

Department of Public Works
Transportation
Technical Manual

2009 Edition

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INTRODUCTION AND LEGAL AUTHORITY

This Transportation Technical Manual was revised in its entirety in 2009, and supersedes all other previously adopted Transportation Technical Manuals. This new manual is effective upon adoption.

All preliminary site development plans, preliminary plats, and other development orders submitted on or subsequent to the effective date of this manual shall be governed by this Transportation Technical Manual. All projects submitted prior to the effective date shall be governed by the version in effect upon submittal unless the developer voluntarily elects to comply with this manual. Construction plans submitted for review shall include design data and calculations for structures and roadways.

This Manual is intended to be a supplement to the following documents which may be found via the Web:

- (a) Florida DOT - Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, latest edition; known as the “Florida Green Book”.
- (b) Florida DOT - Procedures Manual for Flexible Pavement Design, latest edition.
- (c) U.S. Department of Transportation, Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highway, latest edition.
- (d) Florida DOT - Standard Specifications for Road and Bridge Construction, latest edition.
* For local unclassified street only, the Transportation Division shall retain the 2000 edition of the standard specification for pavement design, asphalt (For Type S Mixes). Contractor Quality Control provisions will not be used.
- (e) AASHTO - Standard Geometric Design for Highways and Streets, latest edition.
- (f) Florida DOT - Roadway and Traffic Design Standards, latest edition.
- (g) Drainage Design and Construction see City of Tampa Stormwater Technical Standard Manuals for Public or Private Development.
- (h) The FDOT Florida Highway Landscape Guide.
- (i) AASHTO – Roadway Lighting and Design Guide, latest edition.
- (j) FHWA – Roundabouts an Informational Guide, latest edition.

These documents shall be considered the minimum standards for development within the City of Tampa and shall be incorporated into this Transportation Technical Manual as fully adopted herein. However, various City of Tampa Code of Ordinances may provide for alternative design, which may differ from this manual, but fully comply with the intent of this manual.

Any City of Tampa codes and/or ordinances, or other duly adopted regulations (overlay districts, historic or conservation districts, or form-based codes), which contain standards which are more stringent than the minimum standards adopted herein shall govern.

Alternative designs shall be allowed pursuant to adopted City of Tampa code or pursuant to Alternative Design Review Process set forth in Chapter 22.

SECTION I. TITLE, AUTHORITY AND PURPOSE

I-A TITLE

This manual shall be known as the City of Tampa Transportation Technical Manual.

I-B AUTHORITY

This manual has been prepared and adopted pursuant to the authority granted by the following:

City of Tampa Code, Chapter 35, Ordinance #9803-A Chapter 1-77, Florida Statutes (1979) Chapter 335, Florida Statutes (1984).

I-C PURPOSE

It is essential for the promotion of public health safety and welfare that the design, construction, repair, and maintenance of all streets and public rights-of-way including sub-grade, paving, drainage systems, sidewalks, and all related infrastructure elements be in accordance with the requirements of this manual and all related ordinances of the City of Tampa.

I-D REVISIONS TO THIS MANUAL

The Director of Public Works or designee may recommend revisions to the contents of this manual as necessary. In addition, the Director of Public Works or designee may promulgate policies and procedures to implement the provisions of this manual.

I-E DEFINITIONS

Unless specifically defined herein, please refer to definitions set forth in City of Tampa Code of Ordinances.

SECTION II GENERAL DESIGN STANDARDS

II-A COUNTY, STATE, AND FEDERAL PERMITS

The property owner/developer or agent shall acquire all necessary County, State, and Federal permits for the construction of the project. The Engineer of Record shall submit copies of the approved permits to the City when requesting permission to construct road, bridge, and drainage facilities.

II-B RIGHT-OF-WAY (STREETS) DESIGN AND CONSTRUCTION

Refer to Florida DOT - Standard Specifications for Road and Bridge Construction, latest edition and to Florida DOT – Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, latest edition (Florida Green Book). In addition, Construction shall conform to the standard details and specifications available from the Transportation Division and Utility Departments. Copies of City of Tampa Standard Drawings and Specifications may be obtained through Contract Administration.

- (1) Street right-of-way and pavement widths: Refer to Florida DOT – Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, latest edition (Florida Green Book).
 - a. When construction, reconstruction, or an improvement plan includes intersection(s) of two (2) classified roadways, installation of a roundabout in lieu of a signalized intersection should be strongly considered as an appropriate and viable option (refer to FHWA – Roundabouts an Informational Guide, latest edition).
 - b. When construction, reconstruction, or an improvement is planned for a collector or arterial roadway, installation of bicycle lanes should be strongly considered as an appropriate and viable option to promote multiple modes of transportation.
- (2) Traffic control devices: Traffic control devices, as defined in Chapter 22, including but not limited to all necessary signs, signals and pavement markings must be designed in accordance with the Manual of Uniform Traffic Control Devices published by the Federal Highway Administration.

On private streets, traffic control devices shall specifically identify the street as "private" as provided for in Chapter 22 and 25, City of Tampa Code.

- (3) Traffic calming: Refer to Florida DOT – Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, latest edition (Florida Green Book).

II-C STREET LIGHTS

Refer to Florida DOT – Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, latest edition (Florida Green Book) and AASHTO – Roadway Lighting and Design Guide, latest edition.

