



Infrastructure & Site Plan Submittal Process

**INFRASTRUCTURE AND SITE PLAN CONSTRUCTION REVIEW CHECKLIST
ENGINEERING DIVISION**

For Status of Infrastructure and Site Construction Plan Reviews, contact Engineering at 298-3182.

The average review time is 2 weeks per submittal (may be shorter or longer depending on size of project and schedules). Note: Each resubmittal is reviewed as a “new” submittal and will be reviewed in its entirety as any changes made may result in a change of denial/approval for previous reviews. Plan Review Fee(s) must be paid with each submittal.

A complete electronic submittal package is required for each review. Upon approval, 2 printed final signed & sealed sets are required.

PLEASE REVIEW ITEMS CONTAINED IN THIS CHECKLIST TO ENSURE COMPLIANCE WITH ENGINEERING AND/OR CITY OF DUNEDIN CODE REQUIREMENTS.

This list is not all-inclusive and every item may not apply to every submittal.

GENERAL INFORMATION (Required for all submittals) – 298-3175

CHECKLISTS

PROJECT SUBMITTAL

- **Infrastructure/Site construction plans**
Electronically signed/sealed and dated by a current registered engineer in the State of Florida. Upon approval, two final signed and sealed prints shall be provided to Engineering.
- **Plan Review Fee must be paid with each submittal**
No review fees are required for the second submittal only.
- **Engineer’s Certification on Design form**
(City of Dunedin Form COD/ENG-0017)
- **Regulatory Agency Permits**
(if applicable- see page 2) Final agency approvals must be provided prior to commencement of infrastructure work.
- **Drainage Calculations**
- **Soil Borings Report**
- **Performance Guarantee- Cash deposit or Irrevocable Letter of Credit for 100% of cost of all work in the right-of-way.**
Must be submitted to prior to commencement of work. Cost estimate to be provided by Engineer of Record (Signed & Sealed)

PROJECT COMPLETION

- **Signed and sealed as-built record drawings**
In pdf format, along with Autocad files
 - **Engineer’s Certification of Completion form**
(City of Dunedin Form COD/ENG-0018)
 - **Maintenance Guarantee-** In the form of an Irrevocable Letter of Credit or cash for 10% of the actual cost of infrastructure for a period of 18 months, payable upon completion of work.
 - **Bill of Sale for Personal Property Located in Public Rights-of-Way/Easements**
 - **Site/Infrastructure Project Closeout Fee must be paid prior to Certificate of Occupancy.**
 - **Regulatory Agency Releases/Completion Certificates** (see page 2)
 - **After Final approval, infrastructure must be deeded to the City of Dunedin.**
- If Platted Development:**
- **Provide copy of plat for review by Engineering**
 - **After approval, record at Pinellas County**
 - **Provide Engineering 4 copies**

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- **Regulatory Agency Permits - Page 2**
 - **Drainage - Pages 5-6**
 - **Sanitary Sewer - Pages 8-10**

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- **Site Plans – Page 3**
 - **Potable Water - Page 7**
 - **Road - Pages 11-14**

REGULATORY AGENCY PERMITS – Check websites of regulatory agencies for current forms.

As allowed per Florida Statute, a copy of all required regulatory agency permit approvals must be provided to Engineering prior to start of infrastructure work. For any applications requiring City signatures, a complete copy of the application package must be provided to Engineering for our records.

CHECKLISTS

PROJECT SUBMITTAL

Southwest Florida Water Management District

- Application

Florida Department of Environmental Protection (Water)

- Application for a Specific Permit to Construct PWS Components
OR
- Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs

Florida Department of Environmental Protection (Sewer)

- Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System

Florida Department of Environmental Protection Construction General Permit

- Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities

FDOT Permit

- Driveway
- Drainage

Pinellas County Right-of-Way Utilization Permit

- Right-Of-Way Permit

PROJECT COMPLETION

Southwest Florida Water Management District

- Statement of Completion

Florida Department of Environmental Protection (Water)

- Certification of Construction Completion and Request for a Letter of Clearance to Place Permitted PWS Components into Operation

Florida Department of Environmental Protection (Sewer)

- Request for Approval To Place A Domestic Wastewater Collection/Transmission System Into Operation (Due upon completion)

Florida Department of Environmental Protection Construction General Permit

- Notice of Termination of Generic Permit for Stormwater Discharge from Large and Small Construction Activities

