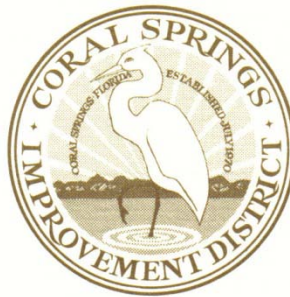


PERMIT CRITERIA MANUAL



FOR PROJECTS WITHIN
CORAL SPRINGS IMPROVEMENT DISTRICT
Revised May 2016

Prepared By:



and



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Purpose

The purpose of this document is to set forth the information, procedures and requirements for preparing an application and obtaining permits from the Coral Springs Improvement District for the construction of water, sanitary sewer, or storm water management (drainage) systems regardless of size or ownership within the Coral Springs Improvement District

Storm Water Permits

Permits from the Coral Springs Improvement District are required for the construction and operation of any and all storm water management systems within the boundaries of the District regardless of size. Projects greater than 40 acres in size and those identified by the District's engineer are also required to obtain approval from the South Florida Water Management District.

The second type of permit is to authorize work within district rights of way and/or crossing district facilities such as water, sewer or reclaimed water lines regardless of their location.

The third type of permit pertains to the installation of water and sewer facilities.

Issuance of a District permit does not relieve the permittee from any obligation to obtain appropriate Federal, State, Regional and Local approvals/permits. Permits do not convey any property rights or privileges other than those specified in the permit; it does not authorize any injury to private property or invasion of private rights, nor does it waive the governing requirements of any other agency or authority. Permits simply express the consent of the District insofar as concerns the public's interest and protection.

Background

The Coral Springs Improvement District (District) was created in 1965 by a special act of the Florida Legislature as a Drainage District. To better serve the new City of Coral Springs, the Coral Springs Drainage District was converted in 1970 to an Improvement District. By 1977 Coral Ridge Properties had completed the master planning of Coral Springs and the Coral Springs Improvement District was able to complete their storm water modeling and submit permits to the Central and South Florida Flood Control District (the predecessor to the South Florida Water Management District - SFWMD) governing the storm water management for all lands within the Coral Springs Improvement District.

The 1977 permit identified two distinct basins within the District, each served by 3 - 50,000 GPM pumps discharging to the C-14 Canal. The 1977 permit also set limits on impervious area and required specific amounts of surface storage for each acre of property in the district. Unfortunately a number of developments did not comply with the criteria and discharge storm water runoff without providing sufficient floodplain storage or water quality treatment. Thus increasing the risk of flooding and allowing heavy metals, hydrocarbons, particulates, nutrients, litter and debris to enter our waterways.

The objectives of these regulations are to:

- Protect and preserve our freshwater resources by improving water quality and reducing the need to pump storm water beyond the boundaries of the Coral Springs Improvement District.
- Improve flood protection by requiring all properties within the District to provide the amounts of surface storage specified for each basin
- Improve water quality in the District's canals by requiring all properties within the District to comply with water quality treatment requirements.
- Help ensure the continued function of storm water management systems by requiring periodic maintenance, inspections and certifications of systems regardless of their past permitting history.
- Encourage responsible renovation and redevelopment of properties.
- Reduce the discharge of hydrocarbons, heavy metals, sediment, litter and debris to District facilities by requiring roadways to comply with water quality and storage requirements.
- Reduce the discharge of sediment, litter and debris into District facilities by requiring projects comply with the EPA's NPDES program for construction activities, provide and follow an Erosion and Sediment Control Plan.
- Reduce runoff to District facilities by increasing available storage.

Policy of the District in Considering and Issuing Permits

1. No Right of Way (R/W) permits will be granted for any use of a District works that will adversely affect such works, construction activities, or degrade the quality of District waters.
2. No R/W permit will be granted for any use of District's works when granting such permit would be inconsistent with the water control plan of the District.
3. A surface water management (SWM) permit will not be granted for any proposed surface water management system which is inconsistent with the South Florida Water Management

District Surface Water Management Permit issued for the Coral Springs Improvement District. The District reserves the right to require any applicant to obtain approval/permit from SFWMD for projects less than 40 acres.

4. Water use permits must be obtained prior to the start of construction from the South Florida Water Management District for construction dewatering and irrigation. A copy of this permit must be provided to the District prior to the start of construction. Discharge of effluent from construction dewatering activities is prohibited unless specifically permitted.
5. Erosion control measures must be incorporated into all projects regardless of size. For projects triggering NPDES compliance a copy of the permit must be provided to the District prior to the start of construction.
6. The Districts reserve the right to:
 - a. Change, regulate and limit discharges into or withdrawals from District works.
 - b. Amend or change any of its policies, practices, procedures or regulations, and such action shall not constitute any claim for damages nor become the basis of a legal suit by any permittee.
 - c. Enter any property containing a storm water management system to verify compliance with the storm water management license and ensure the safe and effective operation of the storm water management system.
7. The District shall require an inspection report at least every five years from permit issuance date, certified by a Florida professional engineer that the storm water management system is operating as permitted by the District. In addition the permittee will state in the report what operational maintenance has been performed on the system.

Permits

A STORM WATER MANAGMENT PERMIT, as issued by the Coral Springs Improvement District, is simply an acknowledgement that the proposed surface water management system or the specific use of public land, as requested by the Applicant, conforms to the requirements and standards of the District. Permits convey no property rights nor any other rights or privileges other than those specified in the permit.

A GENERAL PERMIT, as issued by the Coral Springs Improvement District, is an acknowledgment that proposed construction over, across, under or parallel to District owned facilities conforms to accepted engineering practice for the separation of systems, protection of existing utilities and the continued ability of the District to access and maintain district facilities.

A RIGHT OF WAY PERMIT, as issued by the Coral Springs Improvement District, authorizes the installation of buried or aerial utilities, irrigation lines, or ground cover within District rights of way.

The issuance of permits can be expedited if contact with the District is made prior to the submission of a formal application. The design water surface elevations and other pertinent data will be furnished upon request for any desired location. Applications which are based on the correct design data from the District are processed with a minimum of delay.

Hereafter, Works is defined to include (but not limited to) all water management facilities, lakes, canals, outfall structures, outfall pipes, exfiltration trenches, easements, District rights of way and canal interconnect piping.

Duration

Construction of works authorized by Permits must commence within 2 years of permit issuance and must be completed within 12 months of commencement. Expiring/expired permits may be extended by additional board action.

Emergency Permit

A letter of authorization for emergency use of the District's facilities or for permission to initiate construction of a SWM system may be obtained prior to the issuance of a permit if the delay of normal permit procedure would cause extreme hardship or endanger lives or property.

Modifications or Relocations to Works Under Permit

Changes occurring before the system has been certified by the engineer and placed into operation which do not affect the amount of storage, water quality treatment, or increasing the amount of building or impervious coverage may be made after submitting a letter and supporting documents (3 sets signed and sealed and 1 PDF) detailing the requested changes to the District. Changes affecting the amount of storage, amount of water quality treatment or

changes to the building or impervious coverage may require approval of the Board of Supervisors. Modifications occurring after a system has been placed into operation must follow the procedure required for new permits.

Transfer of a Permit

In general, permits run with the land and are automatically transferred to the new owner. Changes to procedure may be requested in writing.

Application for Permit

Permit applications may be submitted in person, electronically (initial submittals only) or delivered to:

Coral Spring Improvement District

c/o Severn Trent Services

210 N. University Drive, Suite 702

Coral Springs, FL 33071

Application Requirements

Applications are to include the following:

Initial Submittal

An initial submittal should include one paper and one PDF set of plans (scalable), calculations, details, specifications prepared by a civil engineer, along with geotechnical evaluations, reports, survey (referencing NAVD 1988), site plan, landscape plan, floor plan, and any other supporting documents. Permit application fees shall be in accordance with the current District fee schedule. In addition, the applicant agrees to pay the costs of outside District consulting services (including but not limited to engineering services, accounting services and legal services) at the rates charged by such consultants and any other costs and expenses incurred by the District in order to review applications.