II-D SIDEWALKS

- (1) Chapter 22 Streets and Sidewalks, Section 22-103, of the Tampa Code of Ordinances, governs the process for providing sidewalks in the right of way.
- (2) Design Standards are covered in the Florida Department of Transportation Design Standards and FDOT Specifications for Road and Bridge Construction, latest edition. All sidewalks to be established in a subdivision shall be designed in accordance to the Florida DOT – Manual of Uniform Minimum Standards for Design Construction and Maintenance for Street and Highways (Florida Green Book).

All pedestrian ramps constructed in new sidewalk or existing sidewalk areas shall comply with FDOT Roadway and Traffic Design Standards Index No. 304. The Engineer of Record shall specify which ramp detail within Index No. 304 shall be used.

- (3) Standard sidewalk construction shall be a minimum 5 (feet) wide and 4” in thickness (may be greater as per City of Tampa Code of Ordinances), except for driveways and curb ramps where it shall be 6” thick 3000 psi concrete no reinforcement.
- (4) Cross slope of 2% maximum. Inspection is required before and after pouring.

II-E ALLEYS

Refer to Florida DOT – Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, latest edition (Florida Green Book).

SECTION III. SUBDIVISION RIGHT-OF-WAY DESIGN AND CONSTRUCTION STANDARDS

III-A RIGHT-OF-WAY DESIGN AND CONSTRUCTION CRITERIA

Refer to Florida DOT - Standard Specifications for Road and Bridge Construction, latest edition and to Florida DOT – Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, latest edition (Florida Green Book). In addition, Construction shall conform to the standard details and specifications available from the Transportation Division and Utility Departments. Copies of City of Tampa Standard Drawings and Specifications may be obtained through Contract Administration.

- (1) When construction, reconstruction, or an improvement plan includes intersection(s) of two (2) classified roadways, installation of a roundabout in lieu of a signalized intersection should be strongly considered as an appropriate and viable option (refer to FHWA – Roundabouts an Informational Guide, latest edition).
- (2) When construction, reconstruction, or an improvement is planned for a collector or arterial roadway, installation of bicycle lanes should be strongly considered as an appropriate and viable option to promote multiple modes of transportation.

III-B CONSTRUCTION PLANS

- (1) Construction plans must include, but not be limited to the following:
 - a. Cover Sheet.
 - b. Location/Index Map including north arrow.
 - c. Typical Sections.
 - d. Plan and Profile Sheets to include proposed roadway, right-of-way, drainage, sidewalks, street lights, and all other utilities in plan and profile.
 - e. Cross-Sections at all intersections and at 50' intervals for entire length of proposed project, unless otherwise approved by the City.
 - f. Signing, markings, and signal plans must be included where necessary for final plat approval.
 - g. Standard details of all structures.
 - h. Summary of quantities.
 - i. All calculations required for turn lane storage lengths and tapers (traffic data and design speeds) where necessary.
 - j. All documents must be signed and sealed by the registered engineer.

- k. Radius return profiles for all corners of all intersections within the proposed project.
- (2) Plan revisions:
- a. Any revisions to construction drawings that have been previously approved shall be formally resubmitted with a cover letter indicating reason for revision from the Engineer of Record to the City for approval prior to commencement of any work pertaining to that revision.
 - b. Administering revisions on construction drawings require that a revision number be assigned and listed in the revision box provided on the appropriate sheets with the revised item or area clouded with revision number in a pyramid type symbol attached to the clouded area.
- (3) Construction inspections (reference stakes): The contractor shall calculate all required information needed to set all survey stakes, such as grade stakes, roadway centerline offset stakes, reference stakes, slope stakes and other reference markers or points necessary to provide line and grade for construction. The staking for all utility installation shall have both horizontal and vertical controls with appropriate offsetting. All baseline-stationing intervals shall be even numbered and not greater than fifty (50) feet apart. Construction Inspection will not conduct any roadway or drainage inspections without seven (7) day written notice, this written notice shall be accompanied with a standard cut-sheet, this request will be at the discretion of the construction inspector. All stakes for line and grade shall be maintained for the duration of the construction project.
- (4) As-builts: As-built construction drawings for all roadways shall be signed and sealed by the engineer of record verifying all roadway centerline elevations and horizontal locations. Also, a verification of all manhole and inlet invert elevations, along with control structure elevations shall be provided. As-built construction drawings for dedicated public roadways shall be signed and sealed by a licensed professional land surveyor to support and certify all survey data. Manhole, inlet, and control structure-invert elevations for the entire project must be clearly noted. All roadway vertical elevations (high points and low points) with horizontal roadway centerline alignment must be clearly noted. As-builts shall be submitted within sixty (60) days of substantial completion of the project.

III-C SUBSOIL INVESTIGATION FOR ROADWAY

A subsoil investigation report shall be submitted with the road, bridge, and drainage plans and shall include:

- (1) Seasonal high and existing ground water elevation data.
- (2) Soil Boring shall be a minimum of 2.0 feet below the lowest structure or 7.0 feet below finished grade or whichever is greater and spaced at maximum of five hundred (500) foot intervals to determine the soil classification in accordance with AASHTO M 145-73. Additional borings may be made as necessary to determine limits of unsuitable material. Depth and extent of muck areas shall be determined. Handling of unsuitable material shall be determined by the Engineer of Record, subject to the approval of the City Construction Engineer.

