

Appendix C

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Existing City Stormwater Codes

alternative, in residential areas sidewalks may be provided within rear lot easements or common open areas. Sidewalks may be waived by the governing body where the average residential lot size exceeds twenty thousand (20,000) square feet.

Sidewalks shall have a minimum width of five (5) feet and shall be constructed of at least 2500 p.s.i., natural or colored concrete with a minimum thickness of four (4) inches reinforced with 6 x 6/10 welded wire mesh, except at driveway approaches. Driveway approaches shall be 2500 p.s.i. concrete at least six (6) inches thick with minimum reinforcement of 6 x 6/10 welded wire mesh. The requirement for sidewalks shall be the responsibility of the subdivider and such sidewalks shall be installed prior to the final inspection of any adjoining building.

8.05 Bridges

Bridges shall be designed in general accord with current practices as established by the City Engineer. Bridges shall be constructed with curbs, the required paving width, and in addition, sidewalks at least four (4) feet wide on one side. Approach guardrails or fences shall be provided as required by the City Engineer.

8.06 Storm Water Management

8.061 General

A complete storm water management system shall be provided in all areas of the subdivision, and for handling storm water runoff that flows into or across the subdivision from the outside, without undesired additional flooding of usage assumed for selection of proper runoff coefficients within the basins involved. The system shall be designed in accordance with accepted engineering principles for design floods resulting from rain storms of the maximum intensity for the area at twenty-five (25) years intervals for major water management facilities, and ten (10) year intervals for all other water management facilities required for the subdivision. The system shall be designed for long life, low maintenance cost, and ease of maintenance by normal maintenance methods.

8.062 Roadside Swales

Roadside swales within street right-of-way shall have side slopes and back slopes no steeper than 4 to 1. Normal swale sections shall be a minimum of six (6) inches deep, with a maximum depth of twelve (12) inches below the outside edge of the street pavement. Runoff may accumulate and be carried in the swales in the right-of-way up to but not above the point where flooding

of the shoulders or roadside swales and carried away by storm sewers, or other approved means. Where flow velocities in excess of two (2) feet per second are anticipated, curb and gutter shall be provided.

8.063 Open Channels and Outfall Ditches

With the exception of roadside swales, open drainage ways that are not within 100 feet of residential lots or school sites, or running through residential blocks, may be permitted by the governing body upon recommendation of the City Engineer. Drainage plans shall provide that storm waters will be collected in properly designed systems of underground pipes, inlets, and other appurtenances and be conveyed to an ultimate outfall beginning 100 feet beyond the outer edge of the subdivision or at the nearest natural outfall. Where permitted, open drainage ways shall retain natural design characteristics and be so designed and protected that they do not present a hazard to life and safety. Protection against scour and erosion shall be provided as required by the City Engineer. Access waterways shall have a minimum water depth of six (6) feet for a continuous bottom width of twenty (20) feet. Whenever possible, such waterways shall provide for adequate flushing action by prevailing winds and currents to assure the prevention of stagnant water and debris accumulation.

8.064 Disposition of Storm Water Runoff

All drainage systems shall include special engineering design features to minimize pollution by oil, suspended solids and other pollutants as defined in Chapter 376, Florida Statutes, in storm water runoff within acceptable limits. Treatment facilities shall be designed by a Florida registered engineer to adequately treat the storm water runoff resulting from rainstorms of the maximum intensity at twenty-five (25) year intervals for all other drainage ways and shall be subject to approval by the City Engineer prior to construction. The City Engineer shall determine which drainage ways shall be classified as major.

- (1) Storm Drainage into Lakes Where an outfall is utilized which discharges into (a) a lake, (b) a canal or stream with a daily mean discharge of less than five (5) cubic feet per second, or (c) one mile, the first one inch of rainfall from each storm shall be retained and either percolated into the ground, collected and evaporated, or given chemical-physical treatment to conform with the City Engineer's requirements prior to being discharged from the outfall. Treatment of the whole first one inch shall not be required when the City's standard can be met by treating a lesser amount. Runoff from rainfall in excess of the first inch shall be treated as specified in the introductory paragraph of subsection 8.064. Out falls into lakes shall be designed

to prevent lake bottom scour. Acceptable methods include use of an energy dissipator, or extending the outfall to discharge at a depth of ten (10) feet or half the maximum depth of ten (10) feet or half the maximum depth of the lake.