FDOT Permit

- Driveway Sign Off
- Drainage Sign Off

Pinellas County Right-of-Way Utilization Permit

- Right-Of-Way Permit Sign Off

SITE PLAN REQUIREMENTS

1. Prepared by an engineer registered in the state. Must be signed and sealed and dated.
2. Name of proposed project or development.
3. Date, north point, scale.
4. Legal description of the property including section, township and range.
5. Boundary survey (24x36) prepared by a registered surveyor or registered engineer of the state. Must be signed/sealed and dated.
6. Names, addresses and phone numbers of owner, surveyor and engineer. If the property involved is owned by a corporation or company, the name and address of its president and secretary shall be shown.
7. Sketch or map indicating location of development.
8. Dimensions and boundaries of the tract to be developed.
9. The location and dimensions of existing and proposed property lines, public or private easements, dedicated rights-of-way, street names and watercourses on the tract to be developed and on the land immediately adjoining for a distance of at least 50 feet.
10. The name and location of adjoining subdivisions, including the identification of abutting lots, showing plat book and page of public records thereof.
11. The location of adjoining unplatted areas, with notation of the names and addresses of the owners thereof.
12. The existing and proposed parks, school sites, or other open areas to be dedicated to the public.
13. An approximate tie to the nearest one quarter corner, or other recorded and well established corner.
14. The location of wooded areas, natural features, marshes or other conditions affecting the proposed site plan and on the land immediately adjoining for a distance of at least 50 feet. If such feature is extensive, i.e., lake, wetland area, the full size of such feature and its relationship to subject site plan shall be shown.
15. The approximate distances to, and the elevation, location and dimensions of, the existing off-site sanitary sewers, potable water mains, storm drainage piping, culverts, watercourses, streets, sidewalks and other utilities to which connections are proposed to be made to serve the property.
16. Approximate existing and proposed topographic contours with a vertical interval not more than one foot referenced to a defined datum (NAVD, 1929 or NAVD, 1983) on the tract to be developed and on the land immediately adjoining for a distance of at least 50 feet.
17. The identification of the off-site easements or rights-of-way proposed to be utilized or acquired to accommodate the utilities and traffic of the proposed development.
18. Names, designations or purposes of all proposed streets, service drives, easements, waterways and benches.
19. Sufficient data to determine readily and reproduce accurately on ground the location and length of every road and service drive. This shall include the radii of all curves.
20. All internal dimensions accurate to the nearest foot.
21. Locations of proposed buildings, structures, and similar uses showing setbacks and other pertinent information.
22. Proposed development schedule, including any phasing.
23. A tree survey for all areas of the project to be altered from the predevelopment condition.
24. The proposed widths of pavement and the location of sidewalks, bikeways, bridges, walkways, perimeter walls and fences, and signs which are to be provided both on the tract, and adjacent to where required by other codes or to provide access to the development.
25. Tabulation of the total number of gross acres in the project, and the percentages thereof, proposed to be devoted to the several dwelling types, commercial uses, and other nonresidential uses, streets, parks and other reservations.
26. An Engineers Certification on Design form properly completed, signed/sealed and dated.
27. Fifteen (15) feet wide drainage and utility easement required around entire perimeter of development.
28. In platted developments, ten (10) feet wide drainage and utility easements shall be provided centered on all side lot lines and on interior rear interior rear lot lines; fifteen (15) feet wide drainage and utility easements centered on rear lot lines shall be provided.
29. Any easement which has a city owned and maintained facility (water, sanitary sewer, reclaimed water, or drainage) within such easement, shall be a minimum fifteen (15) feet in width. Any easement that will

contain two city facilities (water, sanitary sewer, reclaimed water, or drainage) shall be a minimum of 25 feet in width. Any easement containing three city facilities (water, sanitary sewer, reclaimed water, or drainage) shall be a minimum of 35 feet in width.

INFRASTRUCTURE CONSTRUCTION PLANS

DRAINAGE REQUIREMENTS

30. Topography:
- a. Existing and proposed topographical contours must be shown.
 - b. Topographic contours must be shown in intervals not more than 1' on the property to be developed.
 - c. Topographic contours must extend a minimum of 50' onto adjacent property.
 - d. Locations and depths of all lakes, ponds, marshes, etc. must be shown.
 - e. All other pertinent topographic feature(s) must be shown.
 - f. The finished grades and drainage plan for each individual lot must be shown.
 - g. The minimum finished floor elevation of all structures must be shown.
 - h. The proposed finished floor elevation of all structures should be at least 18" above the centerline of the abutting roadway.
 - i. The proposed finished floor elevation of all structures shall ensure adequate sewer fall.
 - j. The proposed finished floor elevation of all structures must be above the 100 year Base Flood Elevation.
31. Proposed detention or retention area ("pond"):
- a. "Pond" must provide attenuation for a "25 year" storm. Supporting calculations must be provided.
 - b. "Pond" must provide water quality treatment (draw down with 1st ½" run-off filtration structure, plus under drain details/filter material specified. Coastal areas require ¾" filtration.) Supporting calculations must be provided.
 - c. "Pond" must be located within a Drainage & Utility Easement.
 - d. "Pond" must be shown as part of abutting lots.
 - e. "Pond" side slopes cannot be greater than 3:1.
 - f. "Pond" side slopes must be sodded (areas over side drains must be seeded & mulched or have minimum 4" blanket of stone).
 - g. "Pond" must include a properly designed outlet structure. Supporting calculations must be provided. (Note: Double ring percolation test with 1/20 of actual percolation rate allowed as outfall rate when using percolation as the outfall.)
 - h. "Pond" must be constructed to provide a minimum of 12" of freeboard.
 - i. "Pond" must include an adequately protected overflow spillway.
 - j. "Pond" must discharge to a drainage easement or public right-of-way.
- Dry bottom ponds:
- k. Bottom of "pond" must be above seasonal high water elevation. Note: Soil borings with seasonal high water table elevations required for verification.
 - l. Bottom of "pond" must be sodded or seeded and mulched.
- Wet bottom ponds:
- m. Wet bottom pond must meet all applicable criteria.
 - n. Twenty (20) feet wide connection easement to public right-of-way is required for all wet bottom retention areas, plus pond easement must extend 20 feet beyond design high water line.
32. One-hundred (100) year flood routing plan must be provided (can be indicated on plans with arrows).