III-D CONCRETE CURB, GUTTER AND SIDEWALKS

- (1) All materials and installation shall conform to the Florida DOT Standard Specifications for Road and Bridge Construction, latest edition, Section 346. All curbing constructed in a dedicated public right-of-way shall be constructed with a 4" inch curb pad made of Asphaltic Concrete Type ABC-3 with a Marshall-1000. Alternative material with appropriate depth can be used with the approval of Public Works. Densities under the curb pad shall be a minimum of ninety-eight (98) percent modified Proctor for a twelve (12) inch depth. Attached to the asphaltic concrete delivery ticket shall be a FDOT Delivery Sheet. A copy of these tickets shall be given to the City's representative. Refer to Florida DOT Roadway and Traffic Standards and reference the appropriate Standard Index.

SECTION IV. DRIVEWAYS AND ACCESS MANAGEMENT

IV-A GENERAL REQUIREMENTS

Refer to Florida DOT – Manual Uniform Minimum Standards for Design Construction and Maintenance for Streets and Highways, latest edition (Florida Green Book) and City of Tampa Code of Ordinances for appropriate driveway location and access management specifications.

IV-B PROHIBITED LOCATIONS

Driveway flares will not be permitted to encroach into the adjoining property owners extended property line across the City of Tampa public right-of-way. The starting location of a driveway shall be a minimum of one (1) foot for residential two (2) feet for commercial and industrial. This measurement is taken at the edge of street pavement, from the extension of the property line dividing one continuous parcel from another.

IV-C CONSTRUCTION IN RIGHT OF WAY

- (1) Section 22-60 of City of Tampa Code states that it is unlawful for any person to work in City of Tampa right-of-way without a permit from the Department of Public Works. Also, the Department of Public Works may request a performance and warranty/maintenance bond be posted for all work being performed in the public rights-of-way.
- (2) Initial inspection will be made before approved materials are added to rights-of-way. Final inspection is required when construction is completed and right-of-way is restored, pursuant to Chapter 22-60.
- (3) When the City of Tampa removes the curb, gutter and existing driveway for street improvements such as widening or paving, the City will replace the existing curb, gutter and driveway with similar ones at no expense to the property owner. If the property owner wants a driveway in a new location or wants to upgrade his existing driveway to City standards, they will have to conform to the requirements in this manual and pay all costs for the new driveway.

IV-D PERMIT

- (1) A driveway permit must be obtained from the Department of Public Works, Transportation Division and Construction Services Division, prior to the removal or construction alterations of any curb, approach, or gutter on City of Tampa right-of-way. One of the requirements in obtaining a permit is the submission of a scaled site plan showing the location of property lines, streets, alleys, proposed construction, proposed and/or existing off-street parking.
- (2) The Department of Public Works has the authority to prohibit a driveway in a requested location, as long as there is adequate access to the property.

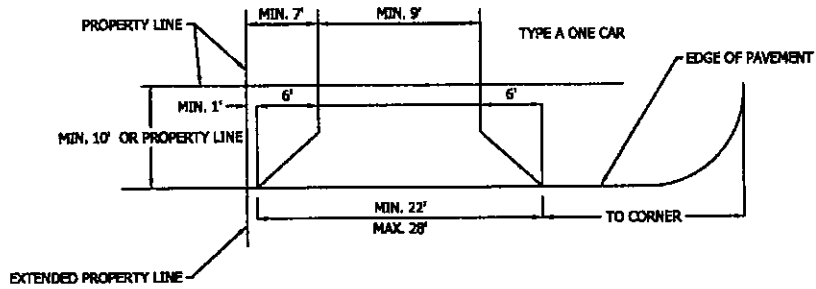
- (3) The permittee shall be required to install and maintain temporary and permanent erosion control measures as deemed necessary by the City.
- (4) The permit is not valid and construction shall not proceed until the Call Sunshine Notification Center is notified (1-800-432-4770) and Sunshine number is obtained not less than forty-eight (48) hours nor more than five (5) working days prior to beginning any construction in the right-of-way. When construction is delayed over five (5) working days call the Notification Center again in accordance with the forty-eight (48) hour minimum notice.
- (5) After application has been made for a permit, an on-site inspection is required prior to the beginning of any construction on any residential driveway. An inspector is available to meet the owner or contractor, if needed. Property lines must be staked along with the proposed driveway location.
- (6) The permittee shall be responsible for the proper placement of flashing barricades during the construction period.

