

# Construction Plans Submittal Checklist



Construction Plans constitute a full and complete set of engineered drawings necessary for final permitting and construction. Construction Plans must illustrate in appropriate detail 1) compliance of all site features with applicable UDO requirements, and 2) if a Master Plan was approved, conformity with the approved Master Plan (see UDO Sec. [15.8.2](#)).

## What must be submitted

Application forms and fees are submitted through the town's electronic plan review portal (<https://wakeforest.idtplans.com/secure/>). The Construction Plans and supporting documents are also submitted through the portal. Required contents for Construction Plans and required supporting documents are listed in this section. Detailed requirements for each item follow. Construction Plans should be submitted as a set of plans in a single PDF. The initial application must include all required contents, as must each subsequent resubmittal of plans, i.e., a complete set of plans must be resubmitted, regardless of the extent of revisions.

	<b>Required Construction Plans contents</b>	<b>When required</b>
A	Base information (to be included on each sheet)	All applications
B	Cover sheet	All applications
C	Existing conditions map	All applications
D	Demolition/Relocation plan	Required if any existing structures or utilities on the site are proposed to be removed or relocated
E	Site plan	All applications
F	Tree protection plan	Required if there are specimen trees or tree save areas on the development site
G	Erosion and Sedimentation Control (E&SC) Plan	Required if any land-disturbing activity (see UDO <a href="#">Sec. 17.4</a> ) is proposed
H	Grading plan	Required if any modification of existing topography is proposed
I	Storm drainage plan	Required if UDO stormwater management regulations apply to proposed activity (see UDO <a href="#">Sec. 12.5.1</a> )
J	Utility plan	Required if an extension of utilities or a modification of existing utilities or utility easements is proposed
K	Lighting plan	All applications
L	Pavement and signage plan	Required if the proposed development includes any traffic control/directional signage or pavement markings
M	Roadway plan	Required if the proposed development includes new streets, curb cuts, or driveways or requires street improvements
N	Landscape plan	Required if the proposed activity is subject to Chapter 8 of the UDO (see UDO <a href="#">Sec. 8.2</a> )
O	Details	All applications (only those details referenced in the Construction Plans are required)
	<b>Required supporting documents</b>	<b>When required</b>
P	Annexation Petition	Required if the lands are outside the Town's corporate boundary
Q	Agent Authorization Form	Required if the applicant is not the owner of record of the lands involved
R	Construction Management Plan	All applications
S	Floodplain Development Permit	Required for all development activities in the Special Flood Hazard Area
T	Land Disturbance Permit application materials	Required if any land-disturbing activity (see UDO <a href="#">Sec. 17.4</a> ) is proposed

# Construction Plans Submittal Checklist



U	Stormwater report	Required for all development activities within areas designated on the Stormwater Map, unless an exception applies (see <a href="#">UDO Sec. 12.5.1.A</a> ), or if any stormwater devices are proposed for the site
V	Wake County Street name approval	Required for developments that include new streets
W	Wake County Residential Development Notification application	Required for new residential developments in Wake County
X	Operations and Maintenance Agreement and Manual	Required for proposed SCMs
Y	Greenway wayfinding plan	Required if there is a private or public greenway associated with the proposed development
Z	NCDOT encroachment permits and driveway permits	Required for encroachments on NCDOT-maintained right-of-way and all driveways proposed onto NCDOT-maintained right-of-way
AA	Easements and/or agreements with adjacent property owners	Required for all easements shown on the Construction Plans
BB	Duke Energy or Wake Electric encroachment approvals	Required for all development activities that encroach on a Duke Energy or Wake Electric easement
CC	NCDEQ permits, determinations, and authorizations	Required if the proposed development activities require NCDEQ permits, determinations, or authorizations

## Detailed requirements

### A. Base information

*Each sheet in Construction plans must include the following:*

1. Name, address, telephone number, of engineer, architect, or landscape architect licensed in the State of North Carolina responsible for the plans
2. Date of drawing preparation and all revision dates (for resubmittals)
3. Sheet number and title
4. North arrow (except detail and elevation sheets)
5. The scale of the drawings listed in feet per inch in both graphic and numeric scale (not required for detail sheets). Engineering scale no smaller than 1" = 50'
6. Seal of Registered Design Professional registered in the State of North Carolina (signed and marked as preliminary)
7. Name of the proposed development and address in title block
8. Case number (ex. SP-21-01) in lower right corner (for resubmittals—this number is assigned once the project is submitted).
9. The following approval blocks in the lower right corner:

These plans have been electronically approved for construction by the Town of Wake Forest Public Works and Engineering Departments. This approval may not be altered once issued.