33. Floodways must be provided where required.
34. Storm Drainage System.
- a. Minimum pipe diameter is 15”.
 - b. Reinforced concrete pipe is required unless otherwise approved.
 - c. Maximum distance from stormwater ridgeline to inlet cannot exceed 400 feet.
 - d. Maximum pipe distance between access structures cannot exceed 450 feet.
 - e. Headwalls or other approved structures must be placed on all pipes into or out of ditches or detention/retention sites.
 - f. Energy dissipaters must be provided (where discharge velocities warrant).
 - g. Pipe sizing calculations:
 - 1) Hydrological calculations must be provided.
 - 2) Design must be based on minimum of 10-year storm.
 - 3) The minimum allowable time of concentration is 15 minutes.
 - 4) The hydraulic gradient must be at least one foot below gutter elevation.
 - 5) Drainage basin plan sheet with ridgeline for each drainage structure shown, area of each basin, time of concentration of each basin and coefficient of run-off for each basin, if substantially different.
 - h. Inlet and other structure details must be provided.
 - i. Curb inlets cannot be located in radius returns.
 - j. Conflicts between storm drains and other utilities must be shown.
 - k. All portions of public storm drainage systems must be located within rights-of-way or drainage & utility easements.
 - l. The minimum easement width is 15 feet for easements with a single City utility. Two utilities require an easement of 25 feet width. Three utilities require an easement of 35 feet width.
 - m. Open ditches (not including shallow swales) are only allowed for stormwater flows greater than 60 CFS.
35. An Erosion Control Plan must be provided. Erosion protection is required so that no earth or construction debris enters storm drainage system or roadway area.
- a. Utilize the Florida Department of Environmental Protection standard of 7 days from timing of temporary and permanent erosion control measures.
 - b. Within the Stormwater Pollution Prevention Plan (SWPPP), specify all details of erosion control measures applicable to the project. Details may include: silt fence surrounding all soil disturbance activities, track-out devices, floating turbidity barriers, staked turbidity curtains, and turbidity monitoring plans.
 - c. If detailing any measures for fertilization of landscaping, include mention of the Pinellas County Fertilizer Ordinance specifying that no fertilizers containing nitrogen or phosphorus may be used in Pinellas County between June 1st and September 30th. Between October 1st and May 30th, fertilizers applied within Pinellas County may only contain 50% nitrogen and 0% phosphorus.

WATER REQUIREMENTS

36. Potable water/fire protection system.
 - a. Minimum ten (10) feet parallel and eighteen (18) inches vertical separation between water and sewer systems (within public right-of-way). (F.A.C. Chapter 62-555.314)
 - b. Minimum five (5) feet parallel and 12 inches vertical separation between water and sewer systems on private property.
 - c. 1½" to 2" diameter pvc pipe minimum of Schedule 80 pvc. (COD Water Division Policy)
 - d. ¾" - 1" "HDPE" pipe rated at 160-200 PSI. (COD Water Division Policy)
 - e. Ductile iron pipe where used or required, must be cement lined 3" diameter and above. (COD Water Division Policy)
 - f. Three (3) inch or larger pvc pipe minimum of DR 18, C-900, NSF approved J-M Pipe "Blue Brute" preferred. (COD Water Div Policy)
 - g. Two (2) inch wide locator tape of proper color and markings above all PVC waterlines (installed 12" to 18" above barrel of pipe). (COD Water Division Policy)
 - h. Water service locations painted OSHA Blue on curbs ("W" etched in curb where applicable). (COD Water Division Policy)
 - i. Water service details. (COD Water Div Policy)
 - j. Fire hydrant details - Water Division prefers Clow, Mueller, Kennedy or American Darling. (COD Water Div Policy)
 - k. Paint fire hydrants Federal Safety Yellow (OSHA approved), Porter Paint. (COD Fire Department)
 - l. Thrust block detail sheet. (COD Water Division Policy)
 - m. Mechanically restrained joints shall be installed on all fittings, valves, caps and plugs. (COD Water Division Policy)
 - n. Pressure testing and chlorination specifications, including injection & sampling points on water system (required by FDEP).
 - o. PVC fire lines of four (4) inch diameter or greater must be minimum of DR 14.
 - p. Tap valves and sleeves must be tested at 150 PSI for one hour and witnessed by City Inspector (requires 24-hour notice) (COD Water Division Policy).
 - q. Are all waterlines adequately looped? (COD Water Division Policy)
 - r. Off-site easements to nearest City waterline.
 - s. Average depth of mains required to be 36" but not less than 30". (COD Water Division Policy.
 - t. Fourteen (14)-gauge locator U.S.E. wire with blue protective insulation shall be installed directly on top of all water mains with terminal ends brought up in the valve boxes at the cover. (COD Water Division Policy)
 - u. All joints will be restrained with "Megalug" (or approved equal) 1100 series for DI pipe and 1100 HV series, or Series 1350, uniflange for PVC pipe, plus on all 90 degree bends, ties, etc. - use poured in place or cement precast thrust blocks at the appropriate spots. Thrust blocks on 12" diameter pipe or more required to be poured in place. (COD Water Division Policy)
 - v. Wet taping saddles and valves at tie in point with City system. (COD Water Division Policy)
 - w. Gate valves required at every intersection or every 1,200 feet. (COD Water Division Policy)

SEWER REQUIREMENTS

37. Sanitary Sewer System:

a. Sewer Checklist:

