the walkway and the public right-of-way or aisle with two sides of each triangle being ten feet in length from the point of intersection and the third side being a line connecting the ends of the two sides.
- (3) *Sight triangles.*
  - a. Within the triangular areas described above, it shall not be permissible to install, set out or maintain, or to allow the installation, setting out or maintenance of, either temporarily or permanently, any vehicular parking space, sign, wall, hedge, shrubbery, tree, earth mound, natural growth or other obstruction of any kind which obstructs cross-visibility at a level between 30 inches and ten feet above the level of the driveway. Any wall or fence within the sight triangle must be constructed in such a manner as to provide adequate cross-visibility over or through the structure between 30 inches and ten feet in height above the driving surface.
  - b. The following will be permitted within the triangular area described above:
    1. Limbs of trees and foliage trimmed in such a manner that no limbs or foliage extend into the area between 30 inches and ten feet above the level of the center of the adjacent intersection. Landscaping, except required grass or ground cover, shall not be located closer than five feet from the edge of any roadway pavement, and three feet from the edge of any alley or driveway pavement.
    2. Fire hydrants and street signs.
    3. If there is no public right-of-way, the sight distance requirement shall be determined by the DRC.
- (d) *Access limitations to thoroughfares.*
  - (1) There shall be no access to a thoroughfare from an existing lot with less than 300 feet of width, unless one of the following conditions is met:
    - a. Access to the lot is not available to streets (exclusive of alleys) other than that thoroughfare; provided, however, that commercial developments shall not be given access on local residential streets.
    - b. Access to the lot is not provided jointly with other lots of an adjoining development such that minimum driveway spacing and corner clearance requirements of subsection (e) (3) of this section are satisfied by the combination of lots served by the existing or relocated joint access driveway.
  - (2) No new single-family or duplex residential lot which is under one acre in size and has less than 300 feet of frontage shall front on a thoroughfare unless access to such lot is provided from a street other than that thoroughfare. Such lot shall have access to a local street or service drive. Service drives outside the required public right-of-way may be granted by easements.
- (e) *Vehicular access to a thoroughfare.* Vehicular access to a thoroughfare shall conform to the following standards:
  - (1) *General.* The area within the development to which the driveway provides access shall be of sufficient size to allow all necessary functions for loading, unloading and parking maneuvers to be carried out on private property and completely off the street right-of-way.
  - (2) *Type of driveway required.*
    - a. *Minor driveway entrance.* This driveway type shall be provided for a maximum daily trip end volume of 500 vehicles and/or a maximum average peak hour volume of 50 vehicles. The minimum distance from the street right-of-way line at any ingress or egress minor driveway to the outer edge of any interior service drive or parking space with direct access



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to such driveway shall be 25 feet, measured perpendicularly from the street. A minor driveway entrance radii shall be 30 feet, and a minimum width shall be 24 feet. A 100-foot long 12-foot wide right turn taper shall be required for a driveway adjacent to a thoroughfare with a 40 m.p.h. posted speed limit. A right turn taper will not be required for a driveway abutting a thoroughfare with four or more through lanes.

- b. *Intermediate driveway entrance.* This driveway type shall provide for a maximum average daily trip end volume of 1,500 vehicles and/or a maximum average peak hour volume of 150 vehicles. The minimum distance from the street right-of-way line at any ingress or egress intermediate driveway to the outer edge of an interior service drive or parking space with direct access to such driveway shall be 50 feet, measured perpendicularly from the street. A right turn lane will not be required for a driveway abutting a thoroughfare with four or more lanes. Refer to subsection (e) (5) for turn lane requirements. A minimum of two egress lanes, 12 feet in width each with one, 14-foot wide ingress lane shall be provided. An intermediate driveway radii shall be 35 feet.
  - c. *Major driveway entrance.* This driveway type shall provide for a maximum average daily trip end volume of 5,000 vehicles and/or maximum average peak hour volume of 500 vehicles. The minimum distance from the street right-of-way line at any ingress or egress major driveway to the outer edge of any interior service drive or parking space with direct access to such driveway shall be 100 feet, measured perpendicularly from the street. Refer to subsection (e) (5) for turn lane requirements. A minimum of two egress lanes 12 feet each in width and one, 14-foot wide ingress lane shall be provided. A major driveway radii shall be 40 feet.
  - d. *Major driveway - signalized.* Any major driveway requiring a traffic signal shall conform to those warrants specified in the "USDOT Manual on Uniform Traffic Control Devices" in addition to the following minimum requirements:
    1. The installation of any traffic signal shall be subject to the approval of the CTE.
    2. Refer to subsection (e) (5) for turn lane requirements.
- (3) *Number and location of driveways.* The number and location of driveways shall be determined as follows:
- a. *Spacing of driveways.*
    1. The minimum distance for a driveway from an unsignalized intersection shall be in accordance with spacing criteria of Table V., Driveways that do not meet the spacing criteria of Table V, shall be limited to right turns only.
    2. If the closest intersection is or is likely to be signalized, then traffic movements to and from any driveway within 370 feet of an intersection with a collector or an arterial shall be limited to right turns only.
    3. Only one driveway shall be permitted for ingress and egress purposes to a single property or development, provided:
      - i. Two driveways entering a particular thoroughfare from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between the adjacent driveways conforms to the minimum spacing requirements of Table V.
      - ii. Three driveways entering a particular thoroughfare from a single property or development may be permitted if all other requirements of these regulations are met and if the minimum distance between adjacent driveways conforms to the minimum spacing requirements of Table V.
      - iii. A joint access driveway will be considered as adequate access for any two adjacent developments. For a development where additional driveways are being requested and where those driveways do not meet the spacing requirements, the