- (2) Storm Drainage into Canals and Streams. Out falls into canals, ditches, and streams which flow into a lake within one mile, or which have daily mean discharge of less than five (5) cubic feet per second, shall follow the criteria prescribed for storm drainage into lakes. Out falls into canals and streams with an average daily flow exceeding five (5) cubic feet per second shall include special engineering design features as specified in the introductory paragraph of this subsection and, where possible, shall discharge into the maximum depth of the canal or stream.
- (3) Inlet Spacing. Inlets shall be spaced in such manner as to accept 100% of the design runoff. Typically, the maximum allowable gutter run will be 1200 feet on streets with Type A or B curbs, and 600 feet on streets with Type C curbs (see Appendix B, Exhibit 2). However, the actual required spacing will depend on the characteristics of each particular site.

8.07 Utilities

8.071 Sanitary Sewer

Where a public sanitary sewerage system is within a reasonable distance, as determined by the governing body, the subdivider shall provide sanitary sewer services to each lot within the subdivision. All sewer lines serving lots within the subdivision shall be installed by the subdivider prior to the paving of the street and should be designed to operate on a gravity flow basis whenever possible.

Where lots cannot be served by the extension of an existing public sanitary sewer, an alternative method of sewage disposal for each lot may be used in compliance with the standards of the Department of Environmental Regulations and the Department of Health and Rehabilitative Services, as enforced by the County Health Department. Soil absorption systems (septic tank and disposal fields) may be used only where each lot meets above standards and district regulations of the City Zoning Ordinance.

8.072 Water Supply

Where a public water supply system is within a reasonable distance, as determined by the governing body, the subdivider shall install or have installed a system of water mains and connect the system to such supply.

8.09 Improvements in Flood Hazard Zone

8.091 Building Site Improvements

- (1) No subdivision or part thereof shall be approved if proposed Subdivison levees, fills, structures or other features will individually or collectively significantly increase flood flows, heights or damages.
- (2) Building sites for residences, motels, resorts or other dwelling or accommodation uses shall not be permitted in floodway areas. Sites for these uses may be permitted outside the floodway is the sites are elevated or filled to a height at least one (1) foot above the elevation of the regulatory flood or if other provisions are made for elevating or adapting structures to achieve the same result. Required fill areas must extend fifteen (15) feet beyond the limits of intended structures and, if the subdivision is not to be sewerred, must include areas for on site waste disposal.
- (3) Of the Planning Commission determines that only part of a proposed plat can be safely developed, it shall limit development to that part and shall require that development proceed consistent with this determination.
- (4) When the subdivider does not intend to develop the plat himself, and the Planning Commission determines that additional use controls are required to ensure safe development, it may require the subdivider to impose appropriate deed restrictions on the land. Such deed restrictions shall be inserted in every deed and noted on the final recorded plat.

8.092 Drainage Facilities

Storm drainage facilities shall be designed to store and convey the flow of surface waters from a 100-year storm without damage to persons or property. The system shall ensure drainage at all points along streets, and provide positive drainage away from buildings and onsite waste disposal sites. Plans shall be subject to approval by the Planning Commission. The Planning Commission may require a primarily underground system to accommodate frequent floods and a secondary surface system to accommodate less frequent floods. Drainage plans shall be consistent with local and regional drainage plans.

BY THE CITY COMMISSION

ORDINANCE NO. 2008-0989

**AN ORDINANCE BY THE CITY OF DADE CITY, FLORIDA
CREATING, REGULATING, AND ESTABLISHING
STORMWATER DESIGN CRITERIA FOR DRAINAGE BASINS
OF SPECIAL CONCERN; DESIGNATING CERTAIN AREAS AS
DRAINAGE BASINS OF SPECIAL CONCERN; PROVIDING FOR
INCLUSION IN THE LAND DEVELOPMENT CODE, REPEALER,
SEVERABILITY, AND AN EFFECTIVE DATE.**

WHEREAS, various stormwater runoff drainage basins have experienced stormwater runoff flooding resulting in conditions harmful to the health, safety and welfare of the public, and;

WHEREAS, the Southwest Florida Water Management District (SWFWMD) has promulgated general permit procedures within Chapters 40 D-4 and 40 D-40, FAC, applicable to most new development activities which have exempted certain activity or construction that contributes to the flooding problem and often contain drainage design standards that are inadequate to prevent flooding in various stormwater drainage basins, and;

WHEREAS, the City has previously utilized drainage design standards consistent with SWFWMD regulations, and;