Public Works/Engineering

These plans have been electronically approved for construction by the Town of Wake Forest Planning Department. This approval may not be altered once issued.

Planning

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION  
Electronic Approval: This approval is being issued electronically. This approval is valid upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification of this approval once issued will invalidate this approval.

City of Raleigh Development Approval:

Raleigh Water Review Officer

10. If revised plans are submitted, each change from the previous submission must be identified through use of bold text (if a change in text) or through clouding

# Construction Plans Submittal Checklist



## B. Cover sheet

*The cover sheet includes basic information about the project. It should include the following:*

1. Name of proposed development and "Construction Plans" (e.g., "Oak Place Construction Plans")
2. Vicinity map at a scale of 1" = 400' including a north arrow and the project boundary clearly marked, with sufficient detail to locate the project in reference to nearby roads
3. Sheet index (the plans must be in the same order as this checklist)
4. General information, including the following:
  - i. Site address(es) and parcel PIN(s)
  - ii. Preparer's name, address, phone, email
  - iii. Owner's name, address, phone, email
  - iv. Developer's name, address, phone, email
  - v. Annexation number for the property, if applicable
  - vi. Zoning of the property and any overlay zoning
  - vii. The dates, resolution, or ordinance number(s), and details of any previously approved rezoning (including any conditions), master plan, variance, special use permit, or other development approval or permit for the project site relevant to the proposed development activity (please specify project numbers, as applicable)
5. Site data, including the following (depending on the proposed development activity, some items may not be applicable):
  - i. Gross site area, including gross area of all parcels
  - ii. Total area of land-disturbing activities
  - iii. Impervious surface area and percentage of gross site area (existing and proposed)
  - iv. Number of stormwater control measures (SCMs)
  - v. Whether the site contains any Special Flood Hazard Areas, and if it does, the FIRM Panel number and date
  - vi. Parks and open space area and percentage of gross site area (existing and proposed)
  - vii. Existing and proposed use
  - viii. Residential density (dwelling units per acre), based on the gross site area
  - ix. Number of phases and lots per phase
  - x. Existing and proposed gross square footage of building(s)
  - xi. Proposed gross square footage by use
- xii. Required and actual setbacks and frontage buildout requirements, if applicable
- xiii. Height and number of stories of proposed building(s)
- xiv. Number of vehicle parking spaces required and proposed, including ADA parking
- xv. Number of bicycle parking spaces required and proposed
- xvi. Number of driveways
- xvii. Amount of public right-of-way dedication
- xviii. Linear footage of all public improvements, including: streets, curb and gutter, storm drainage, sidewalks, multiuse paths, and greenways, with a breakdown by phase if the development is phased
- xix. Linear footage of private roadways
6. General notes, including the following, signed and dated by the owner where indicated (note on proposed signage is only required where future signage is shown on the plans):
  - i. All public facilities, including utilities, sidewalks, and handicap ramps, are to be constructed on all streets as specified by Town of Wake Forest standards. Such facilities approved by the Town of Wake Forest shall be installed as approved, unless a change is approved by the Town of Wake Forest.
  - ii. Execution of these Construction Plans by the review engineer for the Town of Wake Forest in no way limits the responsibility of the owner and engineer of record with regard to compliance with all federal, state, and local standards and/or conditions.
  - iii. Owner hereby certifies and agrees to take such action as may be required by the Town of Wake Forest to correct any errors, omissions, or noncompliance with Town standards and/or conditions described in these Construction Plans, including resubmission or re-execution of these Construction Plans with the appropriate corrections and/or revisions.  

_____ Owner	_____ Date
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  - iv. Any proposed signage shown on these Construction Plans is included to show the general location of future signage. Signage requires separate sign permit review and approval.