IV-E DESIGN STANDARDS

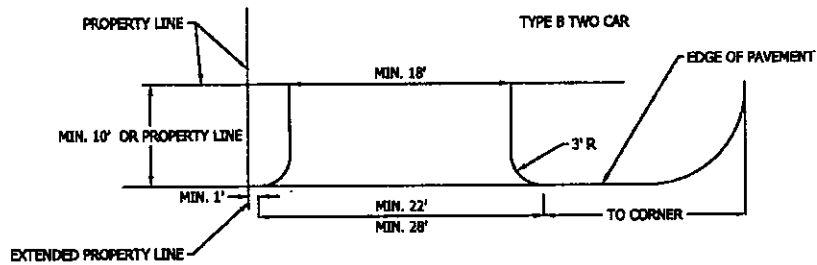
- (1) Driveways accessing roads classified as collectors or arterial shall be designed to Florida DOT - Roadway and Traffic Design Standards, latest edition.
- (2) Refer to Florida DOT - Standard Specifications for Road and Bridge Construction, latest edition, for driveway grades and grade breaks.
- (3) All concrete driveways, flares, and curb returns must be constructed with 6" thick 3,000 psi concrete.
- (4) All asphalt driveways must be Type I Asphaltic Concrete, 1-3/4" thick with 6" limerock or crushed concrete base course compacted to 98% modified proctor. Asphalt may not be placed over existing sidewalk.
- (5) All existing curb cuts that do not coincide with the proposed driveway location, shall be restored to their original height and backfilled, to the original condition as determined by the City of Tampa Department of Public Works.
- (6) The following driveway designs for residential, commercial, and industrial driveways that access local streets are accepted by the City of Tampa Transportation Division and shown below in Figures 2-1 thru 2-10.

STANDARD FOR RESIDENTIAL DRIVEWAYS

STRAIGHT FLARE



3' RADIUS FLARE



5' RADIUS FLARE

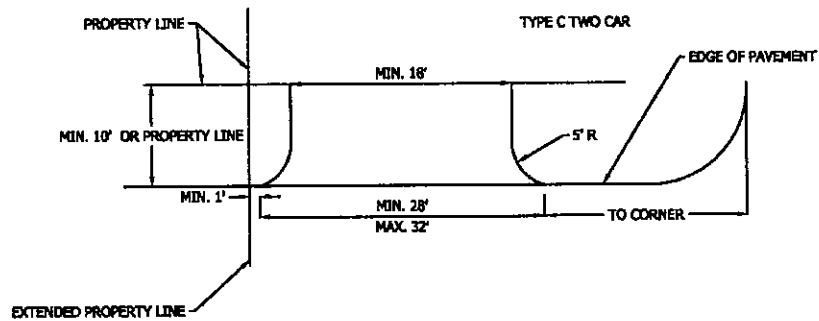
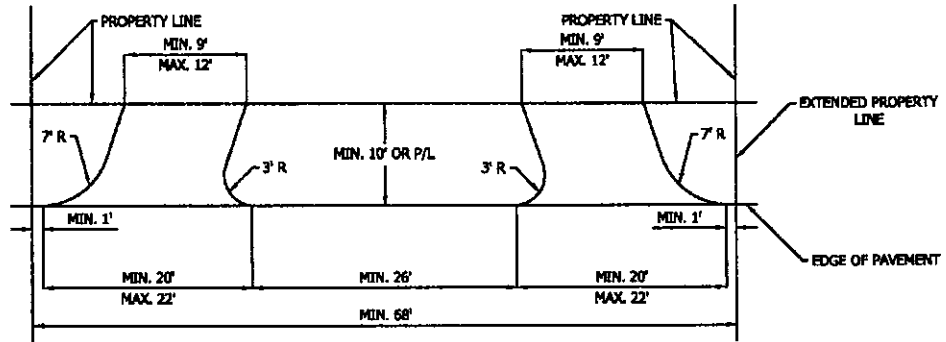


FIGURE 2-1

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

**STANDARD FOR RESIDENTIAL CIRCULAR DRIVEWAYS
ON LOCAL STREETS**

7' RADIUS OUTER
3' RADIUS INNER



3' FLARE

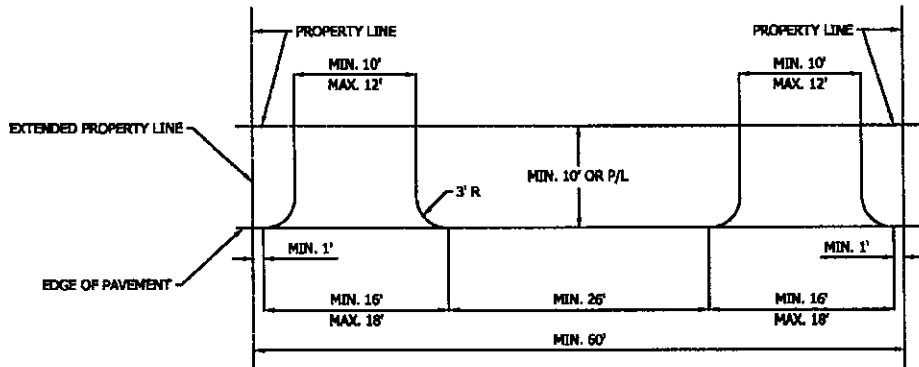
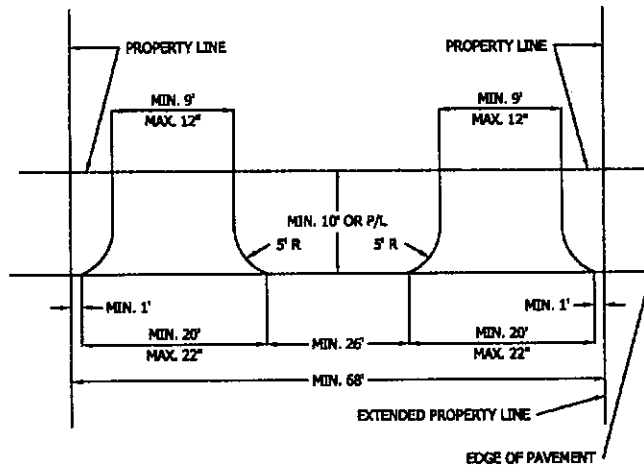