WHEREAS, the City has the authority pursuant to Chapter 166, Florida Statutes, to adopt more stringent design standards, and;

WHEREAS, the Federal Government has created a national flood insurance program which is administered in the incorporated areas of the City by the City, and;

WHEREAS, flooding has also occurred in the City limits in areas beyond the limits of the FEMA Designated Special Flood Hazard Area (SFHA) Floodplain, and;

WHEREAS, Pasco County previously commissioned an engineering study by Metcalf & Eddy that shows that more stringent stormwater design regulations are necessary for certain basins within the City; and

WHEREAS, the City Commission desires to implement Land Development Regulations for stormwater design within certain designated basins in order to protect property and structures from flooding and to prevent the future degradation of various drainage basins.

NOW, THEREFORE, BE IT ORDAINED by the City Commission of Dade City, Florida, as follows:

SECTION 1. RECITALS

The WHEREAS clauses set forth above are hereby incorporated by reference and adopted as findings of fact.

SECTION 2. The City of Dade City Drainage Basins of Special Concern Ordinance is hereby created as follows:

DRAINAGE BASINS OF SPECIAL CONCERN

A. Regulated Drainage Basins

The City Commission may identify drainage basins or sub-basins with either inadequate conveyance capacity or excessive ponding, in order to protect the health, safety and welfare of the public and to protect property. This type of basin so designated by the City Commission shall be classified as a Drainage Basin of Special Concern (DBSC).

B. Basin Specific Design Standards

The City Commission may establish special design standards applicable to any new development activity within a specific Drainage Basin of Special Concern. Special design standards may include, but are not limited to, the following:

1. Maximum allowable peak rate of discharge per acre.
2. Minimum required retention volume required per acre.

C. Standard Design Regulations for Drainage Basins of Special Concern

Unless the City Commission adopts a more stringent special design standard within any particular Drainage Basin of Special Concern pursuant to Paragraph B above, the following standard regulations shall be applicable to Drainage Basins of Special Concern designated in this Ordinance or by an amendment pursuant to Section H herein:

1. Open Drainage Basin

- a. The maximum peak rate of stormwater runoff discharge from any development activity shall not exceed the prior existing maximum peak rate of stormwater runoff discharge for a 2, 10, 25 and 100 year return frequency storm event for a duration of 24 hours.
- b. There shall be no net loss of storage volume from the most restrictive of:
 - (1) FEMA established floodplain storage volume,
 - (2) Storage volume below the elevation of a recorded City or County observed flooding,

- (3) Calculated ponding based upon a 100 year return frequency 24 hour storm event, or
 - (4) A more critical event standard defined in a City or SWFWMD approved study for the applicable drainage basin.
- c. The minimum habitable finished floor elevation shall be above the highest elevation established by the following criteria:
 - (1) Articles IV, VII and XI of the Land Development Code,
 - (2) Recorded County or City observed high water elevation plus one foot,
 - (3) Calculated ponding elevation based upon a 100 year return frequency, 24 hour duration storm event plus one foot, or
 - (4) A more critical event standard defined in a City or SWFWMD approved study for the applicable drainage basin plus one foot.
- d. Permit applicants may present for consideration off-site mitigation plans in accordance with preliminary/construction plan submittal. In addition, an applicant must demonstrate that the mitigation will be viable and sustainable in perpetuity.

2. Closed Drainage Basin

- a. The maximum peak rate of stormwater runoff discharge from any development activity shall not exceed the prior existing maximum peak rate of stormwater runoff discharge for a 2, 10, 25 and 100 year return frequency storm event for a duration of 24 hours.
- b. Runoff volume shall be limited to pre-development conditions such that there shall be no increase in the volume of runoff resulting from development activity for a 100 year return frequency, 10 day duration storm event.
- c. There shall be no net loss of storage volume from the most restrictive of:
 - (1) FEMA established floodplain storage volume,
 - (2) Storage volume below the elevation of a recorded County or City observed flooding,
 - (3) Calculated ponding based upon a 100 year return frequency, 10 day storm event, or
 - (4) A more critical event standard defined in a City or SWFWMD approved study for the applicable drainage basin.
- d. The minimum habitable finished floor elevation shall be above the highest elevation established by the following criteria:
 - (1) Applicable sections of the Land Development Code,
 - (2) Recorded County or City observed flooding elevation plus one foot,
 - (3) Calculated elevation based upon a 100 year return frequency, 10 day duration storm event plus one foot, or

- (4) A more critical event standard defined in a City or SWFWMD approved study for the applicable drainage basin plus one foot.
- e. Permit applicants may present for consideration off-site mitigation plans in accordance with preliminary/construction plan submittal. In addition, an applicant must demonstrate that the mitigation will be viable and sustainable in perpetuity.