- 1) Minimum of SDR 26 PVC sewer pipe for 6" or larger pipe. (COD Wastewater Division Policy)
- 2) Minimum of Schedule 40 PVC sewer pipe for 4" or smaller sewer pipe. (COD Wastewater Division Policy)
- 3) Sewers deeper than 10 feet required to be minimum of SDR 26 PVC pipe. (COD Wastewater Division Policy)
- 4) Sanitary sewer locator tape required to be 18" above all PVC mains, force main locator tape required above all force mains. (COD Wastewater Division Policy)
- 5) All sanitary sewer force mains required to have locator wire installed directly on top of pipe. (COD Wastewater Division Policy)
- 6) Construction note that sewer service to the existing system does not begin until the new system is inspected and accepted by Wastewater. (COD Wastewater Division Policy)
- 7) Are sewer lines located so that they are accessible for inspection and maintenance by hydraulic/vacuum sewer cleaning, televising and sealing equipment? (COD Wastewater Division Policy)
- 8) Construction note that any pipe in paved areas and other areas having less than 36" of cover which must support vehicle weight, shall be approved ductile iron pipe, Schedule 80 PVC or SDR 18 (C-900) bell and spigot PVC. (COD Wastewater Division Policy)
- 9) Construction note that any pipe with less than 12" of cover shall be approved ductile iron pipe. (COD Wastewater Division Policy)
- 10) Construction note that sewer mains and manholes must be inspected and approved prior to any connection of service lines to the mains. (COD Wastewater Division Policy)
- 11) A City of Dunedin registered plumber shall install building sewers from the tap to the building. The tap is defined as the connection to the public sewer, which is normally located at the property line. In the case of special situations (i.e., easements, right-of-way line, private systems, multi-family complexes) tap location will be determined on a case-by-case basis. (COD Wastewater Division Policy)
- 12) The contractor must notify the City of Dunedin Wastewater Division (298-3256) at least 24 hours in advance of making any connection to the existing sewer system. (COD Wastewater Division Policy)
- 13) The connection to the existing sewer system must be plugged from the time of physical connection to the time that written acceptance of the project's sewer system has been received by the project's representative. (COD Wastewater Division Policy)
- 14) Provide sanitary sewer clean-out at right-of-way or easement line of all service laterals.
- 15) All connections to the sewer main shall be made by "tee-wye" fittings. (COD Wastewater Division Policy)
- 16) The "tee-wye" fittings shall be installed such that the incoming flow enters the sewer main in one of the upper two sewer main quadrants. (COD Wastewater Division Policy)
- 17) Maximum of 300 feet spacing between manholes.
- 18) Minimum % of slope of 0.40% on 8" diameter pipe.
- 19) Minimum % of slope of 1.04% on 6" diameter pipe, and 2.08% minimum on 4" diameter pipe.
- 20) No double wyes at the lot line. A separate service for each lot is required.
- 21) Construction note that no debris shall be allowed to enter the existing system from construction of the new system.

- 22) Sewers and manholes in the streets shall be located such that only one lane of traffic is blocked by maintenance vehicles.
- 23) Construction note that when laying pipe, a well graded, crushed stone or crushed gravel of number 89 gradation must be used to achieve proper pipe bedding.
- 24) All sewer mains within easements in platted subdivisions shall be unobstructed easements by deed covenant.
- 25) All sanitary sewer equipment and structures shall be new and unused.
- 26) Locate sewers in streets. Do not locate sewers in easements between lots as they are difficult to maintain. Sewers located in streets to be off-set from center line of road so that only one lane of traffic is blocked when routine maintenance is performed.
- 27) Label SCH or DR of pipe on site plan.

b. Manhole Checklist:

- 1) Notes that manhole covers in paved areas are to be flush with the top of pavement.
Manholes in non-paved areas are to be exactly 3" above finished grade. (COD Wastewater Division Policy)
- 2) For new construction projects, drop manholes shall be outside drops only. (COD Wastewater Division Policy)
- 3) Drop manholes required in all cases where there is an eighteen-inch difference between the inlet and exit pipes into a manhole. A drop sewer manhole bench shall be constructed so that the incoming flow from the dropped line is directed into the receiving invert. (COD Wastewater Division Policy)
- 4) No free drop over eighteen inches is permitted in manholes. (COD Wastewater Division Policy)
- 5) Manhole spacing of 300 feet or less.
- 6) Radius of sewer line through manhole must be wide enough to accommodate the television inspection camera. Camera is approximately 2 feet long and 6 inches in diameter. (COD Wastewater Division Policy)
- 7) Manhole covers shall be U.S. Foundry 170-W or approved equal. In DOT right-of-way, frame and lid to be 170-BJ (U.S. Foundry). (COD Wastewater Division Policy)
- 8) First pipe joint upstream and downstream shall be within 24 inches of the manhole. Exceptions to 1st pipe joint being within 24 inches of manhole are:
 - a) For brick manholes with PVC pipe, a transit adapter with O-ring shall be used at the point of connection within the manhole.
 - b) For precast manholes with PVC pipe, neoprene boot shall be used at point of connection with the manhole.
- 9) Maximum height of manhole adjusting brick and ring is 12 inches.
- 10) If brick manholes are to be constructed, only solid clay brick is acceptable (equal to ASTM C-32-42, or if adjusting bricks are used they must be of Grade MA or better).
- 11) Manhole cover diameter cannot be less than 24 inches.
- 12) The minimum acceptable manhole diameter is 4 feet. 3 feet inside diameter brick manhole may be used if manhole height is 4 feet or less as approved by the City of Dunedin Engineering Division.
- 13) On drop manholes, the upper inlet pipe invert shall not be blocked.
- 14) The distances between manholes shall be shown on the plans as well as the profiles.
- 15) Manhole covers must bear the title "Sanitary Sewer", those manholes to be owned and maintained by Wastewater must also have "City of Dunedin" on them. Covers must also have year of installation and "Confined Space" cast in lid.

