

Santa Rosa County Engineering Construction Plans Review Checklist

(6 pages - Updated 02/27/19)

Initial Submittal Requirements:

- Request Letter
- 2 Sets of the Construction Plans (signed/sealed by Engineer)
- 1 Overall Site Layout with street names, block numbers, and lot numbers
- 1 Set of Technical Specification
- 2 Sets of Stormwater Management Plan with Drainage Calculations
- 1 Geotechnical Report
- Review Fee - \$250 plus \$25 per lot (\$150 resubmittal fee)

Final Submittal Requirements:

- 3 Sets of the Construction Plans (signed/sealed by Engineer and labeled as “Issued for Construction”)
- 2 Sets of Lot Grading Plans – Full Size
- Copy of all Federal, State & Local Permits – Must be received prior to commencement of construction
- 1 Digital Copy in PDF format.

General Requirements:

- ___ A minimum of three benchmarks not more than 1500 feet apart are required to be shown on the Construction Plans. Benchmarks must have a minimum interval of 600 feet.
- ___ Provide a Vicinity Map with a minimum scale 1” = 400’
- ___ Provide the appropriate dedications of ponds, easements, common areas and rights-of-ways. Label as “Public” or “Private”. The subdivision must be either public OR private. The subdivision can not be mixed public and private.
- ___ All manholes must be offset from the centers of intersections & cul-de-sacs where the PCP’s (Permanent Control Point) are to be placed.
- ___ Provide a clearing and grubbing plan showing all areas that will be cleared during construction. This should include all rights-of-way, ponds, drainage easements, laydown areas and any lots that will be cleared during construction. Show all BMP’s on this plan, include BMP’s for any lots that are cleared. The areas shown will be the ONLY areas that will be allowed to be cleared during construction.
- ___ Ensure that the road names and the subdivision name on the construction plans match exactly as the appear on the approved preliminary plat
- ___ All manholes in easements must be offset from lot lines so property corners can be set
- ___ For any subdivision where sidewalks are proposed, the developer must construct all sidewalks in front of non-residential areas (ponds, common areas, etc). Clarify on the plans which portions are to be constructed by the contractor and which portions will be constructed by the home builder. Show all sidewalks in all plan views.
- ___ All subdivision signs/wall should be shown outside the public right of way
- ___ No open cuts are allowed on county roads for utilities. Only Jack and Bore or Directional bores are allowed.
- ___ If the proposed development is located in the Midway Fire District, a Letter of approval is required prior to approval of Construction plans
- ___ Addressing signs must appear within the construction plans. The address ranges must be assigned by the SRC Addressing Department and must match exactly.
- ___ If comments are required, a set of plans will be returned to the Engineer of Record Stamped: “Return By _____ for consideration at _____ Commission Meeting provided the submittal is in accordance with County standards by date shown.”
- ___ Coordinate mail delivery / kiosk requirement with the USPS. Do not locate near intersections or entrance. Provide concrete slab for cluster mailbox unit, appropriate ramp and clear area for access.

Provide the Following Notes:

- ___ Provide Note: All construction shall be in accordance with Santa Rosa County design standards.
- ___ Provide Note (if offsite utility improvements are required): Driveway cuts are to be reviewed on an individual basis by the Road and Bridge Department.
- ___ Provide Note: No construction activities may commence prior to submission of approved copies of all required Local, State and Federal permits to the Santa Rosa County Engineering office.
- ___ Provide Note: Contractor is responsible for obtaining a Utility Permit from the County Road and Bridge Department prior to commencing any work within the County's right of way
- ___ Provide Note: The Street signs with the approved address ranges assigned by the SRC addressing department shall be in place prior to approval of the Final Plat.
- ___ Provide Note: All proposed subdivision signs shall be constructed in accordance with LDC Article 8.
- ___ Provide Note: All Heritage and/or Champion Trees located with the property boundary must be protected.