FIGURE 2-2

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

**STANDARD FOR RESIDENTIAL CIRCULAR DRIVEWAYS
ON LOCAL STREETS**

5' RADIUS FLARE



5' STRAIGHT FLARE

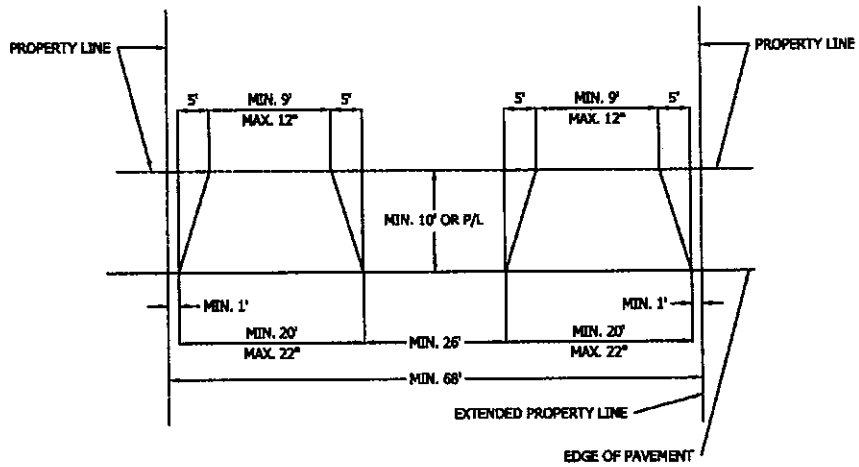


FIGURE 2-3

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

**SPECIAL STANDARD FOR RESIDENTIAL DRIVEWAY
FOR THREE OR MORE CARS ON LOCAL STREETS**

5' RADIUS FLARE

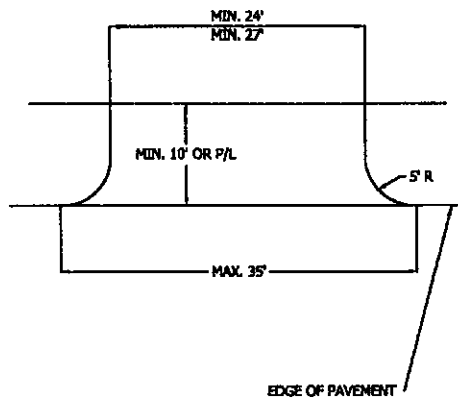
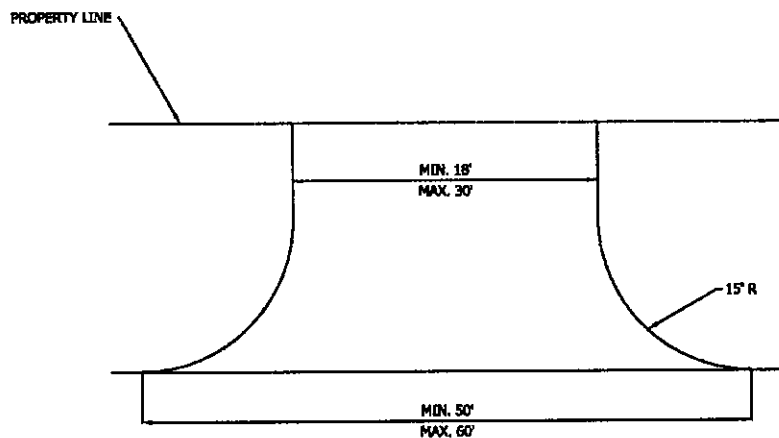


