



**ENGINEERS AND SURVEYORS INSTITUTE**  
 "A public/private partnership"  
**TOWN OF LEESBURG, VIRGINIA**  
**MINIMUM SUBMISSION REQUIREMENTS**



**FINAL SITE PLAN**

PROJECT NAME & #: \_\_\_\_\_  
 SUBMITTING FIRM: \_\_\_\_\_ PHONE #: \_\_\_\_\_  
 SUBMITTING ENGINEER: \_\_\_\_\_ E-MAIL ADDRESS: \_\_\_\_\_  
 REVIEW DATE: \_\_\_\_\_ ESI REVIEW TEAM: \_\_\_\_\_

All references are to Section 10-120 of the Town of Leesburg Design and Construction Standards Manual, unless otherwise noted.

(Column abbreviations: OK = Addressed; REV = Revisions required; N/A = Not Applicable)

Code Reference	Description	Sheet	OK	REV	N/A	Line
A.	Drawings clearly legible and submitted at a scale no more than one 1"=30'. Individual sheets 24" x 36", with an approved cover sheet attached					1
B.	All construction drawings shall bear the professional seal with date and signature of a design professional licensed to practice in the Commonwealth of Virginia					2
C.	A detailed cost estimate of all public improvements and a separate detailed cost estimate of all erosion control measures as shown on the construction drawings					3
(1)	<b>Public Improvements</b>					<b>4</b>
(c)	All cost estimates shall be certified by the design professional of record					
(2)	<b>Erosion and Sediment Control</b>					
A.	<b>Water System</b>					
(1)	Water system calculations, which demonstrate adequate domestic supply pressure and fire flow. Water system calculations shall be based upon the hydraulic conditions as predicted by the Town's water system computer model					5
(2)	State Health Department approval for all water system extensions serving 15 or more equivalent residential connections					6
(3)	Location and sizes of existing and proposed water mains, lines, meters, valves, connections and easements. Profile of existing water lines within the limits of work showing existing and proposed grades					7
(4)	Waterline profiles drawn to a scale of no greater than 1"=30' H, and 1"=5' V. Cover, clearance at crossings with other utilities, length of pipe, pipe material, joints, thrust restraint, pipe fittings and deflections, trenching and bedding requirements					
(5)	Location of existing and proposed fire hydrants, siamese and sprinkler connections, post indicator valves and other fittings, blow-offs and air release valves					8
(6)	Coverage plan for fire hydrants = 300-foot hose reach to most remote edge of any proposed structure or parking facility, whichever is					9

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Code Reference	Description	Sheet	OK	REV	N/A	Line
	farthest from the hydrant					
(7)	Pipe strength calculations for all water lines with depth of cover < 3' (if subject to vehicle load) or > 20'					10
(8)	Notes, references to construction standard details of this manual, and construction details for non-standard structures and installations necessary for the public water system					11
<b>B.</b>	<b>Sanitary Sewer System</b>					
(1)	Sanitary sewer system design comps.					12
(2)	State Health Department approval for all systems which will serve more than 400 persons					13
(3)	Plans drawn to a scale no greater than 1"=30' indicating the location and sizes of existing and proposed sanitary sewer lines, manholes, cleanouts, laterals and easements. Profile of existing sewer lines within the limits of work, showing existing and proposed grades					14
(4)	Public sanitary profiles drawn to a scale no greater than 1"=30' H and 1"=5' V cover, clearance, invert elevations, elevation of any 100-year flood plain within 100 feet of the project, length of pipe, pipe material, joints, thrust restraints, pipe fittings and deflections, trenching and bedding requirements					15
(5)	Capacity, complete engineering calculations, and full specifications of any proposed lift stations					16
(6)	Pipe strength calculations for all sanitary sewer lines with depth of cover < 3' (if subject to vehicle live load) or > 20'					17
(7)	Notes, references to construction standard details of this manual, and construction details for non-standard structures and installations necessary for the sanitary sewer system					18
<b>C.</b>	<b>Road System</b>					
(1)	Typical section of improvements to public roads and approved private road systems including common driveways and parking courts, and pavement design calculations if other than a local road. The typical road section shall specify the typical pavement section (referencing Virginia Department of Transportation materials), standard cross-slope, point of finish grade (PFG) for profile, design CBR compaction requirements, width of pavement, width of right-of-way or easement and proposed sidewalks, utility strips and tree planting areas within the right-of-way					19
(2)	Road cross-section at 50-foot intervals in all areas of transition, super-elevation, addition of lanes and crossovers. Cross-sections shall extend to existing grade on each side of road, shall be dimensioned from the road centerline to indicate width of lanes, pavement, slope, and right-of-way and including elevations at centerline, top of curb, top of bank, toe of bank, and point of grade line; this requirement may be met by reference to profile sheets if cross-sections are cut at stations with computed elevations shown on the profile sheets					
(3)	Plan and profiles of roads, drawn to a scale no greater than 1"=30' H, 1"=5' V, showing stations, percent of grades, elevations at 50-foot stations in vertical tangent sections and on 25-foot stations in vertical curves, spot elevations for all non-typical sections, locations					20