D. Maintenance

All stormwater management systems that are not accepted for maintenance by the City shall be operated and maintained by an entity other than the City of Dade City.

E. Engineer's Certifications

1. Permit applications and stormwater management plans shall be prepared by a professional engineer registered to practice in the State of Florida. A certification of compliance with this Ordinance accompanied by acceptable plans and calculations shall be submitted as part of the permit application by the engineer. Upon completion of construction, a professional engineer registered to practice in the State of Florida shall submit a certification of completion certifying compliance with the approved permit. The professional engineer shall maintain standard professional liability insurance in the minimum amount of \$1,000,000.00 per occurrence and shall submit proof of insurance with all permit applications.
2. It is the responsibility of the applicant to include in the Stormwater Management Plan and Report sufficient information for the City Manager or his designee to evaluate the environmental characteristics of the affected area, the potential and predicted impacts of the proposed activity on area surface waters, and the effectiveness and acceptability of those measures proposed by the applicant for reducing adverse impacts.
3. The Stormwater Management Plan and Report shall contain, as a minimum, the following information:
 - a. The name, address, and telephone number of the applicant and the engineer;
 - b. The location map.
 - c. The predevelopment environmental and hydrological conditions of the site and/or receiving waters and wetlands shall be described in detail, including the following:
 - (1) The direction, peak flow rate, and for closed basins and Drainage Basins of Special Concern, the volume of predevelopment stormwater run-off.
 - (2) The location of area on the site where predevelopment stormwater collects or percolates into the ground.

- (3) A description of all water courses, water bodies, and wetlands on or adjacent to the site or into which stormwater flows.
 - (4) Seasonal high water table elevations.
 - (5) Location of 100-year flood plain, or best available information.
 - (6) Description of vegetation.
 - (7) Topography.
 - (8) Soils
 - (9) Location of drainage basins and sub-basins.
 - (10) Rainfall data for the appropriate design storm.
 - (11) SCS curve numbers.
- d. Proposed post-development conditions of the site shall be described in detail, including:
 - (1) Areas to be filled and/or excavated.
 - (2) Areas where vegetation will be cleared or otherwise removed.
 - (3) The size and location of non-residential buildings or other structures. The typical lot layout shall be used to compute the coefficient of run-off.
 - (4) Location of drainage basins and sub-basins.
 - (5) SCS curve numbers.
 - (6) Effect of any proposed open space irrigation systems.
 - e. All components of the drainage system and any measures for the detention, retention, or infiltration of water or for the protection of water quality shall be described in detail, including:
 - (1) The direction, flow rate, and for closed basins and Drainage Basins of Special Concern, the volume of stormwater that will be conveyed from the site, if any, with a comparison to the predevelopment conditions.
 - (2) Detention and retention areas, including plans for the discharge of waters.
 - (3) Areas of the site to be used or reserved for percolation.
 - (4) A plan for the control of erosion which describes in detail the type and location of control measures.
 - (5) Any other information which the developer or the City Manager or his designee believes is reasonably necessary for an evaluation of the stormwater management plan.
- 4. The requirement for submittal of a stormwater management plan shall not be waived for subdivisions and projects located in Drainage Basins of Special Concern.
 - 5. To ensure attainment of the objectives of the Land Development Code and this Ordinance, and to ensure that standards will be met, the design, performance, construction, and maintenance of the drainage system shall be consistent and shall limit the rate of stormwater discharge from new developments to amounts which are equal to, or less than, the rate of discharge which existed prior to development in accordance with the rules of Chapters 40 D-4 and 40 D-40, FAC, administered by the Southwest Florida Water Management District, provided, however, that

Drainage Basins of Special Concern shall be subject to the provisions of this Ordinance.

F. Applicability Section

1. This Ordinance shall apply to all construction or development activity within Drainage Basins of Special Concern.
2. Exemptions:

If required by the Southwest Florida Water Management District, the City shall allow deviations from the criteria in this Ordinance to the extent necessary to prevent adverse impacts to wetlands or other surface waters when it is demonstrated that adverse impacts cannot otherwise be practicably avoided.