Road and Street Construction Requirements: (see Subdivision Roadway Design Manual for typical X-sections)

Residential - Typical Cross-Section:

Include all of these on the typical section

- ___ Concrete curb and gutters or lay back curb and gutter shall be required in subdivisions with lot widths less than 110 feet. Minimum width of the curb and gutter is 2.5 feet. Type "F" curb may be used for medians only. Ribbon curb required at connection with existing rural section roadway.
- ___ Provide 1.5" - Type SP12.5 Asphalt. Add Note: The asphalt must be 0.25" above curb lip after compaction
- ___ Minimum base thickness is to be 6 inches of an acceptable material recommended in the geotechnical report
- ___ Stabilized sub-grade is to be a minimum of 6" inches thick and must extend 3 feet beyond edge of asphalt/curb interface, unless greater standards are recommended in the geotechnical report
- ___ Stabilized subgrade is to be compacted to a minimum of 96% and an average of 98% with a minimum LBR of 40, unless greater standards are recommended in the geotechnical report
- ___ The base must be compacted to a minimum of 98%.
- ___ Minimum pavement width is 24 feet.
- ___ Add note on typical street cross-section: Prepare curb pad & sub-grade at the same time
- ___ Prime Coat the entire width of the prepared base
- ___ Include SRC Testing frequency schedule
- ___ Add note: SRC LDC does NOT allow tolerance for less than 1-1/2" asphalt thickness
- ___ Where the estimated wet season water table (per Geotechnical Report) is less than 2 ft below the bottom of the subgrade, water proof graded aggregate base material and/or underdrains will be required.
- ___ Tack Coat required on all overlays

Non-Residential - Typical Cross-Section:

Include all of these on the typical section

- ___ Concrete curb and gutters or lay back curb and gutter shall be required unless otherwise approved by the CE.
- ___ Minimum width of the curb and gutter is 2.5 feet.
- ___ Minimum pavement width is 24 feet and shall be 3" of Type SP 12.5 asphalt
- ___ Stabilized sub-grade is to be a minimum of 12 inches thick and must extend 3 feet beyond edge of asphalt/curb interface, unless greater standards are recommended in the geotechnical report
- ___ Stabilized subgrade is to be compacted to a minimum of 96% and an average of 98% with a minimum LBR of 40, unless greater standards are recommended in the geotechnical report
- ___ The Base must be graded aggregate with a minimum thickness of 8 inches and compacted to a minimum of 98%, unless greater standards are recommended in the geotechnical report
- ___ Add note on typical non-residential street cross-section: Prepare curb pad & sub-grade at the same time
- ___ Prime Coat the entire width of the prepared base
- ___ Tack Coat required on all overlays

Other Requirements:

- ___ Minimum elevation of the crown of subdivision roads shall be 4 feet above mean sea level
- ___ If a subdivision is over 50 lots, there must be at least two entrance streets into the proposed subdivision. If this can not be obtained then a Boulevard Roadway section is required up to the first looped street, or until there are only 50 lots beyond the end boulevard section.
- ___ Boulevard Roadway sections require 16 feet wide lanes with a 4 to 5-foot median. Median can be striped (thermoplastic) if lots front the Boulevard section
- ___ For Boulevard sections provide Note: A minimum clear distance of 1.5 feet (for 25 mph) must be maintained from face of curb to any items in the median including signs, landscaping, light poles, etc.
- ___ Sidewalks must be 5 feet wide. For sidewalks located adjacent to the back of curb, sidewalks must be 6 feet wide.
- ___ Add curbing (LDC 4.03.07.B.3) and sidewalk (if applicable) (LDC 4.03.06.E) notes pertaining to joint spacing, concrete, thickness, width, etc.
- ___ A 1-foot non-access easement is required along wetlands where public or private right-of-ways traverses wetlands
- ___ Provide cross-sections for all critical areas showing entire right-of-way
- ___ The minimum slope of a channel bottom and curb and gutter is 0.30 %
- ___ Spot grades are required along the curb line for all intersections and cul-de-sacs. The minimum slope allowed is 0.30 %. Spot shots at intersections/cul-de-sacs must maintain 0.3% or greater and 2% across lanes width.
- ___ The street layout must be based on 100-foot stationing and all stations must be equal
- ___ Provide vertical curve information for all changes in grade over 0.8%
- ___ All curves in the roadway must include the centerline curve data
- ___ The entire width of the right-of-way must be shown
- ___ Show the entire pavement width
- ___ No concrete valley gutters are allowed across intersections.
- ___ Provide 25ft min paved (with curb and gutter if applicable) turnout and dedicated R/W to property line on stub-outs to undeveloped property.
- ___ Right-of-way intersections must have a minimum 25-foot radius
- ___ K Values for vertical curves shall meet the Florida Green Book requirements. For 25 mph, Sag curve – Min. 26; Crest Curve – Min. 19
- ___ All Stop Signs shall be R1-1 and a minimum of 24-inches within all subdivisions. Larger signs will be required if the posted speed is greater than 20 mph.
- ___ Maximum transition at intersections is 20:1