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Code Reference	Description	Sheet	OK	REV	N/A	Line
	of entrances, taper design and any necessary structures and roadway appurtenances					
(4)	Sight distance shown in plan and profile at all street intersections and road entrances, other than single-family driveways, unless warranted by unique topographical conditions. Distances shall be specifically delineated by dimensions or station					21
(5)	All public streets shall be classified by function and indicate the projected average daily traffic (ADT)					22
(6)	Location of existing and proposed traffic signals, stop and yield signs, posted speed limit signs					23
(7)	Existing and proposed streets, names, and widths of pavement, rights-of-way and entrances					24
(8)	Existing and projected traffic information necessary for the design of the road in compliance with Town or Virginia Department of Transportation requirements					25
(9)	Horizontal and vertical curve data, definition of curve control points (PI, PC, PT, PVI, PVR, etc.)					26
(10)	Information regarding the maintenance of any private streets, parking courts, or common driveways					
(11)	Notes, references to construction standard details, and construction details for non-standard structures and installations for the private road system					27
<b>D.</b>	<b>Parking Areas</b>					
(1)	Number of required and provided off-street parking spaces					28
(2)	Size and dimensions of off-street parking spaces, including the specific delineation of any parking spaces utilizing an overhang to reduce the length of parking spaces					29
<b>E.</b>	<b>Sidewalks and Trails</b>					
(1)	Location and dimension of all proposed public and private sidewalks and trails and their relationship to existing sidewalks or trails					30
(2)	A cross-section of all public sidewalks or trails					31
<b>F.</b>	<b>Plantings and Landscaping</b>					
F.	Landscaping plan drawn to a scale no greater than 1"=50', indicating the size, type and location of all proposed street trees, landscape materials, and buffer yards. The location of existing and proposed easements shall also be shown on the plan to avoid conflicts between proposed landscape areas and utility improvements					32
<b>G.</b>	<b>Storm Drainage System</b>					
(1)	Existing major sub basin drainage divides and all proposed drainage divides for proposed drainage facilities, shown at a scale 1"=50' max for on-site areas and 1"=200' max for off-site areas not exceeding 100 acres, and 1"=500' max for off-site areas exceeding 100 acres. Drainage divide maps for <u>flood plain studies only</u> may be at a scale 1"=2000' max. Drainage divide maps delineate existing major drainage areas and all proposed drainage areas, and indicating the amount of land within individual drainage areas and runoff coefficients. The plan sheet for proposed drainage divides must show the final grading of the site and all physical improvements and drainage elements thereon. Drainage areas must "close" and account					33