Final Submittal

For consideration by the Board of Supervisors the applicant must address all comments and provide at a minimum PDF's of all submitted documents along with 4 sets of signed and sealed engineering plans, calculations, reports, surveys, etc.

Instructions for preparing an application are as follows:

Item (1) - Simply state what use is intended, i.e., bridge crossing, culvert connection, beautification of right-of-way, surface water management system construction, etc.

Item (2) - Self-explanatory (information can be obtained from your deed or tax notice).

Item (3) - Refers to work involved (i.e., District Canal Name).

Item (4) - The person or entity responsible for maintenance of facilities after construction is completed.

Item (5) - The applicant may be an agent of the owner (i.e., contractor or engineer) to whom correspondence will be directed during the application process. A letter of authorization from the owner may be required by the District in such case.

Item (6) - Of minor importance when not affecting water control. If a bridge is to provide access to owner's property – so state. This information must be completed for culvert and/or pump installations giving capacities as well as acreage being drained or irrigated.

Preparation of the Drawing or Plans

Four (4) sets of supporting documents are required, one set will be returned with the approved permit. Drawings should be to scale and adequately dimensioned. Drawings need to show existing conditions such as structures, elevations, trees, underground and overhead utilities, along with the proposed work in sufficient detail to verify compliance with permit criteria. Information typically provided includes: location map, paving grading and drainage plan, details and specifications, water quality and storage calculations.

For activities within the District rights-of-way, easements, or crossing District owned water, sewer, or drainage components, a plan and cross section or elevation view of the proposed construction relative to District owned facilities must be shown. Elevations of key components shall be expressed in North American Vertical Datum of 1988 (NAVD). Minimum clearances, cover, and separation between components must also be indicated on the drawings. Projects abutting District owned facilities are required to provide cross sections at 50 ft. intervals.

Standard Conditions

All permits issued will contain the following standard conditions

1. In the event the District wishes to obtain the ingress or egress to its property, easement or right of way affected by the permit issued pursuant to this application for any lawful District purpose, including but not limited to maintenance of any lake, canal or related water management infrastructure, the removal, demolition and reconstruction, if any, of the proposed work or structure permitted hereunder shall be at the sole expense of the owner or the owner's successors or assigns.
2. Permittee, by acceptance of the permit, covenants and agrees that the District, District Managers, District consultants and its successors and assigns shall be promptly indemnified, defended, protected, exonerated, and saved harmless by the Permittee from and against all expenses, liabilities, claims, demands, and proceedings incurred by or imposed on said District in connection with any claim, proceeding, demand, administrative hearing, suit, appellate proceeding, or other activity; including

unfounded or "nuisance" claims, in which the District may become involved, or any settlement thereof, arising out of any operations under this permit, including use of canal water for irrigation purposes, damage to landscaping, paint damage to automobiles, buildings, or other structures, and any property damage or personal injuries, fatal or non-fatal, of any kind or character.

3. Permittee agrees that no debris will be placed into the waterways of the District.

For this purpose the Permittee has submitted a check in the amount of Two-Thousand Five Hundred Dollars (\$2,500.00) which Permittee agrees to forfeit if debris is found to have been placed into the District's waterways; said determination to be at the sole discretion of the District and is acknowledged by Permittee to represent both actual and punitive damages for violating the provisions of this permit and, further, the provisions of Chapter 298, Florida Statutes.

If construction of the facilities called for in this permit have not been completed, an additional Two Thousand Five Hundred Dollars (\$2,500.00) will be submitted by Permittee to cover future occurrences of discharging builder debris into the District's waterways.

4. Permittee agrees to maintain the system in accordance with permit documents and to recertify the function, condition and operation of the system according to the District's schedule and submit "Storm water Inspection Reports" and shall comply with all re-inspection procedures required under the District's policies.
5. Permittee agrees to maintain adjacent canal/lake banks in accordance with the specified cross section, maintain permitted vegetation to the water's edge and keep the canal bank free and clear of trash and debris.
6. Permittee agrees to correct any shoaling or erosion of district facilities resulting from the installation of components authorized by the permit.
7. Permittee agrees to remove vegetation, other than grass or approved ground cover within 20 ft. of the edge of water or within adjacent district rights of way (and process permits for tree removal through the City of Coral Springs). The removal, mitigation, and permitting shall be performed by the Permittee at their own cost.
8. Permittee agrees to Abide by the terms and conditions of the permit.
9. Permittee agrees to maintain works or structures in a good and safe condition.
10. Permittee agrees to allow inspection at any time by the District of any works or structure established upon permit.
11. Permittee agrees to prevent the discharge of debris and/or aquatic weeds into any District works.
12. Permittee agrees to maintain the water quality of all waters discharging into District works.

13. Permittee agrees to conform with any alterations of or amendments to this manual, or those imposed by the DEP, SFWMD or EPA that may be deemed necessary by the District.
14. Permittee agrees to To make any immediate changes or repairs as requested by District personnel to ensure the safe operation of the District's waterways during storm events.
15. Permittee agrees to Restore abutting lake/canal banks to the design cross section of 4 Horizontal: 1 Vertical to 2 ft. below the control elevation.
16. Upon completion of the construction specified in the permit, the Permittee shall submit to the District 3 as-built surveys and electronic media certified by a professional engineer, in a format generally compatible with the requirements of other storm water management jurisdictions.
17. Permittee acknowledges that failure to maintain the system, comply with re-certification requirements, or performing construction with District authorization may result in the restriction or elimination of storm water discharges to District facilities.
18. Permittee agrees not to occupy or make beneficial use of the permit property until the improvements and conditions of approval identified in the permit are completed, certified, and released by the District.

Permit Requirements

Right-of-Way Permits

Bridge Crossings

Bridges constructed over the canals within the boundaries of the District require crossings having a 15-foot horizontal clearance between center bents, a minimum vertical clearance of 6 feet between low member and normal water elevation or 1 foot above the 100-year, 3-day storm elevation, whichever is greater (See Table I). The District reserves the right to determine which of the two elevations will be the control in establishment of the required vertical clearance.

Bents and bridge piers are required to be so located that they will not catch debris or interfere with the normal flow of water. Pilings should be placed parallel to the major axis of the canal and protected in order that future cleanout under the bridge can be accomplished. Details of fencing at crossings, headwalls, wing walls and other special items will vary from site to site depending on soil conditions and other factors.

Culvert Connections

The connection to District canals or levees is usually accomplished by means of culverts. Culverts size, diameter and type vary with the requirements for each connection. The diameter of the culvert must be such that the purpose of the installation will be adequately and properly served under maximum conditions. The culvert crown shall be 2 feet below basin control elevation (See Table II) wherever possible.

All trenches within the District right-of-way shall be backfilled and compacted to a dry density equal to 100% of the maximum density as determined by AASHTO T-99.

Silt screens or turbidity curtains shall be installed upstream and downstream of the proposed construction. Screens or curtains shall remain in place until construction is complete and turbidity levels have returned to normal.

Culvert Crossings

Culvert crossings shall be designed to minimize head losses. It is the applicant's responsibility to demonstrate that the head loss for the proposed culvert does not exceed that of the canal section being replaced. Culvert crossing shall not decrease the available storage at either the 10 or 100 year flood elevations.

Drainage Pump Connections

To ensure equitable allocation of storage and discharge capacity the use of pumps is prohibited.

Open Channel Connections

Open channel connections to District canals will be considered on a case by case basis. Overland flow directly to District facilities is prohibited.