- 16) Note that precast manholes must be approved (shop drawing) by the City before casting of manholes.
- 17) Built in place manholes shall be plastered with ½” mortar externally and coated with a bitumen/asphaltic product.
- 18) All manholes shall be placed on a rock base of a minimum of 6” in depth. The required depth may exceed 6” as required by the City Engineer.
- 19) Manhole inverts shall be as follows:
 - a) Precut PVC half-pipe for flow thru manhole, or
 - b) Manhole bench constructed of solid clay brick forming an invert the shape of a halfpipe.
- 20) Manhole benches shall be trowel finished. Any roughness shall be stoned out.
- 21) Label existing City manholes with sewer atlas sheet number and manhole number.
- 22) Sewer service lines connected to manholes must be channeled into the manhole bench at the receiving invert elevation.
- 23) Manhole detail is needed of proposed connection to existing manhole.
- 24) No “flat top” manholes are permitted.
- 25) No “dog house” manholes are permitted.
- 26) Copies of all monitoring tests to be furnished to the City of Dunedin Engineering Division.
- 27) Mortar for manhole construction shall be Portland cement, type II.
- 28) A stabilized access road base shall be provided to all sanitary sewer manholes for inspection purposes.
- 29) Contractor shall provide all dewatering equipment necessary to keep excavations dry and shall provide all sheeting, shoring and bracing necessary to protect adjacent structures, utilities, or to minimize trench width.
- 30) Contractor shall notify and call Sunshine (1-800-432-4770) prior to starting any work in areas where there are utilities tied into Sunshine system. (Florida Statutes, Chapter 556)

ROAD REQUIREMENTS

38. Roadway system:
- a. Widths of right-of-way dimensioned.
 - b. Roadway widths dimensioned.
 - c. Crowned roads/curbs.
 - d. Centerline turning radius of 75 feet minimum.
 - e. Tabulation of soil boring samples/water table elevations taken at intervals not in excess of 200'. All areas that have been filled on since the City of Dunedin aerial of 1926 may require soil borings to 30 feet depth.
 - f. Typical roadway section; (local or minor road)
 - 1) 1 ½" thick SP-9.5 asphalt surface.
 - 2) ¼" /ft. cross slope.
 - 3) 6" thick base with 98% minimum density.
 - 4) 9" thick sub base with minimum 75-psi fbv or 98% minimum density.
 - 5) In lieu of installing stabilized sub base, City will accept base course installation of 50% greater thickness than depth specified on the plans.
 - 6) Note on minimum 100% density at sub grade elevation above all pipe crossing of road.
 - 7) Typical curb detail/3,000 psi concrete note. In addition, sona-tube compressive samples will be taken at 7 day and 28-day intervals with 1 cylinder as backup hold cylinder (total of 3 cylinders to be cast).
 - g. Minimum % slope of road profile is 0.4%.
 - h. Vertical curves required when algebraic difference in gradient is 1% or greater.
 - i. At the intersection of a major street to a major street, an additional twelve (12) feet of right-of-way on both sides within 150 feet of the right-of-way intersections shall be provided.
 - j. At the intersection of a minor street to a major street, an additional five (5) feet of right-of-way on both sides within 100 feet of the right-of-way intersection shall be provided.
 - k. Minimum radius or diagonal; cut-off required at property lines of all intersections.
 - l. Acceleration and deceleration lanes required for all developments generating 100 or more parking spaces designed in accordance with Pinellas County Standards and Florida DOT Standards.
 - m. Roadway restoration detail with:
 - 1) Two (2) inch thick SP-9.5 asphalt concrete surface.
 - 2) Eight (8) inch thick base.
 - 3) Note "Saw cut and match existing asphalt".
39. Driveway Entrances
- 1) Subdivisions and private developments serving more than 100 lots require a minimum of two (2) connections to adjacent roads.
 - 2) Driveway widths shall be a minimum of 8 feet wide.
 - 3) Driveway widths shall be a maximum of 12 feet for a "one-way" driveway and a maximum of 36 feet for a "two-way" driveway.
 - 4) Minimum line of sight clearance shall meet FDOT Design Manual.
 - 5) All driveways connecting to any State highway under the authorization and in accordance with the specifications of the State Department of Transportation.