## C. Existing conditions map

*This is a scaled drawing showing the existing conditions on, and adjacent to, the site, including the following:*

1. Jurisdictional boundaries
2. PIN, owner(s), zoning, and current use
3. Boundaries of existing parcels and of the development site boundary with metes and bounds
4. Wetlands, streams, and associated buffers as determined by a licensed soil scientist, the Army Corps of Engineers, or the NCDEQ (on site)
5. Special Flood Hazard Areas (on site)
6. Watershed boundaries and associated drainageway buffers, with name and direction of flow of each drainageway labeled
7. Soil types (on site)
8. Contour lines at a minimum of 2-foot contours (on site)
9. Documented rare or protected species habitats on the site
10. Woodline, labeled with vegetation type (on site)
11. Forest stands or trees of uniform size and species (on site)
12. Specimen trees, including trees that are 20" DBH or larger (canopy) and trees that are 8" DBH or larger (understory), labeled with DBH and species (on site)
13. Fences or vegetation to be retained to meet buffer or landscaping requirements
14. Rights-of-way
15. Structures, labeled with year built and historical significance (on site)
16. Cemeteries
17. Bridges or culverts
18. Utilities (water, sewer, natural gas, electric, telephone, cable, fiber optic, etc.) above and/or below ground
19. Existing and proposed easements, including but not limited to, electric, water, sewer, storm, drainage, private street, gas, or other service-related easement, labeled with width and nature/purpose of easement
20. Driveways and curb cuts
21. Sidewalks, vehicular use areas, and loading areas
22. Streets (private and public), labeled with pavement width
23. Any other existing developed conditions on the site

## D. Demolition/Relocation plan

*This plan is required if any existing structures or utilities on the site are proposed to be removed or relocated. It is a scaled drawing that must show the following:*

1. All items required to be shown on the existing conditions map
2. Structures to be removed or relocated
3. Utilities to be removed or relocated

## E. Site plan

*This scaled drawing shows the proposed layout of the site. It includes the following (depending on the site conditions and the proposed development, some items may not be applicable):*

1. Site information table:
  - i. Site address(es) and parcel PIN(s)
  - ii. Zoning of the property and any overlay zoning; note if conditions of a development approval or permit apply (specific conditions only need be listed on the cover sheet)
  - iii. Gross site area, including gross area of all parcels
  - iv. Total area of land disturbing activity
  - v. Impervious surface area and percentage of gross site area (existing and proposed)
  - vi. Number of stormwater control measures (SCMs)
  - vii. Whether the site contains any Special Flood Hazard Areas, and if it does, the FIRM Panel number and date
  - viii. Parks and open space area and percentage of gross site area (existing and proposed)
  - ix. Required and actual setbacks and other dimensional requirements
2. Delineation of development phases, labeled and with specification of the open space, roadways, stormwater facilities, utilities, mailbox access, and other improvements to be completed in each phase
3. Lot lines, with lot area labeled (a table may be provided instead of labeling when the number of lots would make a table a more readable alternative)
4. Setbacks, labeled with dimensions
5. Sidewalks and other pedestrian areas, such as trails and greenways, labeled with dimensions and materials
6. Roads (public and private) and alleys, referenced to corresponding street section details

# Construction Plans Submittal Checklist



7. Frontage improvements and other improvements (e.g., greenways, multi-use paths) and right-of-way dedication per Comprehensive Transportation Plan
8. Improvements required per Traffic Impact Analysis, if applicable
9. Fire access roadway(s) with any required turnarounds, labeled with length
10. Driveways and curb cuts on the site and on adjoining properties (label dimensions)
11. Sight triangles labeled with dimensions
12. Vehicular use areas, with entrances/exits and drive aisles labeled with dimensions and circulation information
13. ADA and bicycle parking spaces, referenced to corresponding detail
14. Fire lanes, labeled with dimensions
15. Loading areas, labeled with dimensions (Construction Plans for Site Master Plans only)
16. Accessibility routes for all multi-family, commercial, and townhome sites label sidewalk with slope percentage for ADA Verification
17. Parks, open space, recreational areas, and greenways (public and private, if applicable), labeled with dimensions
18. Creeks, streams, dams, and ponds (detention, retention, and natural)
19. Buffers, including riparian and watershed buffers (must label Zone 1 and Zone 2)
20. Special Flood Hazard Areas
21. Easements (public and private)
22. Cemeteries to be retained
23. Existing structures to be retained
24. Principal structures, accessory structures, and site amenities, with building height (feet and stories), gross square footage, and proposed use labeled (Construction Plans for Site Master Plans only)
25. Fences and retaining walls (if residential development, must provide evidence of HOA wall maintenance easement)
26. Outdoor storage areas (Construction Plans for Site Master Plans only)
27. Garbage collection and disposal areas, with note describing method of garbage collection and disposal (Construction Plans for Site Master Plans only)
28. Existing signage to remain on the site and general location of future signage (Construction Plans for Site Master Plans only; see note on future signage on cover sheet requirements)
29. Cluster mailbox units, including parking spaces