Any provisions needed to protect the District channel and berm from erosion or shoaling shall be made at the time of excavation.

Under no conditions, directly or indirectly, will the discharging of aquatic weeds, raw sewage, garbage or debris of any nature into a District channel be tolerated. Such action will constitute grounds for the cancellation of the permit. Any discharge of water with a quality less than any State agency water quality standard will constitute grounds for the cancellation of the permit.

Right-of-Way Beautification/Grading

Grass and approved ground covers are permitted within the District's right-of-way and easement, with the understanding that such improvements are made at the risk and peril of the permittee and are subject to prompt removal by permittee at his expense upon notification by the District. Should the owner/permittee fail to remove such improvements, the District may remove or otherwise destroy the same without liability or responsibility.

Altering the grade or slope of any canal to other than the specified section will be considered on a case by case basis. Any deviation from the standard section must be supported by an engineering justification.

A typical minimum section is shown in Exhibit 4.

Utility Crossing

Overhead Crossings

Overhead power and telephone line crossings must have a minimum vertical clearance of forty (40) feet between low wire elevation and elevation of the berm or natural ground, whichever is greater.

When such installations cross District levees, a minimum clearance of 25 feet between low wire elevation and top of the levee will be required.

Overwater Crossings

When such construction is supported on pilings, the required clearance (both horizontal and vertical) for bridge crossings are in effect.

Should installation be made adjacent to an existing bridge, piling will be aligned with the bridge piling, so that a minimum of obstruction to the flow of water by accumulation of debris is assured.

Subaqueous Crossings

Subaqueous crossings of any nature, such as cables, water or fuel (gas) lines, etc., shall be laid to a predetermined depth and cross-section that will provide for two (2) foot cover below the design bottom elevation. This depth and section will be furnished by the District for each crossing. Should conditions warrant the laying of a cable on the bottom of the channel, such is done so at the permittee's risk.

Below Grade Crossings

Underground crossings of District owned facilities (water, sewer, drainage culverts, rights of way) by any other utility, company or entity shall provide sufficient clearance to ensure the safe and continued operation and future maintenance of District facilities. The minimum acceptable clearances between District facilities and any other installation shall be 5 ft. horizontal and 18 inches vertical. This clearance shall be depicted on plans provided to the District a minimum of 4 weeks prior to the start of construction. The actual clearance shall be confirmed and depicted on as-built drawings prepared by a registered surveyor and provided to the District.

Seawalls, Bulkheads

In lieu of providing a 4:1 slope to 2 ft. below the water table, the applicant may construct sea walls or bulkheads, provided compensation for lost littoral areas is made. Each application will be judged on its merits and must meet the requirements of the specific location.

Fences

Any fence within the District's right of way must be approved by the Board of Supervisors and the property owner shall enter into an encroachment agreement with the District. Any approved fence shall comply with the City of Coral Springs fence ordinance.

Irrigation Withdrawal Facilities

The use of ground or surface water is regulated by the South Florida Water Management District. The Coral Springs Improvement District only regulates the installation of lines within District rights of way and easements. Irrigation supply lines within District rights of way are required to have a minimum 2 ft. cover and shall have an inlet at least 6 inches below the basin control elevation. A copy of the SFWMD water use permit must be provided before water withdrawals are commenced. Pumps are not allowed to be located on District rights-of-way.

The permittee shall notify the District at least 60 days prior to intended operation of irrigation facilities. The following information shall be supplied to the District:

1. Permittee's name and address
2. Date withdrawal will begin
3. Source of supply
4. Estimated quantity to be withdrawn per day
5. Land use being served
6. Location of points of withdrawal
7. Number and size of pumps
8. A Copy of the SFWMD water use permit.

Applicants must first apply to the SFWMD for a Consumptive Use Permit under FAC Chapter 40E-2.

Surface Water Management Permits

The following criteria is to be used for design of water management facilities for projects within the Coral Springs Improvement District. Surface Water Management permit applications will be reviewed according to these criteria. Permits from the Coral Springs Improvement District for projects less than 40 acres are issued in lieu of an Environmental Resource Permit under Chapter 62-330, F.A.C. from the South Florida Water Management District unless otherwise instructed by the District. All of the criteria stated in Chapter 62-330 must be complied with as part of this permitting process.

Projects larger than 40 acres require approval of BOTH the Coral Springs Improvement District and the South Florida Water Management District (SFWMD).

The District review and permitting process for projects does not obviate the need for each project to obtain approval from the City of Coral Springs Engineering Department or any other applicable regulatory agencies. The District's review will be limited to the water management aspects of each project.

All criteria outlined in Chapter 62-330 and the Rules of the South Florida Water Management District shall be enforced as part of the District permit process.

The Coral Springs Improvement District operates its surface water management system under SFWMD Permit No. 06-00119-S issued August 11, 1977.

Storm Water Management Criteria

Storage, water quality and quantity calculations supporting the 1977 SFWMD drainage permit accounted for future development by assuming limits on impervious areas based on the future land use designation. The maximum percent impervious established in the 1977 calculations area as follows:

Parks	2%
Public Facilities	80%
Commercial Uses	75%
High Density Residential	75%
Medium Density Residential	40%, and
Low Density Residential	25%

Individual projects may exceed the impervious areas listed above but will need to provide additional water quality treatment and quantity attenuation to offset the additional impacts.

General Requirements

All projects within the Coral Springs Improvement District are required to comply with the standards for water quality treatment and storage of storm water runoff, regardless of their ownership, age, or use. All storm water management systems are required to incorporate maintenance sumps on structures or other mechanisms to remove sediments and mechanisms for the removal of hydrocarbons and lighter constituents in storm water prior to discharge off-site or to district facilities. Systems located within designated well field protection zones must comply with the additional measures established by Broward County. All projects shall be designed so that discharges will meet State water quality standards, as set forth in Florida Administrative Code.

Allowable Discharge

The SFWMD permit allows the District to pump 150,000 gallons per minute per basin to the C-14 Canal. Individual parcels are not required to restrict discharge to CSID canals except where necessary to provide water quality treatment and for those projects unable to comply with required surface storage.

Except for systems utilizing exfiltration trench (in which case no discharge below the top of pipe is permitted), discharge control structures for individual projects (when required for retention/detention) shall provide a mechanism for returning the on-site water surface elevation to the basin control elevation (See Table II). This mechanism shall consist of one 3" diameter circular bleeder located one foot below the control elevation, unless calculations demonstrate a larger bleeder is required to restore the water table within 72 hours.

Discharge structures must satisfy the requirements of this manual pertaining to right-of-way permits. Before discharging to District facilities, storm water shall be directed through a pollution retardant structure.

Additional Requirements

State Standards

Projects shall be designed so that discharges will meet State water quality standards, as set forth in Florida Administrative Code.

Retention/Detention Criteria

Retention and/or detention in the overall system, including swales, lakes, canals, greenways, etc., shall be provided for as required by the current SFWMD "Basis of Review".

Pretreatment criteria

Projects within a Well Field Protection Zone 3 and having greater than 40% impervious area are required to provide ½" of dry pretreatment along. Projects other than single family

developments are also required to provide 1/2" of dry pretreatment regardless of their location.

Underground Exfiltration Systems

If an underground exfiltration system is to be used towards meeting retention/detention requirements, refer to SFWMD "Basis of Review" Vol. IV, current edition. The first hour of storage and exfiltration from a trench may be used towards meeting the storage requirements for the 10 year storm.

Construction

Discharge structures

All design discharges shall be made through structural discharge facilities.

Discharge structures shall include a "baffle" system to encourage discharge from the center of the water column rather than the top or bottom.

The control structure overflow design shall be based on tail water control using the 10-year design elevations listed in Exhibit 2.