- 6) All driveways connected to any County-maintained road shall acquire proper authorization from and be constructed in accordance with County specifications and regulations.
- 7) Driveways or accessways connection to any street shall intersect the roadway at approximate right angles.
- 8) Driveways on lots adjacent to intersections shall be located at the property line at the farthest distance from the intersection.
- 9) All driveways are granted for the use of the property owner. Maintenance of driveways from the edge of the road pavement to the right-of-way line, including that portion of any sidewalk within the driveway, is the responsibility of the property owner.
- 10) Driveway flares or entrance curb transition shall not be less than three feet in width at the edge of pavement or curb line with the warp or transition extending not less than seven feet from the edge of the curb or edge of the pavement.
- 11) Driveway flares shall not be less than 3 feet from the point the flare intersects the curb or pavement edge to the property line, extended.
- 12) Driveway Grading - Driveway entrances shall not obstruct gutter flows or roadside drainage.
- 13) Where driveways cross roadside drainage swales, driveway culverts, sized in accordance with the requirements and specifications of Chapter 78 shall be approved by the City Engineer.
- 14) Concrete driveways in public right-of-way shall be 6 inches thick and reinforced with wire mesh. Expansion joints shall be provided at the back edge of the curb or edge of pavement, at the sidewalk joints and/or at the property line concrete strength shall be 3,000 psi after 28 days.
- 15) Concrete driveway serving a single-family structure and not located in right-of-way or easements shall be 4 inches thick, 3,000-psi concrete/wire mesh.
- 16) Concrete driveways and parking for multi-family, commercial, public and semi-public developments shall be 6 inches thick, 3,000 psi concrete/wire mesh in the right-of-way and on private property.
- 17) Where an asphalt surface driveway in public right-of-way is proposed, a 6 inch thick compacted base course and a 1½" thick Type SP-9.5 wearing course surface shall be installed.
- 18) Asphalt driveways located outside of public right-of-way shall have a base course with a minimum thickness of 6 inches compacted to a minimum density of 98% density with a 1 inch thick SP-9.5 wearing course surface.

40. Parking Lot Design Standards

- a. Parking space to be an all-weather surface with minimum stall width of 9 feet and a minimum stall length of 18 feet.
- b. Driveways shall be a minimum of 25 feet for 90° parking.
- c. Drainage - Parking lots shall be drained to prevent damage to adjoining property and/or public streets and alleys, and will be surfaced with an erosion-resistant material in accordance with City standards.
- d. Accessways - No vehicle shall be allowed to drive or back from a parking space onto a collectorurban or arterial street.
- e. Adequate accessways shall be provided from parking areas to public streets.
- f. Pavement markings delineating parking stalls are required, installed in accordance with the standards and practices outlined by the Florida Department of Transportation.
- g. When required, adequate lighting shall be provided and shall be designed to minimize or eliminate glare on surrounding property and to motorists traveling on adjacent streets.
- h. Handicapped parking must be provided and marked in accordance with the current standards as set forth in the State Statutes.

41. Sidewalks

- a. Sidewalks shall be constructed:

- 1) With a brush finish, 3,000 psi concrete.
- 2) At least 4 inches thick.
- 3) With a ½ inch expansion joint every 50 lineal feet.
- 4) With ½ inch expansion joints on both sides of driveway entrances and at roadway connections at back of curb or edge of pavement.
- 5) With a contraction or "dummy" joint every five linear feet.
- 6) With a transverse slope of ¼ inch per foot.
- 7) With elevation transition slopes not in excess of 12:1 (12 horizontal to 1 vertical).
- 8) To include standard handicapped ramps at all pavement connections. Handicap ramps at all intersections on sidewalk.
- 9) To be located in the right-of-way or easements approximately 1 foot from property or easement line, except as otherwise approved to preserve trees and valuable objects or to avoid utility pole, guy wires, fire hydrants, or other hazards to public safety. Horizontal shifts in the sidewalk cannot exceed a deflection of 3:1.
- 10) Must connect to the roadway curbing or pavement at street intersections in a safe manner away from storm inlets.
- 11) At elevations that does not interfere with lot line drainage draining properties to the street.
- 12) To be 6 inches thick with reinforcing mesh at all driveway crossings.

b. Sidewalk Widths

- 1) Six feet wide sidewalks shall be required on both sides of major streets (arterial and collector-urban) and in designated areas having heavy concentrations of pedestrian traffic.
- 2) Within planned residential communities, 5 feet sidewalks shall be required at locations approved by the Local Planning Agency (LPA).
- 3) Five feet wide sidewalks shall be required on both sides of all minor streets.

c. Cross-Block Sidewalks.

- 1) When determined by the LPA, a pedestrian easement, not less than 6 feet in width, shall be provided across a block to connect public rights-of-way for pedestrian traffic.
- 2) Such pedestrian easement shall have boundary marker posts not less than 4 feet above ground, located at the public right-of-way boundaries.
- 3) A standard barricade, not less than 12 feet in width, shall be erected in the parkway of public right-of-way to prohibit straight-line access to or from the street, such barricade to be 4 feet in height on reinforced concrete posts not less than 6 feet on center to which 2 railings will be securely bolted and painted with reflective paint visible to vehicular and pedestrian traffic. Design for this system shall be submitted to the Engineering Section for approval.

d. Bicycle Routes.

- 1) Bicycle routes shall be designated on the County Metropolitan Planning Organization Bikeways Plan.
- 2) Designs for shared facilities shall conform to the State Department of Transportation Bicycle Facility and Design Manual, most current edition.

e. Bicycle Routes Materials of Construction.

- 1) Where the bicycle route is not located in public right-of-way, the construction materials may vary depending on location of the route (extension of road pavement, special park routes, etc.)
- 2) The City Engineer shall determine materials of construction for the various bicycle routes.
- 3) Special plans shall be developed for bicycle route construction when these routes cross proposed developments.