Utilities Requirements:

- ___ Provide letter of availability for water and sewer services from local utility company
- ___ If sewer is not available, then provide an approval letter for HRS for septic service.
- ___ If a low-pressure system is proposed in public subdivision, a variance request is required.
- ___ Minimum criteria for a low-pressure system is as follows:
 - o All components of the system crossing public rights-of-way are buried at least 48 inches below finished grade
 - o The main line is contained within a Utility Easement on the lots
 - o All lines (main lines and laterals) that cross public rights-of-way to be sleeved and have a tracer wire
- ___ Show all sewer mains, manholes, and lateral locations
- ___ Show all water mains, water connections, and laterals locations
- ___ Provide Fire hydrants at least every 800 feet as the hose lays along the water main. Minimum line size for fire protection is 6 inches. Show 400-foot radius of lot coverage for all Fire Hydrants.
- ___ Add note: No Concrete block is allowed for Manholes and Inlets
- ___ Lift stations must be located on their own parcel and not in public right-of-way
- ___ Provide irrigation stubs to the any islands (PVC chases)

Turn lane Requirements:

- ___ Verify if Turn Lanes will be required (see LDC Chapter 4 for warrant info)
- ___ Square off ends of right turn lanes
- ___ All turn lanes are to be designed according to the latest edition of the FDOT Standard index. When turn lanes are to be installed all widening should be completed through center widening. A lateral shift will only be allowed in extenuating circumstances.
- ___ Cross sections shall have a 2% crowned roadway with a minimum 4-foot stabilized shoulder at 6% slope. All remaining slopes are not to exceed 3:1 in the clear zone. Piping may be required.
- ___ Provide necessary details for Road Widening. The entire road surface will be overlain.
- ___ Provide Note for turn lanes: For improvements to all County roads, it is the contractor's responsibility to install all necessary leveling courses to provide a proper roadway cross-section. Cross sections shall have a 2% crowned roadway with a minimum 4-foot stabilized shoulder at 6% slope.
- ___ The road must be milled 10-feet at both ends of the overlay for a smooth transition.
- ___ New turn lanes must meet a minimum of 300-feet from the end of the taper on the new turn lane to the beginning of existing tapers. If the 300-foot spacing cannot be met, then a three-lane section with dual left turn will be required.

Street Name Markers and Traffic Control Requirements:

- ___ Provide Street, Stop, Dead End/No Outlet and Speed Limit signs (25 mph) as necessary
- ___ Provide the Current Sign detail available at the Santa Rosa County website
<https://www.santarosa.fl.gov/198/Subdivisions>
- ___ Add note: All striping must be thermoplastic paint. No pre-manufactured striping (tape) application allowed.
- ___ All Stop bars are to be 24 inches.
- ___ Provide a double solid yellow thermoplastic stripe at intersections for a minimum of 20 linear feet.
- ___ For all off-site roadway improvements, thermoplastic striping and reflectors are required per FDOT Index.
- ___ Sign lettering heights and retro reflectivity shall be in accordance with the MUTCD, latest edition.