Control Devices/Bleed-Down Mechanisms for Detention Systems

Gravity control devices shall normally be sized based on a design discharge 0.5 inch of the detention volume in one day. Bleed down devices shall consist of one 3" diameter circular bleeder, unless calculations demonstrate a different size is needed to restore the on-site water table to the basin control elevation within 72 hours. The invert of the bleed down device shall be set one foot below the basin control elevation. Systems utilizing exfiltration trench are prohibited from discharging at an elevation below the crown of the pipe.

Dry Retention/Detention areas

Dry retention/detention areas shall have mechanisms for returning the groundwater level in the area to the control elevation.

The design of dry retention/detention areas shall incorporate considerations for regular maintenance and vegetation harvesting procedures.

Dry systems are designed with the lowest elevation not lower than one foot above the basin control elevation.

Exfiltration systems

Pipe diameter – 15 inches minimum.

Trench width – 3 foot minimum.

Rock in trench must be fully enclosed in filter material

Maintenance sumps of at least 12 inches are required.

To qualify as a dry system, the invert of all slotted or perforated pipes must be at or above the basin control elevation.

Exfiltration trenches within Well Field Protection Zones must also comply with the criteria for well fields established by Broward County.

Water Bodies – (See Exhibit 2)

New water bodies shall comply with the more stringent of 1) dimensional criteria established by the SFWMD in their “Basis of Review” Vol. IV or 2) dimensions shown in Exhibit 4.

Existing water bodies may not be filled or reduced in size or capacity without providing compensating storage elsewhere in the district.

Impervious Areas

Runoff shall be discharged from impervious surfaces through retention areas, detention devices, filtering and cleansing devices, and shall be subjected to some type of Best Management Practice (BMP) prior to discharge from the project site. Projects which include substantial paved areas, such as shopping centers, large highway intersections with frequent stopped traffic and high density developments shall incorporate provisions for the removal of oil, grease and sediment from storm water discharges.

Design Information

Surface Storage

Individual projects must demonstrate that surface storage is provided in accordance with Exhibit 2, Surface Water Management Data.

Storage requirements at the elevations specified are derived from the existing SFWMD permitted stage versus storage relationships for each respective drainage basin. Each project must provide its prorated share of the overall storage for each basin to ensure that flood plain encroachment will not occur.

Projects involving the expansion or redevelopment of existing sites may comply with the standard criteria or the section titled “REDEVELOPMENT CRITERIA”

Any circumstances which might mitigate adverse impacts to District facilities may be submitted by the applicant for consideration by the District.

Minimum Road Crown and Finished Floor Elevations

Road crown elevations will be set no lower than the corresponding 10-year elevations indicated in Exhibit 2. Finished floor elevations will be set no lower than the elevations indicated in Exhibit 2. Please note, the City of Coral Springs may require finished floor elevations higher than those indicated in Exhibit 2.

Basic Criteria - East Basin

The East Basin of the Coral Springs Improvement District encompasses approximately 2391 AC. The system of lakes, canals and pumps is not permitted or operated to provide water quality treatment. Each project is required to provide water quality treatment consistent with the requirements of the South Florida Water Management District and provide District specified storage. Storage requirements are based on the gross area of each parcel. Redevelopment projects which are unable to fully comply with these requirements may elect to follow the compliance schedule listed in Redevelopment Criteria.

Water Quality Treatment

All projects are required to provide water quality treatment in accordance with SFWMD regulations. For ease of reference the requirements as of 5/1/2015 are repeated here.

- Treatment shall be provided for the greater of:
 - o 1" times the site area or
 - o The project's imperviousness multiplied by 2 1/2" over the entire site (less water bodies). Imperviousness is the proportion of impervious areas (excluding building footprint) to the site area less the building footprint.
- Water quality treatment volumes represent wet retention volumes. If dry retention is used, then 75% of the computed volume must be provided. If dry detention is used then 50% of the volume must be provided. These credits may not be applied to exfiltration trench systems.
- All projects other than single family residential projects are required to provide 1/2" of dry pretreatment. This dry pretreatment may be used towards meeting the overall water quality treatment requirements.
- Projects exceeding the impervious areas established in the 1977 Permit need to compute and provide additional water quality treatment.
- Prior to off-site discharge, all runoff shall pass through a pollution control structure which is designed to discharge from the center of the water column and incorporate a pollution retardant baffle.

Flood Plain Storage

Each project in the East Basin is required to provide

- For the 10 year storm 0.1 AF/AC of storage must be provided below elevation 9.3' NAVD (10.8' NGVD). Water quality treatment volumes below elevation 9.3' NAVD may be used towards meeting this requirement. Surface storage, exfiltration trench (1 hour treatment volume), storm chambers or a combination of these measures may be used to achieve the required storage.

- For the 100 year storm 0.81 AF/AC of storage must be provided below an elevation of 10.1' NAVD (11.6' NGVD). Unlike storage for the 10 year storm, this storage may not take into account that provided by exfiltration trench.
- Projects which exceed the impervious areas used to obtain permit coverage (and listed previously) must provide additional storage to offset the additional runoff generated.

In the event a project is not able to provide the required storage at the specified elevations a combination of perimeter berms, coupled with restricted discharge to district facilities may be considered.

Basic Criteria - West Basin

The West Basin of the Coral Springs Improvement District encompasses approximately 2395 AC of lakes, canals, residential, commercial and civic uses. Unlike the East Basin, the West Basin was designed and permitted to provide water quality treatment for the first inch of runoff. Dry pretreatment or water quality treatment requirements in excess of 1" must be provided by each project as applicable. Surface storage requirements are based on the gross area of each project and must be provided on-site.

Water Quality Treatment

Projects must provide any required water quality treatment in excess of 1". The exact quantity is determined based on SFWMD regulations. For ease of reference the requirements as of 5/1/2015 are repeated here.

- Treatment shall be provided for the greater of:
 - 1" times the site area or
 - The project's impervious multiplied by 2 1/2" over the entire site (less water bodies). Imperviousness is computed as the proportion of (impervious area less building footprint) to the site area less the building footprint.
 - These volumes represent wet retention volumes. If dry retention is used, then 75% of the computed volume must be provided. If dry detention is used then 50% of the volume must be provided. These credits may not be applied to exfiltration trench systems.
- All projects other than single family residential projects are required to provide ½" of dry pretreatment. This dry pretreatment may be used towards meeting the overall water quality treatment requirements.
- Projects exceeding the impervious areas established in the 1977 Permit need to compute and provide additional water quality treatment.
- Prior to off-site discharge, all runoff shall pass through a pollution control structure which is designed to discharge from the center of the water column and incorporate a pollution retardant baffle.

Flood Plain Storage

Each project in the West Basin is required to provide floodplain storage based on the gross area of each project as follows.

- For the 10 year storm 0.05 AF/AC of storage must be provided below elevation 8.5' NAVD (10.0' NGVD). Water quality treatment volumes below elevation 8.5'

NAVD may be used towards meeting this requirement. This volume may consist of surface storage, exfiltration trench (1 hour treatment volume), storm chambers or a combination.

- For the 100 year storm 0.31 AF/AC of storage must be provided below an elevation of 9.6' NAVD (11.1' NGVD). This storage may not include that volume provided by exfiltration trench.
- Projects which exceed the impervious areas used to obtain permit coverage (and listed previously) must provide additional storage to offset the additional runoff generated.

In the event a project is not able to provide the required storage at the specified elevations a combination of perimeter berms, coupled with restricted discharge to district facilities may be considered.

Redevelopment Criteria for Commercial, Institutional, and Multifamily Projects

The storm water management criteria apply to all properties. Existing properties which do not meet these standards may elect to submit a compliance plan depicting the phased implementation of storm water management components (see following schedule) along with a plan for the ultimate compliance with District Criteria.