FIGURE 2-4

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

STANDARD FOR INDUSTRIAL DRIVEWAY



STANDARD FOR COMMERCIAL DRIVEWAY

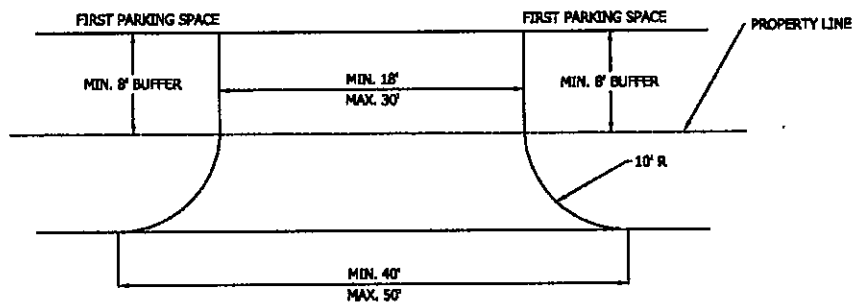


FIGURE 2-5

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

**STANDARD FOR ONE WAY DRIVE ON A
ONE WAY COMMERCIAL STREET**

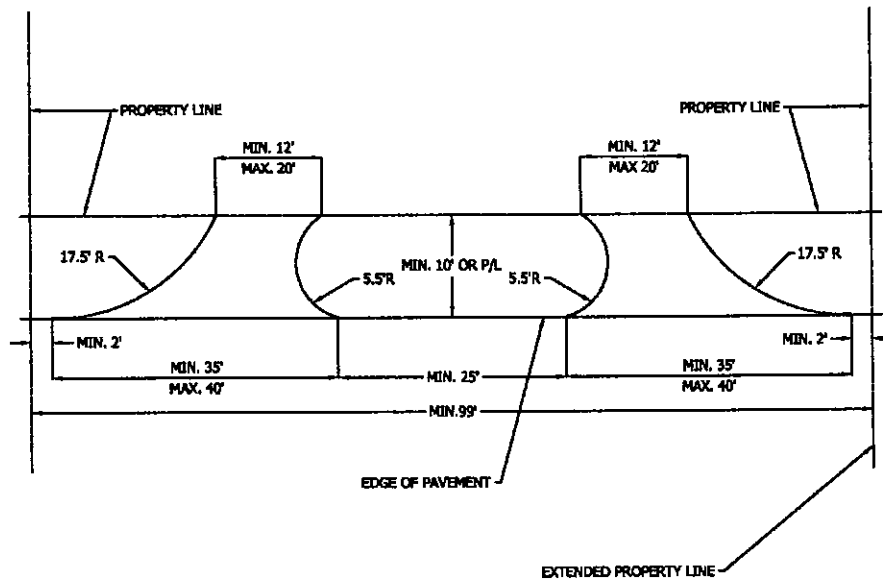


FIGURE 2-6

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

**STANDARD FOR ONE WAY DRIVE PAIR ON A
TWO WAY COMMERCIAL STREET**

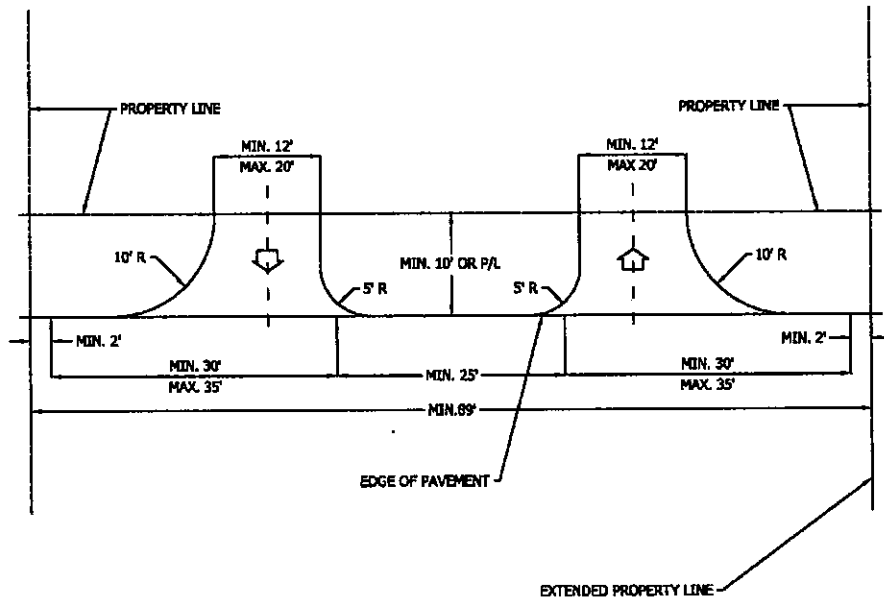


FIGURE 2-7

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

STANDARD FOR COMMERCIAL DRIVEWAYS