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applicant shall be required to submit a brief traffic report justifying the need, describing the internal circulation and parking system, and identifying the impact of the development and its proposed access facilities on the operation of the thoroughfare.

TABLE V. DRIVEWAY CENTERLINE SPACING REQUIREMENTS ON A THOROUGHFARE

The minimum distance between centerlines of two-way driveways shall conform to Table V. For those driveways with left turn movements, median opening spacing requirements shall have precedence.

TABLE V-A

Speed Limit (mph)	Minimum Centerline Distance (feet)
25	155
30	175

If the speed limit of the thoroughfare is 35 miles per hour or greater, or the volume of right turn movements requires the construction of a right-turn lane(s), the minimum distance between centerlines of two-way driveways shall conform to Table V-B.

TABLE V-B  
*(Centerline Spacing in Feet)*

	Minor DW	Intermediate DW	Major DW	Major DW Signalized, 4 Lanes or More
Minor DW*	335	350	355	370
Intermediate DW	350	360	365	380
Major DW	355	365	370	385
Signalized, 4 lanes or more	370	380	385	1320*

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DW = Driveway

Minor DW = Maximum ADT of 500 or a maximum peak hour volume of 50

Intermediate DW = Maximum ADT of 1,500 or maximum peak hour volume of 150

Major DW = Maximum ADT of 5,000 or maximum peak hour volume of 500

\*Desirable spacing.

Driveway centerline spacing may be increased if the required turn lane storage or transition is increased by any governmental agency. Minimum driveway centerline spacing may be decreased if one-way driveways are utilized and accepted by the DRC.

- (4) *Special driveway requirements.* In the case of a land use with special driveway needs, an applicant may submit a traffic engineering study requesting deviations from the requirements of this section. If deviations from driveway requirements are permitted, substitute requirements which deviate no more than necessary to serve the special land use needs may be applied to the development in order to minimize the impact on the adjacent street.
- (5) *Turn lanes requirements.*
  - a. *Turn lane requirements immediately adjacent to the development.*
    1. A left-turn lane of 12 feet in width, conforming to Table VI, shall be provided at each driveway when the average daily trip ends of the driveway is 1,000 vehicles or more and/or the average peak hour inbound left-turn volume is 25 vehicles or more. Increased queue lengths (waiting vehicle storage) may be required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 75 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 75 vehicles in the peak hour or less.
    2. A right-turn lane of 12 feet in width, conforming to Table VI shall be provided at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Increased storage and transition queue lengths (waiting vehicle storage) may be required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 150 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 150 vehicles in the peak hour or less.
  - b. *Additional improvements immediately adjacent to the development.* At intersections, with a thoroughfare which abut the development, the following improvements shall be provided:
    1. A right-turn lane of 12 feet in width, conforming to subsection (e)(5) and Table VI, shall be provided if the development will generate 100 or more right turns during the peak hour.
    2. A left-turn lane of 12 feet in width conforming to subsection (e)(5) and Table VI, shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 25 or more left turns during the peak hour.
  - c. *Through lane pavement transition tapers.* A through lane pavement transition taper shall be provided on all streets and roadways where the through lane is offset to provide for right turn lanes, left turn lanes, lane width changes and an increase or reduction in the number of through lanes. The through lane pavement transition taper length shall be based upon FDOT Standard Index #526 and 17346, and calculated using the following formulas:  
For design speeds less than or equal to 40 m.p.h. use:

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$$L = \frac{WS^2}{60}$$

For design speeds greater than or equal to 45 m.p.h. use:

L	=	WS
L	=	the pavement transition taper length in feet.
W	=	the width of the through lane lateral transition in feet (offset).
S	=	the design speed (must be at least five m.p.h. greater than the posted speed limit.)

TABLE VI. TURN LANE DIMENSIONAL  
REQUIREMENTS

Speed Limit (mph)	Urban Section Deceleration Length (feet)*	Rural Section Deceleration Length (feet)*
30	145	145
35	155	155
40	185	185
45	240	320
50	N/A**	385
55	N/A**	455

\* Includes minimum 50 feet bay taper in accordance with FDOT Standard Index #301 and 526.

\*\* Curbing is not permitted for these speed limits, use rural section.

d. *Modifications.* Required storage and transition lengths may be modified where conditions warrant and such modifications are acceptable to the DRC.