Table 1 - Construction without Building Expansion

Category	Applicability	Requirements
1.	Building permits associated with the ongoing maintenance (such as re-roofing, AC replacement or seal coating and restriping) and not involving interior modifications of existing buildings which utilize privately owned drainage systems.	Demonstrate compliance with 5 year recertification requirements Provide PRB prior to off-site discharge
2.	Interior modifications or tenant improvements affecting less than 25% of the gross floor area (GFA), or installations to comply with ADA requirements provided the total number of parking spaces is not increased.	Items required for Category 1 plus: Provide water quality treatment Surface storage for 10 year storm Increase surface storage for 100 year storm by 0.1 AF/AC (up to basin requirements) Demonstrate functioning operating entity (per Broward County Code Chapter 27)
3.	Tenant improvements or interior modifications to building affecting less than 50% of GFA or Modification (no net increase) of parking areas affecting less than 25% of existing paving.	Items required in Categories 1 and 2 plus: Provide easements: to adjacent canal, over public water and sewer lines, cross drainage Removal of trees and obstacles along canal bank adjacent to project Increase surface storage by 0.2 AF/AC (up to basin requirements)
4.	Tenant improvements or interior modifications affecting less than 75% of GFA or Modifications (no net increase) of parking areas affecting less than 50% of existing paving.	Items required in Categories 1 through 3 plus: Increase surface storage by 0.4 AF/AC (for a total of 0.6 AF/AC additional up to the basin required amount)
5.	Tenant improvements or interior modifications affecting more than of 75% of existing space (i.e. Gutting a building) or modifications to parking areas comprising more than 50% of the existing paving	Items required in Categories 1 through 4 plus: Full compliance with water quality and quantity attenuation requirements

In addition to the requirements above, projects involving the construction of additional impervious areas or building expansion are required to: meet the requirements as set forth in the redevelopment schedule, provide a plan for the ultimate, full compliance with district regulations and demonstrate the current proposed expansion increases (in addition to redevelopment criteria above) compliance as follows.

$$\% \text{ addit. compliance} = \left(\frac{\text{area of exterior improvements}}{\text{site area} - \text{building footprint}} + \frac{\text{increased building area}}{\text{existing building footprint}} \right)$$

Road Rights of Way

The drainage calculations which served as the basis for the underlying SFWMD permit did not separate out, exclude or otherwise exempt road rights of way from complying with the requirements for water quality treatment or floodplain storage.

Road rights of way represent a significant source of water quality degradation. Constituents in storm water runoff from roads include: Heavy metals, hydrocarbons, particulates, nutrients, litter and debris. To reduce the levels of these pollutants entering the District facilities and improve floodplain storage, all roadways shall:

- be subject to the periodic maintenance and recertification requirements for storm water management systems
- Provide ½" of dry pretreatment
- provide PRB prior to discharge
- provide water quality treatment consistent with the requirements of each basin
- provide for the removal of sediment, trash, and debris prior to discharge
- provide basin specified floodplain storage
- Drainage modifications to comply with district requirements are subject to permit review by the Coral Springs Improvement District.

Recognizing that not all roadways currently comply with these criteria and compliance may be costly the Coral Springs Improvement District will accept the following, incremental improvements to storm water management systems serving road rights of way along with a plan for the eventual, full compliance with criteria.

Table 2 - Roadway Construction

	Nature of Road Construction	Required Storm Water Management Measures
	Maintenance such as restriping or pavement repairs along less than 100 linear feet per mile of roadway	• Provide PRB prior to offsite discharge • Demonstrate recent recertification (within 5 years) of storm water management system or provide plan for compliance with 5 year renewal requirements
	Addition of roadway lighting, installation of traffic signals,	• Provide PRB prior to offsite discharge • Demonstrate recent recertification (within 5 years) of storm water management system or provide plan for compliance with 5 year renewal requirements • Document extent of storm water management system.
	ADA improvements at intersections, installation of guardrails, safety upgrades	• Provide PRB prior to offsite discharge • Demonstrate recent recertification (within 5 years) of storm water management system or provide plan for compliance with 5 year renewal requirements • Document extent of storm water management system. • Provide dry pretreatment and water quality treatment for 200' along each leg of intersection.
	Repaving, including overlays, milling and resurfacing prior to 2025	• Provide PRB prior to off-site discharge • Provide water quality treatment (East Basin) • Provide ½" dry pretreatment (E/W) • Provide / document extent of drainage system • Document periodic maintenance and recent recertification of drainage system
	Major road construction such as alterations affecting the number of travel lanes, addition of turn lanes, re-alignment increases in impervious area or Repaving, including overlays, milling and resurfacing after Jan 1 2015	• Provide PRB prior to off-site discharge. • Provide ½" dry pretreatment (E/W) • Provide/demonstrate water quality treatment (East basin only) • Provide/demonstrate compliance with basin storage requirements (E/W) • Demonstrate/document periodic maintenance of system and current recertification.

Supporting Information

The following information may be used when additional information or analysis is required.

Rainfall

Design rainfall amounts (24 hour) for the Coral Springs Improvement District are:

10-Year	100-Year
9.5 (inches)	14.2 (inches)

Distribution follows standard SFWMD rainfall distributions

Soil Storage

Ground Storage – the Soil Conservation Service/SFWMD method shall be used for design: Ground storage values repeated here are only to be used to compute extra runoff for additional impervious areas. Soil storage is used only in the computation of excess runoff, when a project exceeds the allowed impervious area.

Depth to Water Table	Cumulative Water Storage
1'	0.5"
2'	1.9"
3'	5.0"
4'	8.2"

Soil storage beneath impervious surfaces cannot be considered for design nor can ground storage be considered below 4-foot depths.

Infiltration and Percolation

Ground surface – Ground surface infiltration will be reviewed on the basis of commonly accepted procedures such as those of Soil Conservation Service (see U.S. Department of Agriculture, Soil Conservation Service Technical Paper No. 149, "A Method for Estimating Volume and Rate of Runoff in Small Watersheds" (1973), and U. S. Department of Agriculture, Soil Conservation Service Technical Release No. 55, "Urban Hydrology for Small Watersheds" (1975); or Rational Method (see Florida State Road Department, "Drainage Manual" (2nd Edition, rev. 1978)); or standard Civil Engineering textbooks.

Subsurface – subsurface exfiltration will be reviewed only on the basis of representative or actual test data submitted by the Applicant. Tests shall be consistent as to elevation, location, soils, etc. with the system design to which the test data will be applied.

Runoff

When considering additional impacts, the following methods of quantifying runoff may be used.

Rainfall minus losses and storage.

Soil conservation Service (see U.S. Department of Agriculture, Soil Conservation Service, "Natural Engineering Handbook, Section 4, Hydrology" – 1972), with extra attention to hydrologic accounting of water table conditions.

Rational method, for systems serving projects of less than 10 acres total land area (see Florida State Department of Transportation, "Drainage Manual" (2nd Edition, revised 1978); or standard Civil Engineering texts.

Datum

In order to be consistent with nearby jurisdictions the Coral Springs Improvement District in converting from using NGVD (National Geodetic Vertical Datum) to NAVD (North American Vertical Datum. To convert elevation NGVD to NAVD the following approximation is acceptable.

Elevation (in Ft) NAVD = Elevation (in Ft) NGVD -1.5 ft.

Exhibit 1 - Bridge Crossing Criteria

Bridge Crossing Criteria				
	Basin	Basin Control Elevation	100-Year Flood Elevation	Minimum Low Chord Elevation
CSID				
East		5.0'	10.1'	11.1'
West		5.0'	9.6'	11.0
Note: 1. All elevations referenced to NAVD. An acceptable conversion equation is Elev. NAVD + 1.5 ft. = Elev. in NGVD. 2. Basin Control Elevations may vary Seasonally.				