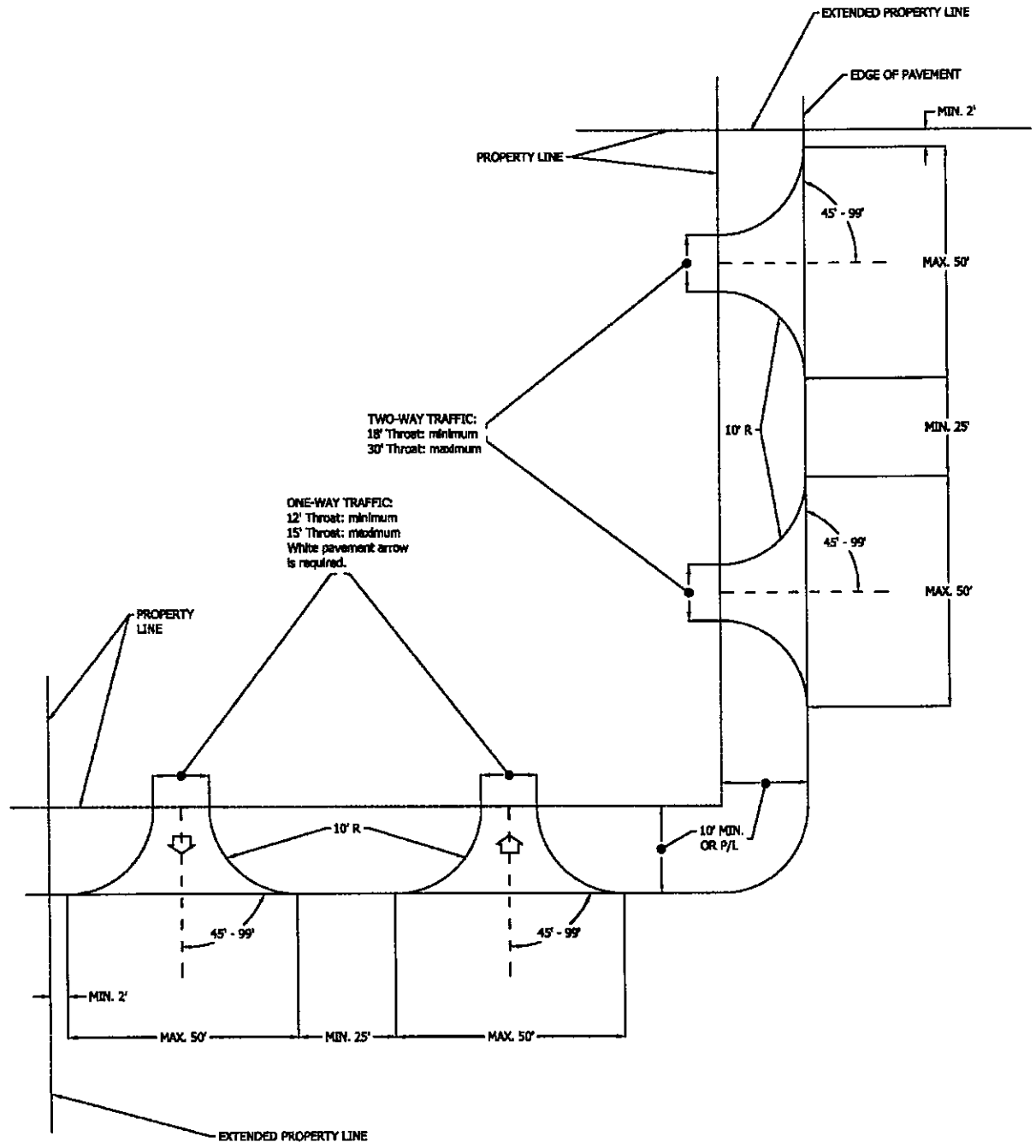


FIGURE 2-8

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

STANDARD FOR COMMERCIAL DRIVEWAYS

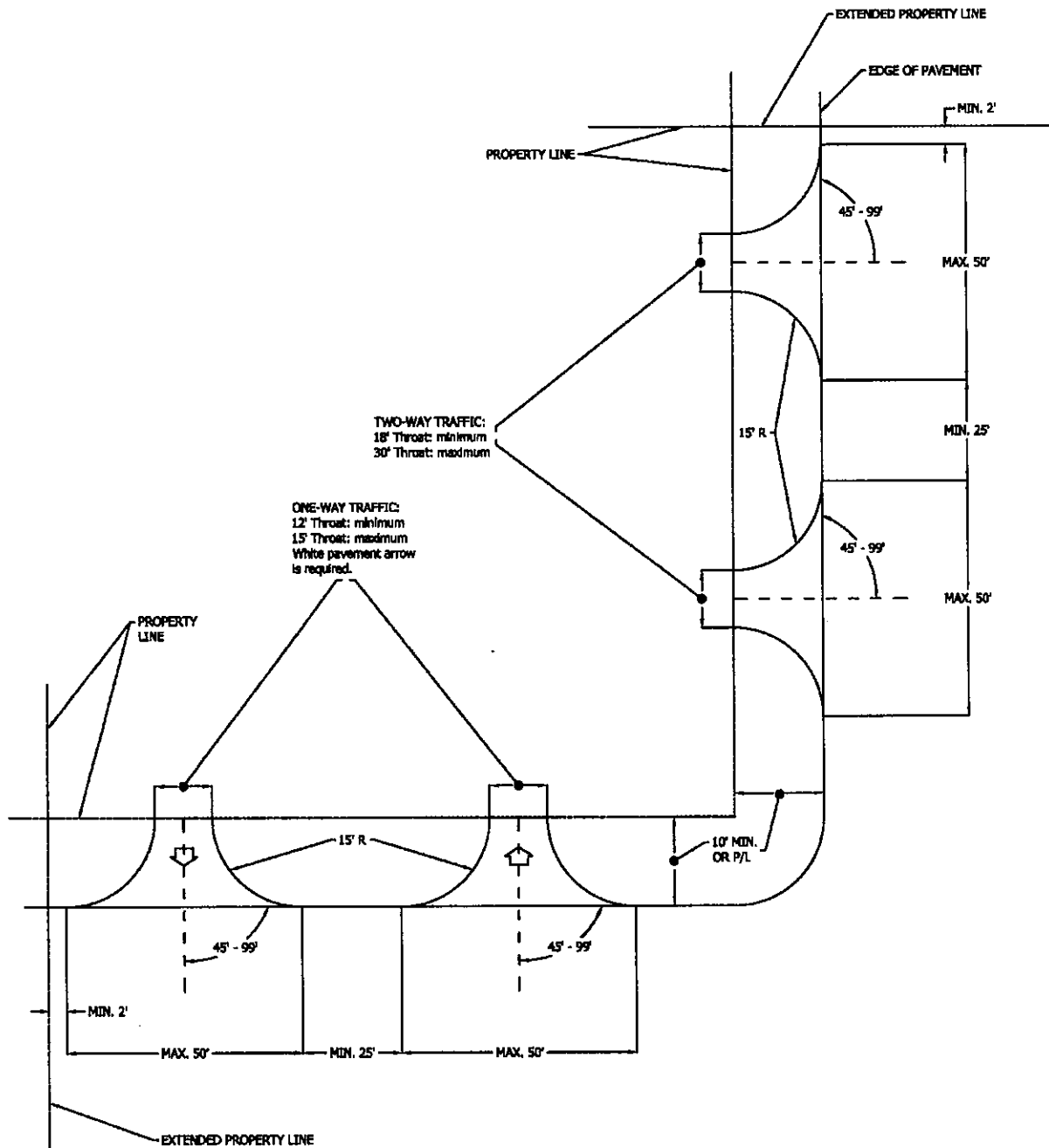
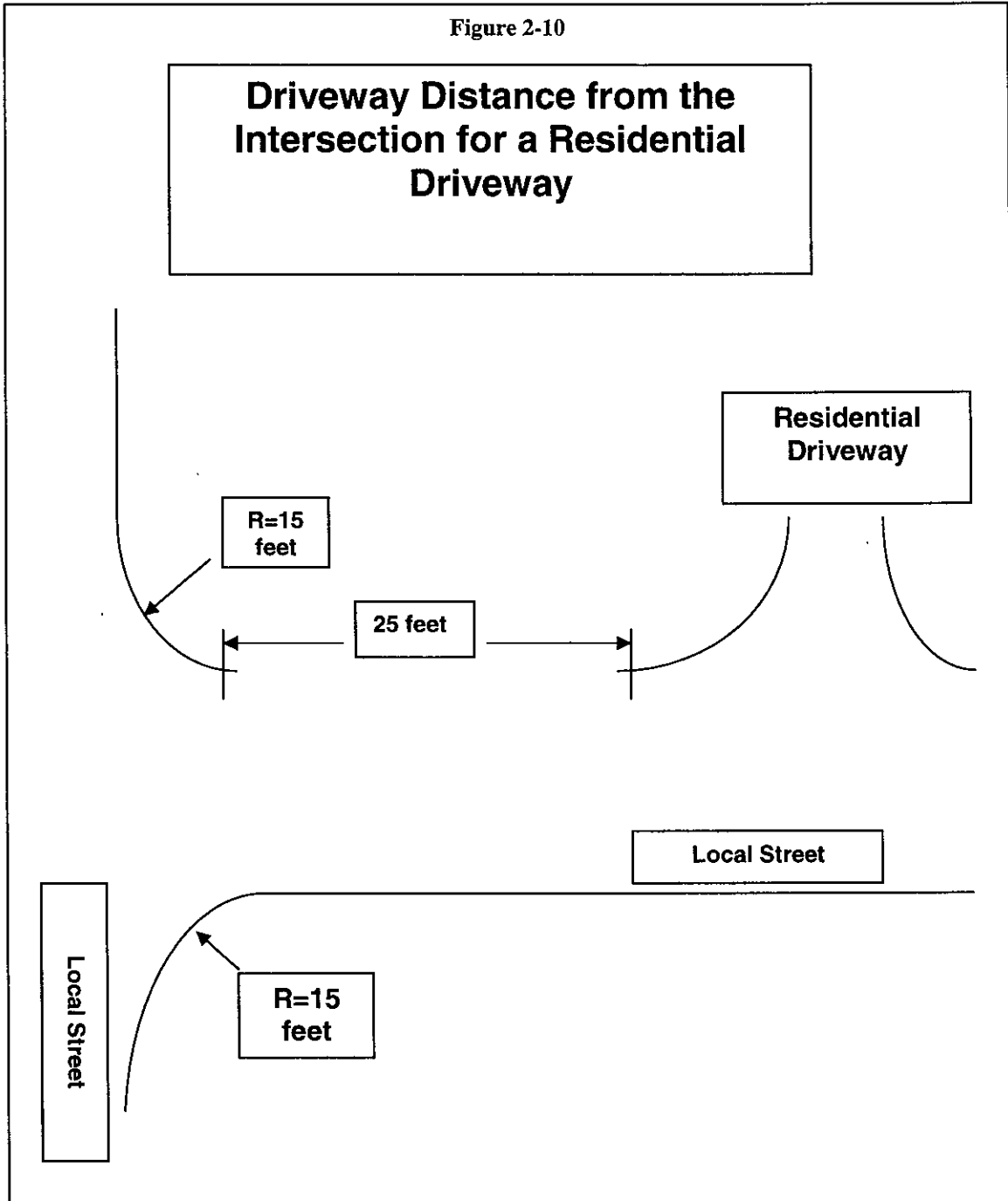


FIGURE 2-9

CALL: Sunshine State One Call 1-800-432-4770 48 Hours before digging.

Figure 2-10

Driveway Distance from the Intersection for a Residential Driveway



SECTION V. ADDITIONAL PROVISIONS

V-A SIGHT DISTANCE

Refer to Florida DOT – Manual Uniform Minimum Standards for Design Construction and Maintenance for Streets and Highways, latest edition (Florida Green Book).

V-B ON STREET PARKING / LOADING ZONES

On Street parking and/or loading may be permitted through Alternative Design Review Process as set for in Chapter 22.

CONCLUSION: 18. COPY OF DOCUMENTS

Each applicant is encouraged to keep a copy of any and all documents filed, mailed or submitted to the City. Copies of any documents filed may be obtained by contacting the official below.

This guide prepared by the:

Department of Public Works
Transportation Division

Please direct all inquires, questions, or comments to:

City of Tampa
DPW/Transportation
Attn: Transportation Manager
306 East Jackson Street
Tampa, FL 33602
813-274-8333
<http://www.tampagov.net>