## F. Tree protection plan

*This plan is required if there are specimen trees or tree save areas on the development site. The plan must show the following:*

1. Boundaries of existing parcels
2. Specimen trees and historic trees on the site, labeled with DBH, species, and whether the tree will be preserved or removed and replaced
3. Boundaries of tree save areas/tree protection zones, labeled with reference to tree protection area detail and with information about the trees to be preserved and any trees to be removed within each tree save area
4. Calculations for required specimen tree mitigation for all specimen trees proposed to be removed
5. Limits of disturbance
6. Boundaries of common open space and recreation areas (existing and proposed)
7. Easements, labeled with width and type
8. Roadways and driveways and associated rights-of-way or easements (existing and proposed)
9. Sight distance triangles for all road and driveway intersections
10. Buildings (existing and proposed)
11. Sidewalk(s), multi-use path(s), and greenway(s) and associated easements (existing and proposed)
12. Vehicular use areas (existing and proposed)
13. The following notes:
  - i. There shall be no clearing, excavation, soil compaction, or changes of the existing grade within the delineated tree save area or tree protection zones. Should the removal of underbrush vegetation take place, every effort should be made to minimize the disturbance.
  - ii. The storage of construction or other vehicles and/or equipment, site construction materials, portable buildings, including portable toilets, or other heavy objects is prohibited within delineated tree save areas and tree protection zones.
  - iii. The developer shall contact the Town of Wake Forest Planning Director prior to any development related activities, such as the erection of scaffolding, vehicle movement, trenching, or excavation, taking place inside tree save areas or tree protection zones. Such activities shall be subject to preventative measures the Planning Director determines appropriate in accordance with the Town of Wake Forest UDO.





## G. Erosion and Sedimentation Control (E&SC) Plan

*This plan is required if any land-disturbing activity is proposed (see UDO [Sec. 12.3.2](#)). It must show the following:*

1. Existing lot boundaries, with lots labeled with lot numbers and, for lots adjacent to the site, the owner of the lot
2. Contours (existing and proposed) with contour labels
3. Stream centerlines, stream buffers (Zones 1 and 2), wetlands, setbacks, and floodplains (1% and 0.2%)
4. Required trees save areas (per UDO)
5. Roads (existing and proposed) including temporary access roads
6. Boundaries of land disturbance, labeled with acreage
7. Areas proposed for stockpile, material storage, and/or processing of materials excavated
8. Erosion and sediment control measures, to scale, including the following:
  - i. Reference to legend
  - ii. Existing and proposed contours (including off-site) where necessary (design storage requirements must be maintained through all phases of construction)
9. Legend of all erosion and sediment control measures identifying the size, material, and capacity of each, with reference to the corresponding construction detail(s)
10. Permanent erosion/stormwater controls, including the following:
  - i. Stormwater calculations (pre-, post-, percent impervious)
  - ii. Proposed stormwater easements (recorded)
  - iii. Energy dissipaters
  - iv. Permanent ditches with matting
11. Contact information for person responsible for maintenance
12. The following notes to the E&SC sheets:
  - i. Skimmer basins required for drainage areas over 5 acres
  - ii. Construction entrance 50 foot minimum with woven 20# tensile strength fabric underneath
  - iii. Silt fence-metal posts with wire spaced at 6 feet
  - iv. Hardware cloth outlets (special sediment control fence)
  - v. Tree protection fence with "Do Not Enter Tree Protection Area" sign in English and Spanish (this is

required around the perimeter of the property, at buffer zones, and in tree save areas)