Exhibit 2 - Surface Water Management Data

EXHIBIT 2 Surface Water Management Data for CSID						
Drainage Basin	Basin Control Elevation	10-Year Flood Elevation	100-Year Flood Elevation	Minimum Finished Floor Elevation	Required Minimum Stage @ 10-Year Elevation (AF/ac)*	Required Minimum Stage @ 100-Year Elevation (AF/ac)*
CSID						
East Basin	5.0'	9.3'	10.1'	10.5'	0.10	0.81
West Basin	5.0'	8.5'	9.6'	10.0'	0.05	0.31
*(AF/ac) Storage required per acre of Project Area. For projects exceeding assumed impervious area, additional storage will be required.						
Note: 1. All elevations referenced to NAVD 2. Basin Control Elevations may vary Seasonally.						

Exhibit 3 - Application for Permit

APPLICATION FOR PERMIT

Board of Supervisors Coral Springs Improvement District 10300 NW 11 th Manor Coral Springs, FL 33071		Permit Type <input style="width: 20px; height: 20px; margin-right: 10px;" type="checkbox"/> Right of Way <input style="width: 20px; height: 20px; margin-right: 10px;" type="checkbox"/> Surface Water Management <input style="width: 20px; height: 20px; margin-right: 10px;" type="checkbox"/> General
--	--	--

1.	PROPOSED USE OF DISTRICT FACILITY: _____ _____
2.	LOCATION OF WORK: _____ _____ _____ Subdivision _____ Section: _____ Lot No. _____ Township: _____ Block No. _____ Range: _____
3.	DISTRICT WORKS INVOLVED IN PROPOSED CONSTRUCTION OR USE: _____ _____
4.	NAME, ADDRESS, PHONE AND FAX OF OWNER OF PROPOSED WORK OR STRUCTURE: _____ _____ _____
5.	NAME, ADDRESS, PHONE AND FAX OF APPLICANT OTHER THAN OWNER (If any): _____ _____ _____
6.	AREA PROPOSED TO BE SERVED: (Give property description sufficient for identification, _____ _____
7.	This application, including sketches, drawings or plans and specifications attached, contains a full and complete description of the work proposed or use desired of the above described facilities of the District and for which permit is herewith applied. It shall be part of any permit that may be issued. It is agreed that all work or the use of the District's facilities involved will be in accordance with the permit to be granted and with the Permit Criteria Manual heretofore adopted by the District, which have been examined and are understood by the applicant and as the same may be hereafter from time to time amended, changed or revised and which (it is further understood) shall be incorporated in reference as a part of any permit which may be granted.

Standard Conditions ARE AS FOLLOWS:

1. In the event the DISTRICT wishes to obtain the ingress or egress to its property, easement or right of way affected by the permit issued pursuant to this application for any lawful District purpose, including but not limited to maintenance of any lake, canal or related water management infrastructure, the removal, demolition and reconstruction, if any, of the proposed work or structure permitted hereunder shall be at the sole expense of the owner or the owner's successors or assigns.
2. Permittee, by acceptance of the permit, covenants and agrees that the DISTRICT, District Managers, district consultants and its successors shall be promptly indemnified, defended, protected, exonerated, and saved harmless by the Permittee from and against all expenses, liabilities, claims, demands, and proceedings incurred by or imposed on said District in connection with any claim, proceeding, demand, administrative hearing, suit, appellate proceeding, or other activity; including unfounded or "nuisance" claims, in which the District may become involved, or any settlement thereof, arising out of any operations under this permit, including use of canal water for irrigation purposes, damage to landscaping, paint damage to automobiles, buildings, or other structures, and any property damage or personal injuries, fatal or non-fatal, of any kind or character.
3. Permittee agrees that no debris will be placed into the waterways of the District.

For this purpose the Permittee has submitted a check in the amount of Two-Thousand Five Hundred Dollars (\$2,500.00) which Permittee agrees to forfeit if debris is found to have been placed into the District's waterways; said determination to be at the sole discretion of the District and is acknowledged by Permittee to represent both actual and punitive damages for violating the provisions of this permit and, further, the provisions of Chapter 298, Florida Statutes.

If construction of the facilities called for in this permit have not been completed, an additional Two Thousand Five Hundred Dollars (\$2,500.00) will be submitted by Permittee to cover future occurrences of discharging builder debris into the District's waterways.

4. Applicant agrees to maintain the system in accordance with permit documents and to recertify the function, condition and operation of the system according to the District's schedule and submit "Storm water Inspection Reports" and shall comply with all re-inspection procedures required under the District's policies.
5. Applicant agrees to maintain adjacent canal/lake banks in accordance with the specified cross section, maintain permitted vegetation to the water's edge and keep the canal and canal bank free and clear of trash and debris.
6. Permittee agrees to correct any shoaling or erosion of district facilities resulting from the installation or operation of components authorized by the permit.
7. Applicant agrees to remove (and process permits for tree removal through the City of Coral Springs) any landscaping from adjacent canal rights of way other than grass or approved ground cover. The removal, mitigation, and permitting shall be at the applicant's own cost.
8. Abide by the terms and conditions of the permit.
9. To maintain works or structures in a good and safe condition.

10. To allow inspection at any time by the District of any works or structure established by permit upon notification.
11. Prevent the discharge of debris and/or aquatic weeds into any District works.
12. To maintain the water quality of all waters discharging into District works.
13. To conform with any alterations of or amendments to this manual, or those imposed by the DEP, SFWMD or EPA that may be deemed necessary by the District.
14. To make any immediate changes or repairs as requested by District personnel to insure the safe operation of the District's waterways during storm events.
15. Restore existing lake/canal banks to the design cross section of 4 Horizontal: 1 Vertical to 2 ft. below the control elevation.
16. Upon completion of the construction specified in the permit, the applicant shall submit to the District 3 as-built surveys and electronic media certified by a professional engineer, in a format generally compatible with the requirements of other storm water management jurisdictions.
17. Acknowledges that failure to maintain the system, comply with re-certification requirements, or performing construction with District authorization may result in the restriction or elimination of storm water discharges to District facilities.
18. No beneficial use of the property is allowed until the Coral Springs Improvement District has accepted the engineer's storm water management certification and released the project.

SPECIAL CONDITIONS WILL BE ADDED WHEN APPLICABLE:

Submitted _____ day _____, 20
this _____ of _____

Company and/or Owner: _____

By:

Name
:

Title:

BOARD OF SUPERVISORS
Reviewed and approved by Board meeting held

Exhibit 4 - Typical Canal Cross Section

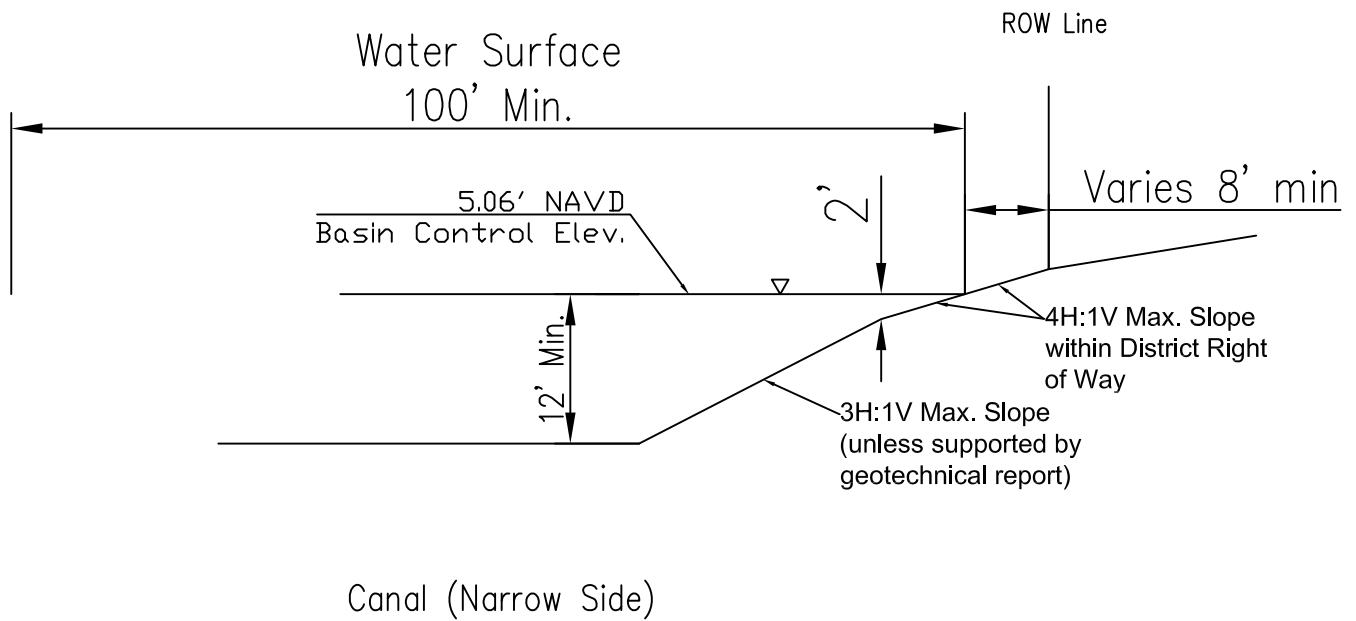
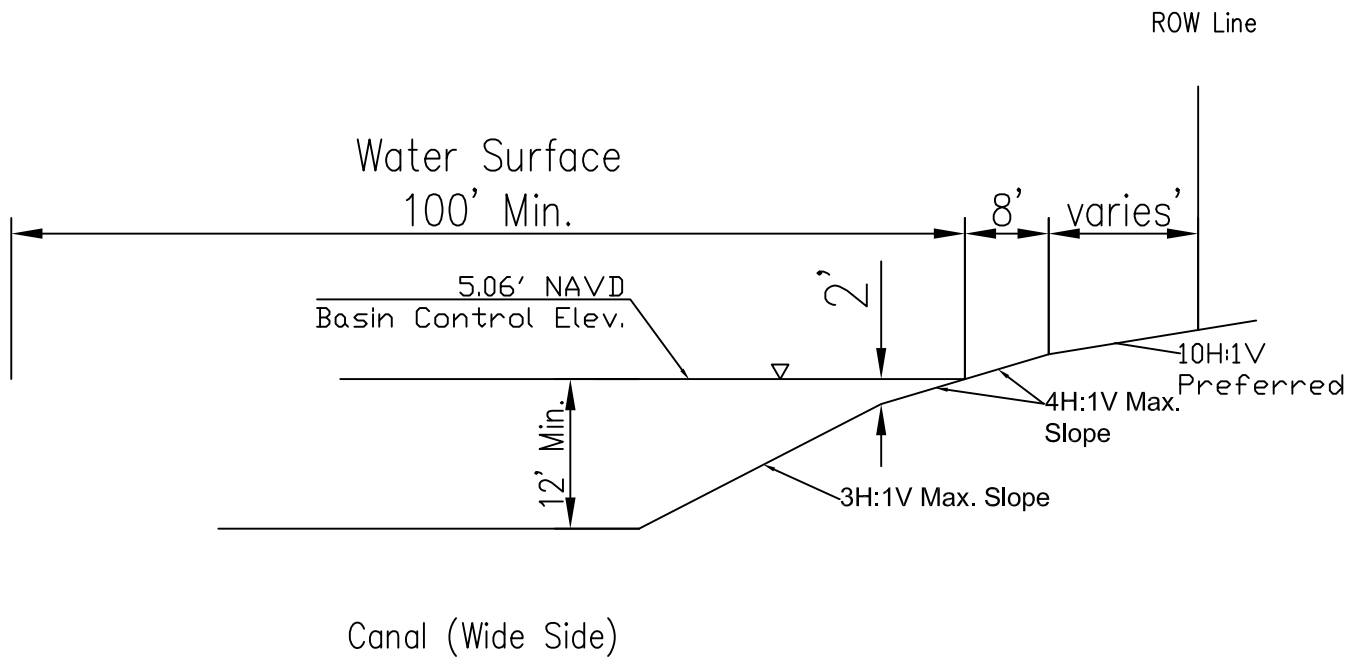
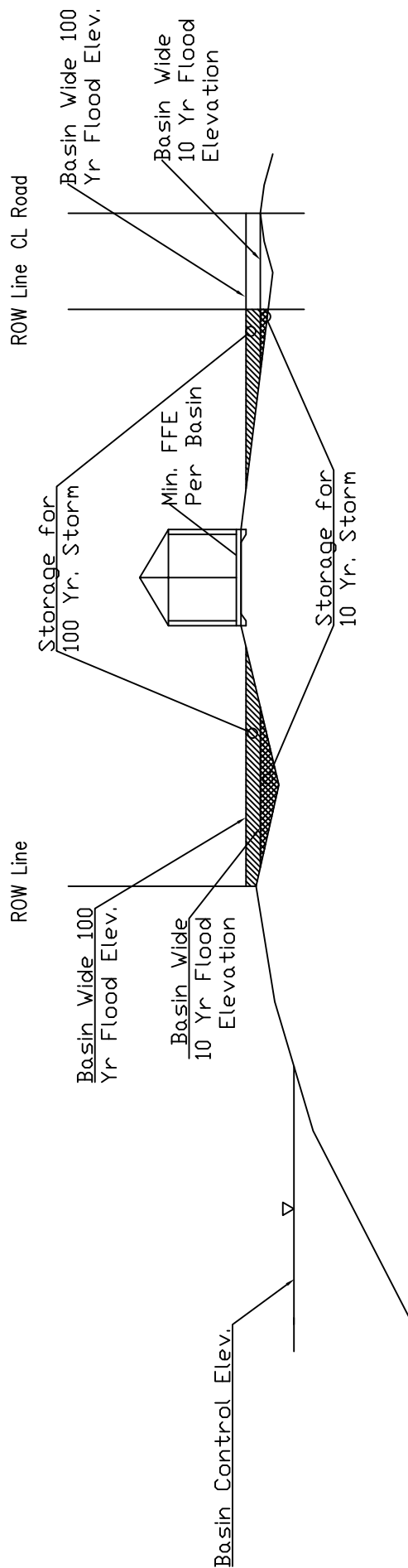