Stormwater Management Requirements:

- ___ All finished floor elevations must be a minimum of 2.5 feet above the ground water elevation
- ___ A minimum of 15" diameter pipes are allowed with a maximum distance of 400 linear feet between structures
- ___ No metal pipes on allowed on the South End of the County
- ___ Only RCP (Class III), and A-2000 (double gasket), HPSTORM polypropylene are allowed under streets.
- ___ No ADS (HDPE) pipe will be allowed with a diameter greater than 36 inches.
- ___ Provide these notes for pipes located under streets:
 - o Backfill in 6-inch lifts
 - o Minimum cover of 12 inches
 - o Density testing is required every 2 vertical feet up to the bottom of the subgrade
 - o Density is to be a minimum of 95% per AASHTO T180
 - o All joints are to be wrapped in woven filter fabric.
- ___ For any ADS (HDPE) pipe used that is not under the roadways add the following notes to the plans:
 - o All ADS (HDPE) pipe must be installed as per the manufacture's recommendations.
 - o The Contractor must provide proof to the County that he is certified by the manufacturer to install ADS pipe.
 - o The County does not allow any deflections in ADS (HDPE) pipe once installed.
- ___ All pipes are to extend to the bottom of the pond. No flumes are allowed.
- ___ All pipe joints must be wrapped with woven filter cloth
- ___ Pipe connections to structures include concrete collars
- ___ Provide adequate Erosion Control methods with the necessary details
- ___ A maximum of 3 fps is allowed in open unpaved channels. These will be allowed on a very limited basis only in areas where there is no chance they would be filled by a homeowner/builder with a pool, retaining wall, fence, etc.
- ___ A maximum of 6 fps is allowed in open paved channels w/out dissipaters
- ___ All drainage easements are to be 20 feet wide. For deep pipe, large drainage easements may be required

- ___ All rear lot swales must be concrete including side slopes
- ___ Lots that are draining directly to ponds must be intercepted with a concrete swale in a public easement. The easement is not allowed to be part of the pond parcel.
- ___ Concrete swales in drainage easements must have a heavy raked finish and must be a minimum of 2500 psi
- ___ For any public pond, a 6-foot chain link fence, with (2) 9-foot gates in a 20-foot opening is required. The fence detail is to match the county specifications and is available at the Santa Rosa County website <https://www.santarosa.fl.gov/198/Subdivisions>
- ___ The fence is to be located on county property at the top of the berm or slope. In addition, the fence is to be located 4 feet off the property line and 1 foot from the beginning of the slope. If lots are filled to the fence, fence should be at the top of the slope. Expand pond parcel if necessary.
- ___ Provide a 12-foot, gravel pond access road to the bottom of the pond at a minimum 6:1 slope or extend out to the permanent pool elevation for wet ponds
- ___ No inlets may be located within the 12-foot pond access road
- ___ Bubble-up inlets are to be 1 foot above pond bottom. Include rip-rap around the structure.
- ___ Provide a minimum of a 0.5-foot freeboard in the ponds
- ___ Provide filter cloth under rip-rap
- ___ Provide pond cross-sections showing ground water depths, 3:1 side slope or flatter, and note that only Bahia sod is allowed in public ponds.
- ___ Ensure that the maximum pond stage does not back into the street. If any water backs up into pipes, pipes must be concrete or plastic, no metal. For calculation purposed, no storage is allowed in the pipes.
- ___ Provide a clay core on any pond berm that is greater than 3 feet high. Clay core is to be compacted to 95 % and keyed into the natural grade. All berms must have a minimum top width of 3 feet. All berms greater than 3 feet high must have a top width equal to the height of the berm.
- ___ Provide child proofing using pipe (not wire) for overflow flumes and inlets as necessary
- ___ Provide boards on top of skimmer for stand pipe
- ___ Anti-seep collars are required for all outfall pipes through pond berms to prevent water migration and berm blowout. Exception: No anti-seep collars will be allowed if the berm is 35-feet high or greater or is the storage x height > 3,000 ac-ft². A sand diaphragm per NRCS will then be required.
- ___ Ensure that no ponding occurs on adjacent properties