G. Designation of Tank Lake as DBSC

With the enactment of this Ordinance, the City Commission designates Tank Lake (west of the old railroad berm) as a closed Drainage Basin of Special Concern as delineated on the attached map. Upon the effective date of this Ordinance, land within these basins shall be subject to this Ordinance.

H. Future Designation of Basins of Special Concern

The City Commission may designate additional areas as Drainage Basins of Special Concern by amending this Ordinance. Designation of basins as Drainage Basins of Special Concern will include the following steps:

1. Documentation of the fact that the basin is prone to flooding based on records of flooding occurrence and severity. The records can include photos and statements from City or County staff or area residents.
2. Evaluation of basin drainage characteristics and cause of flooding, based on review of relevant information including topographic maps, drainage features and structures, such as channels and culverts, surficial soils, land use and soil stratigraphy. If warranted, this evaluation may include modeling of stormwater runoff generation and conveyance.
3. Determination that the flooding would be exacerbated unless the provisions of this ordinance are in force.

The area(s) to be covered shall be accurately depicted on maps that will be available in digital and hard copy format.

I. City Enforcement

The City is specifically authorized to take any and all steps and actions that are legally available to it, including any court proceedings as are authorized by law, against any person who fails, neglects, or refuses to comply with this Ordinance, or who knowingly furnishes false information or information that is not supported by scientific data to the City or any official in charge of the administration of this Ordinance on any matter relating to the administration of this Ordinance. Each day of a violation shall constitute a separate offense. The City may elect any or all of the available remedies concurrently, and the pursuit of one shall not preclude the pursuit of another, or any other remedy allowed by law.

J. Definitions

1. ***Open Basin*** means a watershed that is not closed.
2. ***Closed Basin*** means a watershed in which the run-off does not have a surface outfall up to and including the 100 year, 10 day flood level or an open basin with a severe discharge restriction as determined by the City Commission at a public hearing.
3. ***Drainage Basin or Sub-basin*** means the area that contributes stormwater runoff to a common low area or common discharge point.
4. ***Recorded County or City observed flooding elevation*** means a flooding elevation surveyed by the County and/or the City and adopted as a standard by the City Commission by resolution.

K. Removal of Designations

The City Commission shall consider amending this section and removing the Special Concern designation from any open basin if the following conditions are met:

1. The City receives a removal request containing a scientific analysis and a proposal to remediate or otherwise ameliorate the conditions that supported the designation. Such request must include proposed funding for the implementation of the remediation plan;
2. The City Manager, in consultation with the Southwest Florida Water Management District, determines that the remediation plan presents a viable solution that is permitted and funded, and;
3. The City Commission has approved the remediation plan.

SECTION 3. INCLUSION IN THE CODE

It is the intent of the City of Dade City Commission that the provisions of this Ordinance shall become and be made a part of the Dade City Land Development Code, and that the

sections of this Ordinance may be renumbered or relettered and the word "ordinance" may be changed to "section," "article," or such other appropriate word or phase in order to accomplish such intentions.

SECTION 4. SEVERABILITY

It is declared to be the intent of the City Commission of the City of Dade City, Florida that if any section, subsection, sentence, clause or provision of this ordinance shall be declared invalid, the remainder of this ordinance shall be construed as not having contained said section, subsection, sentence, clause or provision, and shall not be affected by such holding.

SECTION 5. REPEALER

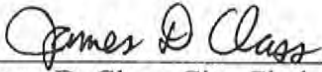
All provisions of the Dade City Land Development Code, as amended, and/or any other ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of any conflict.

SECTION 6. EFFECTIVE DATE

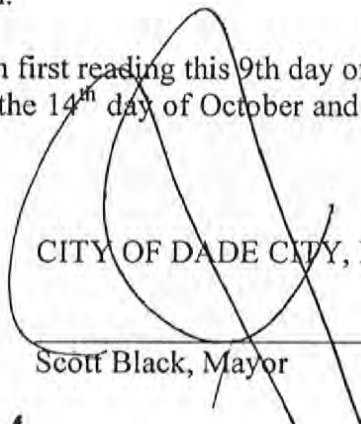
This Ordinance shall take effect upon its adoption.

The above ordinance was read and approved upon first reading this 9th day of September, 2008, and adopted following public hearings on the 14th day of October and the 28th day of October, 2008.