Exhibit 4
Typical Canal Cross Section

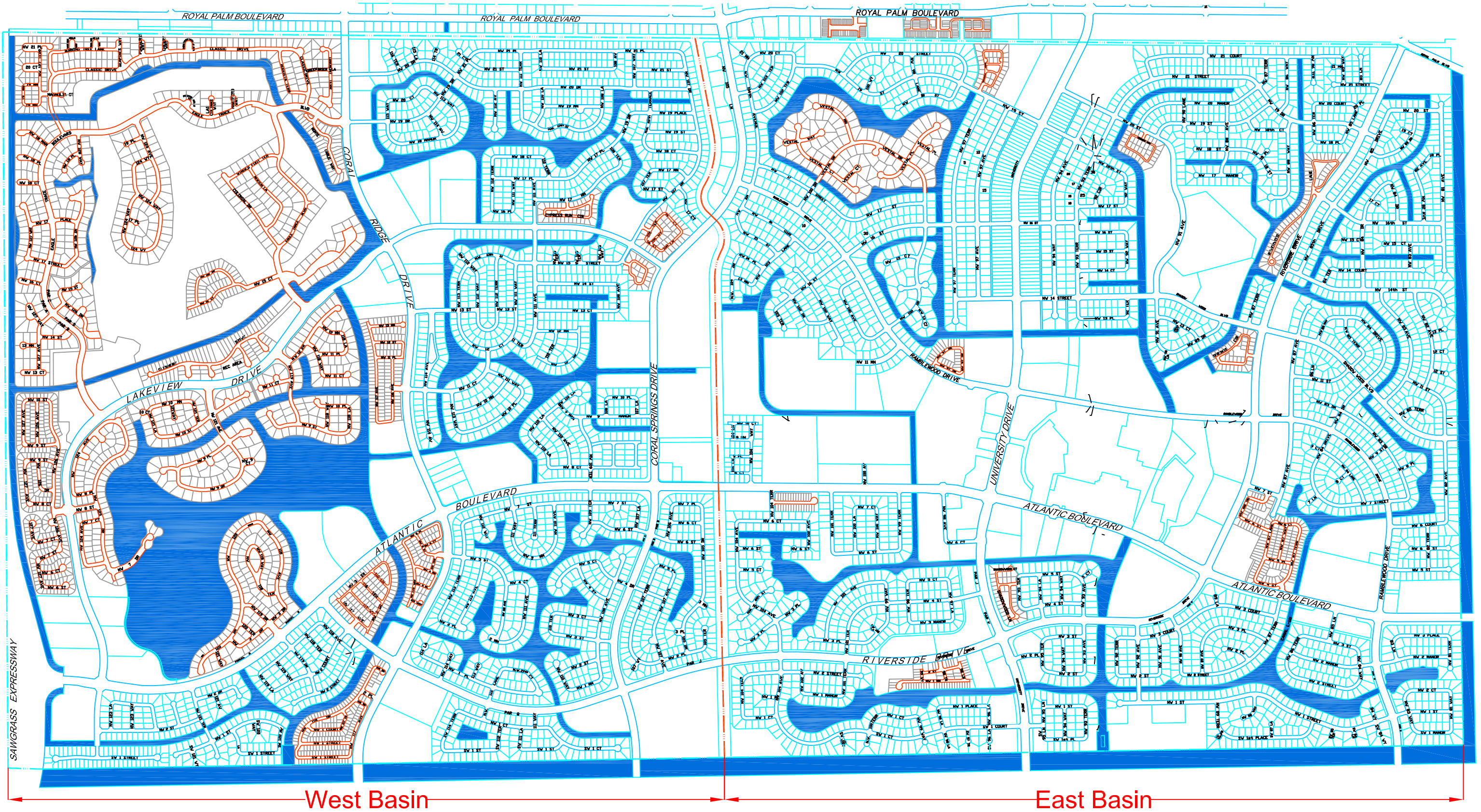
Exhibit 5 - Typical Project Cross Section



Conceptual Site Cross Section

Exhibit 5 Typical Project Cross Section

Exhibit 6 - District Map

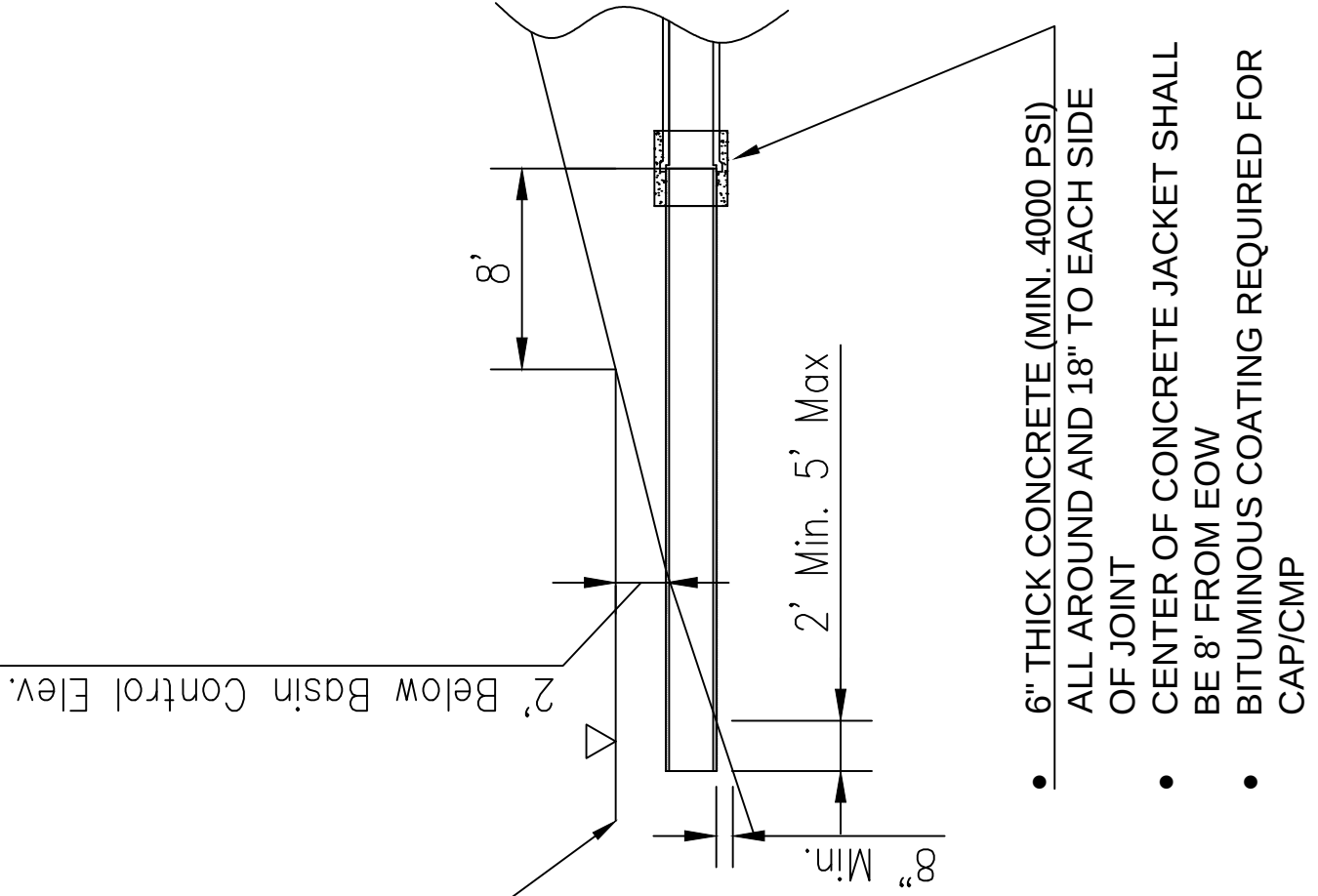


Coral Springs Improvement District

Exhibit 7 - Permit Fee Schedule

EXHIBIT 7 District Permit Schedule Fee			
PERMIT			
	Surface Water Management	Right-of-Way	Trash Bond Required
CSID	\$ 500.00	\$ 500.00	\$2,500.00
PERMIT RENEWAL			
	Surface Water Management	Right-of-Way	
CSID	\$ 200.00	N/A	
Note : Permits fee amount, represents the initial review for projects requiring District approval not to exceed Three (3) hours. In addition, the cost of outside consulting services (including but not limited to engineering services, accounting services and legal services) at the rates charged by such consultants and any other costs and expenses incurred by the District in order to review applications shall be paid by the applicant. The renewal fee needs to be submitted at the time of certification. Please note that failure to comply with this requirements may result in warnings followed by violations fee in the amount of \$100.00.			

Exhibit 8 - Storm Water Management Details



Lake / Canal Outfall Detail