42. Street Lighting Plan.

Street lighting system plan shall show:

- a. Location of special concrete poles.
 - b. Minimum illumination of not less than 0.2 lumens per square feet of residential right-of-way.
 - c. Street lights at all street intersections.
 - d. Standard high-pressure sodium luminaries.
 - e. Street Light Fee (payable before final approval).
43. Traffic Control Fees (street signs, stop signs, bars, etc.) (payable before final approval)
44. Dumpster pad locations (Contact Solid Waste Division at 298-3215 for details).



ENGINEERING DIVISION
727 LOUDEN AVENUE
DUNEDIN, FLORIDA 34697-1348

ENGINEER'S CERTIFICATION ON DESIGN

I,

hereby certify that the design, plans and specifications of all improvements in connection with

have been reviewed by me and found to be designed in accordance with standard engineering methods and practices and any applicable Ordinances and Regulations to the best of my belief or knowledge.

Signed and Sealed this _____ day of _____ 20__.

Signed

Florida Registration #
(Affix seal)

INSTRUCTIONS FOR LOC REQUIRED PRIOR TO ISSUANCE OF INFRASTRUCTURE PERMIT:

1. **Must be from a local bank.**
2. **Amount = 100% of the cost of all work in the right-of-way.**
3. **Must be accompanied by a Signed & Sealed Cost Estimate provided by Engineer of Record.**
4. **Will be held until completion of Final Inspection & Approval Procedures.**
5. **Must be signed by Corporate Bank Officer.**

(Date)

IRREVOCABLE LETTER OF CREDIT NO. _____

AMOUNT: \$ _____

TERMINATION: (Date)

Beneficiary: City of Dunedin Applicant: _____
P.O. Box 1348 _____
Dunedin, FL 34697-1348 _____

Gentlemen:

We hereby establish our Irrevocable Letter of Credit No. _____ in your favor on behalf of _____, up to the aggregate amount of \$ _____ (\$ _____) Dollars (U.S.), available by your sight draft or drafts drawn on us.

All drafts drawn under this credit must state "Drawn under (Name of Bank) Irrevocable Letter of Credit No. _ dated for the account of____", and must be accompanied by the original Letter of Credit No. _ , and a statement bearing the signature of an authorized representative of the City of Dunedin or any other applicable governmental agency(ies) stating that improvements in the right-of-way have a defect or require an emergency repair or are not in accordance with permit requirements and/or the approved plans and specifications on file in the City's Engineering Section and which has not been completed by the developer,____, or its successor or assigns. (Name of Bank) shall have no responsibility for determining the accuracy or veracity of said statements.

We engage with you that all drafts drawing hereunder and in compliance with the terms of this Letter of Credit shall be duly honored upon presentation to us at our office located at (address of local bank) on or before the close of business on (expiration date), at which time said Letter of Credit will expire, provided however, that this Letter of Credit will not be cancelled or terminated without first notifying the City Attorney of Dunedin by certified, US Mail, return receipt requested, that said Letter of Credit will be terminated within 30 days of receipt hereof.

Except so far as to otherwise expressly stated, this Letter of Credit is governed by and subject to the Uniform Customs and Practices for Commercial Documentary Credits (2007 Revision) of the International Chamber of Commerce Publication No. 600 (UCP), and, to the extent not inconsistent with UCP, the laws of the State of Florida.

(BANK NAME)

ATTEST:

(Name)
(Title)

(Name)
(Title)

**INFRASTRUCTURE AND SITE PLAN CONSTRUCTION
CLOSE OUT ITEMS REQUIRED**

The following items are required for infrastructure and site close out. All these items must be completed prior to issuance of vertical building permit. Note: For platted developments, plat must be scheduled for Commission acceptance, must be recorded at County, and recorded copies provided to Engineering prior to issuance of vertical building permit.

Forms can be found on the City of Dunedin/Engineering web site.

NOTE: All infrastructure (water, sewer, reclaimed, storm drainage, streets, curbs and gutters, sidewalks, fire hydrants must be installed for sign off of the infrastructure and site construction permit.

Only exception is for single lot developments – all infrastructure must be installed with the exception of the final asphalt and curbing (road base must be installed). The final asphalt and curbing must be completed prior to issuance of CO.

ALL DEVELOPMENTS (Per COD Code Chapter 104-50)

- 2 Sets Signed and Sealed Plans as well as an Electronic Version of Record Drawings (In AutoCad)

*The “Record Drawings” should consist of the entire set of “approved” infrastructure/site plans that were prepared by the Engineer of Record, showing any revisions that were made during construction, indicating how the project was actually constructed.

- Engineer’s Certification on Completion
- Infrastructure/Site Plans Project Closeout Review Fee
- Maintenance Guarantee – ILOC or Cash Deposit
(10% of the total cost of the infrastructure to be held for a period of 18 months from completion date of infrastructure and should be accompanied by a breakdown of costs)
- Bill of Sale for Personal Property Located in Public Rights-of-Way/Easements
- Required Easements must be Recorded at County and copy provided to Engineering

All Releases/Completion Certificates from Regulatory Agencies

- | | | |
|---|---|--------------|
| <input type="checkbox"/> SWFWMD | ■ | FDEP (Water) |
| <input type="checkbox"/> FDEP (Sewer) | ■ | FDOT |
| <input type="checkbox"/> Pinellas County Right-of-Way | | |



ENGINEERING DIVISION
727 LOUDEN AVENUE
DUNEDIN, FLORIDA 34697-1348

ENGINEER’S CERTIFICATION ON COMPLETION

I, _____ hereby certify that all improvements in

connection with _____

project have been inspected and found to be completed in accordance with City of Dunedin approved plans and specifications or changes thereto authorized by me meeting the terms of standard engineering methods and practices and any applicable Ordinances and Regulations to the best of my knowledge and belief.