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Code Reference	Description	Sheet	OK	REV	N/A	Line
	for all on-site areas					
(2)	Storm drainage calculations to include runoff and pipe sizing, hydraulic grade line for pipes surcharged above the pipe crown for any portion of that pipe run, inlet sizing and channel and swale capacity, and system demonstrating adequacy of design for each element of the required public drainage system. Calculations for the drainage system shall be in the format of the VDOT Drainage Manual. Open channels shall be designed in compliance with the Virginia Erosion and Sedimentation Control Handbook, Chapter 5.					34
(3)	Plan and profile of the designed drainage system drawn to a max scale 1"=30' H, 1"=5' V. Plan and profile are required for underground conduits, at-grade conduits and open channel reaches in the system. Data required include: location, type, top elevation, inverts of structures, material, class, slope, length of pipe, cover over the top of the pipe, and clearance at all utility crossings					35
(4)	Location of 100-year flood plain for any water course (constant or intermittent, natural or manmade) within 25 feet of the subject property. Limits of the 100-year flood plain may be taken from existing records if the water course or 100-year water surface elevation is not modified by development on the subject property					36
(5)	Location, description, and certification that an "adequate" downstream channel, complying with the flood control stormwater management criteria and the discharge control stormwater management criteria of this Manual, exists or will be provided with the project. Description shall include channel cross-section at control points and profile to the point of adequacy. Plan and profile for the off-site channel shall be at a scale 1"=200' max					37
(6)	Overland relief for 100-year storm, showing that residential buildings or other structures will not be flooded or damaged. Overland relief shall be provided for all natural or manmade sumps where water may pond if the underground drainage system becomes inoperative. Overland relief easements must be provided to maintain the overland relief path and prevent flooding; the easement need not encompass the upstream ponded area					
(7)	Location and size of existing and proposed public drainage systems, connections, inlets and gutters, and natural and man-made channels					38
(8)	A stormwater management plan sheet and narrative with supporting calculations detailing the techniques proposed					39
(9)	Details and narrative defining special maintenance provisions (if any), which are over and above the requirements listed in the standard "stormwater detention facility" easement, for any proposed stormwater detention ponds					
(10)	Notes, references to construction standard details of this Manual, and construction details for non-standard structures and installations necessary for the storm drainage system					40
<b>H.</b>	<b>Lot Grading and Soils</b>					
(1)	Existing and proposed topography, vegetation and drainage areas to include specific location and disposition of specimen trees, and limits of clearing dimensioned from the perimeter boundary					41

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(2)	Topography shall extend a minimum of 25' beyond the site boundary and/or limits of work					
(3)	Contour interval shall be two feet and, in areas of less than four percent slope, spot elevations 50' on center					
(4)	Grading plans shall be at a scale no greater than 1"=30' and shall indicate physical improvements, drainage systems, finished floor and basement elevations, spot elevations at lot corners and all breaks in grade. Survey control point locations for grading operations shall be indicated					42
(5)	The applicant shall submit a complete detailed geotechnical investigation and sealed by, a registered VA P.E. The detailed investigation shall contain specific recommendations for problems anticipated during the proposed construction of required public improvements, overlot cuts or fills in excess of 6 feet, and slopes exceeding 1 vertical foot in 3 horizontal feet.					43
(5)	The design professional shall provide the Director with a written statement from the geotechnical engineer stating that he has reviewed the plans, as submitted, and that the plans were prepared in accordance with the recommendations of the geotechnical investigation					44
<b>I.</b>	<b>Erosion and Sediment Control</b>					
(1)	General description of project, type and nature of land disturbing activity, and amount of grading involved					45
(2)	Description of existing topography, vegetation and drainage					46
(3)	Description of neighboring and downstream properties which may be affected by the land disturbance					47
(4)	Specific erosion and sediment control plan sheet and narrative providing the details and calculations required to select and size the measures to be used, in compliance with the VESCH					48
(5)	Existing and proposed topography, vegetation and drainage area to erosion and sediment control devices, VESCH, and limits of clearing dimensioned from the perimeter boundary					49
(6)	Topography shall extend a minimum of 25 feet beyond the site boundary and or limits of work					50
(7)	Contour intervals shall be two feet, except in areas of less than four percent slope, where spot elevations 50 feet on center shall be provided					51
(8)	Location, description, and certification that an "adequate" downstream channel complying with the DCSM and VESCH, exists or will be provided with the project. Description shall include channel cross-section at control points and profile to the point of adequacy. Plan and profile for the off-site channel shall be at a scale 1"=200' max					
(9)	Information and specifications on how the site will be stabilized after construction is completed					
<b>J.</b>	<b>Other Information</b>					52
(1)	Public street security lighting plan					53
(2)	An onsite lighting plan indicating that all outdoor lighting fixtures exclusive of public street lights will not have a source of illumination					54

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	that is visible beyond the site or cause illumination of adjacent properties in excess of 0.5 foot-candles as measured at the site boundary. Levels of illumination at entrances may be higher					
(3)	Location of proposed electrical, telephone, cable television, and gas lines and associated easements					55
(4)	Boundary survey of the property with bearings and distances					56
(5)	Off-site right-of-way dedication, temporary construction easements, off-site easement documents, maintenance agreements and letters of permission (letters of permission only acceptable for private, non-bonded improvements on lands of others)					
(7)	All survey lot corners and construction benchmarks, together with their description, shall be provided					57

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