Stormwater Management Plan:

- ___ The drainage plan must be adequate and easily interpreted, and it must include any offsite runoff
- ___ For proposed projects that have a positive outfall provide calculations using the critical duration storm, up to, and including, a one hundred (100) year, 24-hour storm event.
- ___ For proposed projects that have NO positive outfall, via public right-of-way or onsite flowing ditch, provide calculations using the twenty-four (24) hour, one hundred (100) year frequency storm (13.44 inches over the entire site) with no offsite discharge. A runoff coefficient of one (1) shall be used for systems that are in closed basins.
- ___ The 100-year storm must be used for all drainage calculations, including but not limited to, pipe analysis, gutter spread, hydrographs, pre and post-development flow rates, swales and ditches, cross drains, etc.
- ___ Provide stormwater delineation maps for the overall basin (pre and post development) and sub-basins for all individual drainage components. Offsite areas must be included also. Offsite flow should be accommodated in the system. The discharge rate can be increased by offsite flow amount if offsite reaches discharge location at pre-development.
- ___ Provide inlet capacity calculations. Include any bypass flow when inlets are not located in a sag curve.
- ___ Provide inlet types with the throat width specified
- ___ Inlet throat widths should be dimensioned and ensure they match the calculations.
- ___ All curb inlets must have a manhole access. No metal grates are allowed in the throat on curb inlets.
- ___ Provide a detailed pipe analysis for surcharge and/or bubble up system. The system must be analyzed using the maximum tail water in the pond.
- ___ Provide a geotechnical report. The report must include borings in the right-of-way and percolation tests in all ponds.
- ___ Provide treatment for at least the first inch of runoff (no C values allowed to be used to reduce the treatment volume: 1-inch times the project area = treatment volume)
- ___ Show recovery of 1" volume and volume provided below the weir (72 hours for 1" volume, 15 days for max stage volume provided) for dry detention ponds

- ___ For wet retention ponds, the outfall structure shall be designed to drawdown one-half the required treatment volume between 48 and 60 hours and meet the NFWFMD requirements.
- ___ Drawdown rates are to be calculated using the bottom area only as the infiltration area.
- ___ A safety factor of 2 is required to be used with the percolation rates, no matter the source of the data with the exception for sand chimneys.
- ___ For any compensatory treatment areas, provide calculations that meets the pre vs post requirements for the 100-year critical storm event.
- ___ Provide a Positive discharge map route map for all developments that are in an open basin. The route map should clearly define the route of the stormwater discharge (post-development) to an open body of water. Overland flow over private property will require a hold harmless agreement from said private property owner.
- ___ Available runoff coefficients (“C”) are as follows:
 - Pre-development (undeveloped land) 0.25 max
 - Vegetative Areas 0.25 min
 - Impervious areas 0.90 min
 - Gravel 0.60 min
 - Composite “C” for subdivisions 0.40 min
- ___ Provide minimum allowable pre-development Time of Concentration and methodology used
- ___ The discharge point should mimic pre-development characteristics.
- ___ If Escambia County Type Inlets are being used, the following is the maximum allowable flow
 - Type ‘A’ Inlet 7-10 cfs
 - Type ‘A-1’ Inlet 7-10 cfs
 - Type Modified ‘A’ Inlet 14-20 cfs
 - Type Double A 14-20 cfs
- ___ Provide a specific lot grading plan to demonstrate runoff from lots reaches streets, swales, etc. Any runoff that cannot reach the stormwater system must be accounted for in pre vs post calculations for that specific basin to prove no adverse effects to the offsite property. Additional contours, FFE, spot elevations, etc may be required on a per lot basis.

Note: Some comments may not apply. If uncertain, contact one of the SRC Engineers @ 981-7100.

Note: These are general engineering requirements only. Additional requirements may be necessary depending on the characteristics of the subdivision.