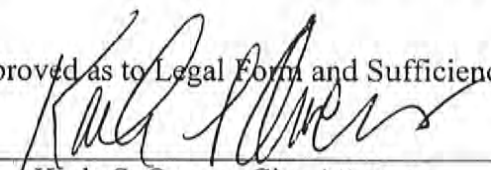
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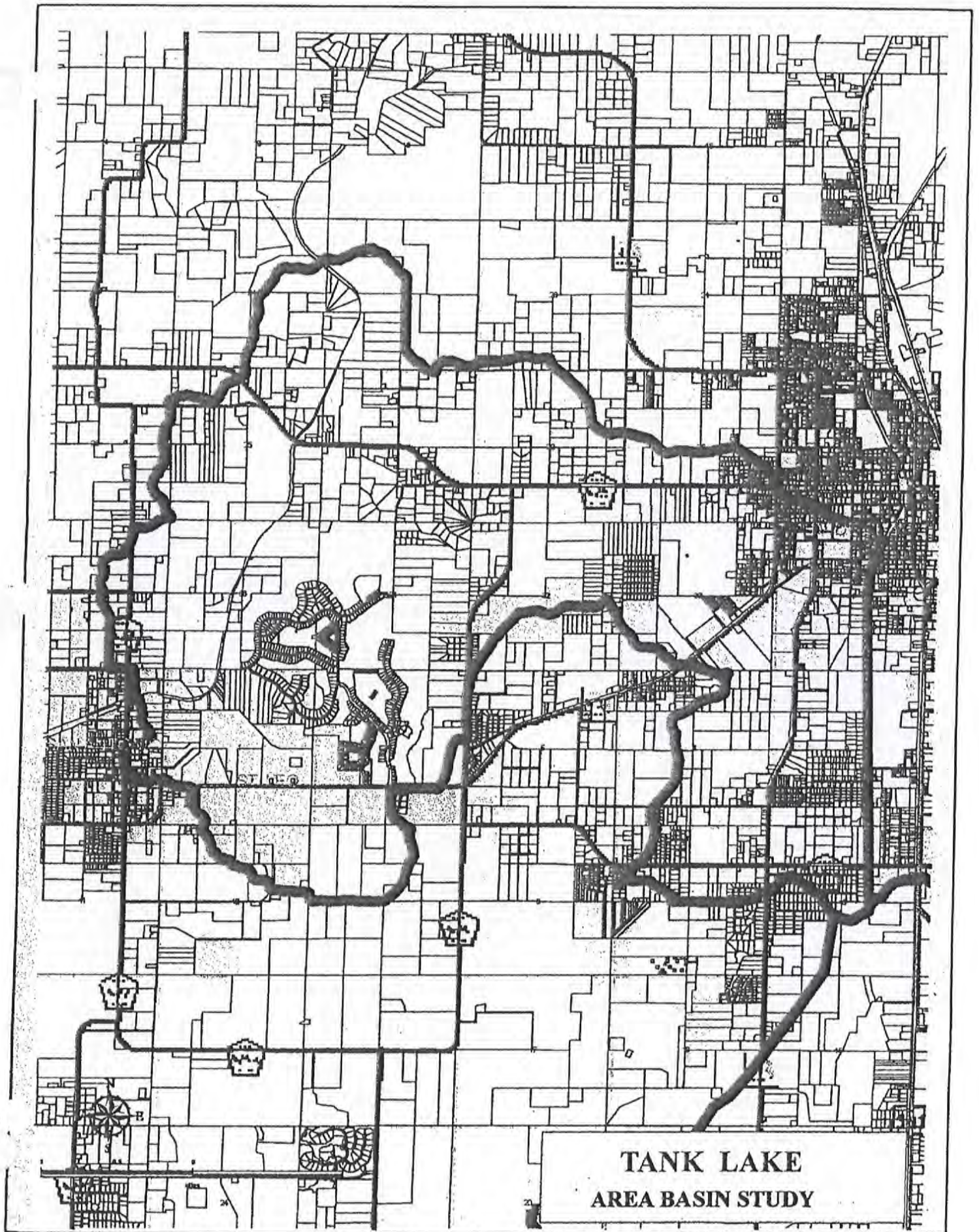

James D. Class, City Clerk

CITY OF DADE CITY, FLORIDA


Scott Black, Mayor

Approved as to Legal Form and Sufficiency


Karla S. Owens, City Attorney



**TANK LAKE
AREA BASIN STUDY**