No changes made. Construction completed according to approved construction plans. *AsBuilt/Record Drawing Plans accompany this certificate (complete set of approved infrastructure/site plans).

Changes Made. *As-Built/Record Drawing Plans showing changes accompany this certificate (complete set of approved infrastructure/site plans).

Signed and Sealed this _____ day of _____, 20__

Signed

Florida Registration #
(Affix seal)

*2 Signed & Sealed As-Built/Record Drawings (along with electronic version in AutoCad) required.

INSTRUCTIONS FOR LOC FOR MAINTENANCE GUARANTEE REQUIRED AT COMPLETION OF PROJECT:

1. Must be from a local bank.
2. Amount = 10% of the cost of the infrastructure.
3. Must be for a period of 18 months from completion date of infrastructure.
4. Must be signed by Corporate Bank Officer.
5. No changes to this form/format are allowed.

(Date)

IRREVOCABLE LETTER OF CREDIT NO. _____

AMOUNT: \$ _____

TERMINATION: (Date)

Beneficiary: City of Dunedin
P.O. Box 1348
Dunedin, FL 34697-1348

Applicant: _____

Gentlemen:

We hereby establish our Irrevocable Letter of Credit No. _____ in your favor on behalf of _____, up to the aggregate amount of _____ (\$ _____) Dollars (U.S.), available by your sight draft or drafts drawn on us.

All drafts drawn under this credit must state "Drawn under (Bank Name) Irrevocable Letter of Credit No. _____ dated _____ for the account of _____", and must be accompanied by the original Letter of Credit No. _____, and a statement bearing the signature of an authorized representative of the City of Dunedin stating that infrastructure improvements have a defect or require an emergency repair or are not in accordance with permit requirements and/or the approved plans and specifications on file in the City's Engineering Section and which has not been completed by the developer, _____, or its successor or assigns. (Bank Name) shall have no responsibility for determining the accuracy or veracity of said statements.

We engage with you that all drafts drawing hereunder and in compliance with the terms of this Letter of Credit shall be duly honored upon presentation to us at our office located at (Address of Local Bank) on or before the close of business on (Date), at which time said Letter of Credit will expire, provided however, that this Letter of Credit will not be cancelled or terminated without first notifying the City Attorney of Dunedin by certified, US Mail, return receipt requested, that said Letter of Credit will be terminated within 30 days of receipt hereof.

Except so far as to otherwise expressly stated, this Letter of Credit is governed by and subject to the Uniform Customs and Practices for Commercial Documentary Credits (2007 Revision) of the International Chamber of Commerce Publication No. 600 (UCP), and, to the extent not inconsistent with UCP, the laws of the State of Florida.

(BANK NAME)

ATTEST:

(Name)
(Title)

(Name)
(Title)

**BILL OF SALE FOR PERSONAL PROPERTY LOCATED
IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS OF RECORD**

KNOWN TO ALL MEN BY THESE PRESENTS, That _____,
a Florida _____ of the City of Dunedin, Pinellas County, State of Florida, hereinafter referred to as
the "Owner" for good and valuable consideration the receipt whereof is hereby acknowledged, has granted bargained, sold,
transferred and delivered, and by these presents does grant, bargain, sell, transfer and deliver unto the CITY OF DUNEDIN, a
municipal corporation of the State of Florida, the following goods and chattels, to wit:

All personal property and infrastructure improvements located in public rights-of-way or easements of record, including,
but not limited to, water, reclaimed and sanitary sewer mains, valves and related appurtenances, storm sewer lines, storm
structures and related appurtenances, curbs, sidewalks, ramps, paving improvements to streets and any and all other
infrastructure improvements located within the public rights-of-way and easements of record in connection with the
project, development or building located at or in the vicinity of

lying and being in Section ____, Township ____ South, Range ____ East, City of Dunedin, Pinellas County, Florida.

TO HAVE AND TO HOLD the same unto the CITY OF DUNEDIN forever.

And does he/she/they covenant to and with said CITY OF DUNEDIN that he/she/they is the lawful owner of the said goods and
chattels; that they are free from encumbrances; that he/she/they has good right to sell the same as aforesaid, and that he/she/they
will warrant and defend the sale of said property, goods and chattels hereby made, unto the CITY OF DUNEDIN against the lawful
claims and demands of all persons whomsoever.

WHEREVER USED HEREIN, the term "party" shall include the heirs, personal representatives, successors and/or assigns of the
respective parties hereto; the use of the singular number shall include the plural the singular; the use of any gender shall include all
genders; and, if used, the term "note" shall include all of the notes herein described if more than one.

IN WITNESS WHEREOF, the Grantor(s) have hereunto set their hands and seals the day and year first hereinabove set forth.

Signed, sealed and delivered in
the presence of:

WITNESS

Authorized Representative

WITNESS

Name Printed

STATE OF FLORIDA
COUNTY OF PINELLAS

The foregoing instrument was acknowledged before me this ____ day of _____, 20__ by, who personally known to me
or who has produced _____ (type of identification) as identification and who executed the forgoing instrument.

(Signature of Person taking acknowledgements)

(Name of Officer taking acknowledgement typed printed or stamped)

(SEAL)