13. Construction sequence for each phase, including maintenance requirements for measures, and practices associated with the temporary stream crossings and bypasses, if any such crossings or bypasses are proposed
14. Locations where seven- or 14-day ground stabilization requirements apply
15. Information on vegetation stabilization, including seed type, fertilization type, rates, etc.
16. Reference detail sheet for NCG01 Ground Stabilization and Material Handling and Inspection, Recordkeeping and Reporting detail sheets, or equivalent
17. If polyacrylamide (PAM) is to be used on-site for any applications, calculations for application rates and specifications (soil tests must be taken to determine correct soil charge and product type prior to use)
18. The following Erosion Permit notes:
  - i. A LAND DISTURBING (E&SC) PERMIT IS REQUIRED FOR PROJECTS OVER 0.50 ACRE. IF MULTIPLE LOTS WITH LAND DISTURBANCE OVER 0.50 ACRE TOTAL ARE EITHER CONTIGUOUS OR NONCONTIGUOUS IN THE SAME SUBDIVISION, BY THE SAME BUILDER/OWNER, A LAND DISTURBING PERMIT IS REQUIRED. THE COST OF THE PLAN REVIEW AND PERMIT IS \$500/ACRE ROUNDED UP (1.1 ACRES = 2 ACRES @ \$500/ACRE = \$1,000). THE FEE IS DUE AT TIME OF PLAN SUBMITTAL. DEVELOPER IS RESPONSIBLE FOR INFORMING BUILDER OF E&SC PERMIT REQUIREMENTS ON INDIVIDUAL LOTS. DISCLAIMER: TOWN OF WAKE FOREST FEES AND CHARGES ARE SUBJECT TO CHANGE WITHOUT NOTICE. PLEASE CALL 919-435-9443 TO CONFIRM CURRENT FEES AND CHARGES.
  - ii. IF ADDITIONAL ACREAGE IS ADDED TO AN EXISTING PERMIT REVISED FORMS, PLANS, AND ANY ADDITIONAL FEES MUST BE SUBMITTED.
  - iii. IF OWNERSHIP OF A PROPERTY HAS CHANGED, A REVISED FRO MUST BE SUBMITTED.
  - iv. IF A PROPERTY IS TAKEN OVER BY THE BANK, THE BANK SHALL CONTACT THE TOWN AND REPAIR ALL EROSION CONTROL MEASURES TO TOWN/NCDENR STANDARDS. THEY SHALL ALSO SUBMIT A NEW FRO FORM.
  - v. IF A PROJECT IS NOT COMPLETE WITHIN TWO YEARS, THE PLANS MUST BE RENEWED AT \$250/ACRE. A REVISED SET OF PLANS MAY BE SUBMITTED IF ACREAGE HAS ALREADY BEEN DEVELOPED AND A CERTIFICATE OF OCCUPANCY HAS BEEN ISSUED.
  - vi. AN EROSION PRECONSTRUCTION MEETING MUST BE HELD WITH THE TOWN OF WAKE FOREST PRIOR TO START OF ANY WORK, INCLUDING INSTALLATION OF EROSION CONTROL MEASURES, DEMOLITION, CUTTING TREES, AND GRUBBING. CALL ENGINEERING AT (919) 435-9443 TO SET UP A MEETING. ALL PLANS MUST BE SIGNED AND COPIES RETURNED BACK TO THE TOWN 1 WEEK PRIOR TO PRECONSTRUCTION MEETING.

# Construction Plans Submittal Checklist



- vii. THE OWNER, GENERAL CONTRACTOR, GRADING COMPANY, AND EROSION CONTROL INSTALLER MUST BE PRESENT AT THE PRECONSTRUCTION MEETING.
- viii. THE E&SC PERMIT WILL BE DISTRIBUTED AT THIS MEETING.

- xii. IF SEDIMENT LEAVES THE SITE A FINE MAY BE ISSUED UP TO \$5,000 PER DAY PER VIOLATION. IF SEDIMENT ENTERS A BUFFER, STREAM, OR WETLAND NCDWQ WILL BE NOTIFIED. THEY MAY ISSUE FINES UP TO \$25,000 PER DAY PER VIOLATION.
- xiii. CALL THE TOWN UPON COMPLETION FOR A FINAL EROSION INSPECTION. A PUNCHLIST MAY BE GENERATED ADDRESSING ANY REMAINING ITEMS. THERE MUST BE 85% GROUND COVER ON THE ENTIRE SITE PRIOR TO A CERTIFICATE OF OCCUPANCY. IF THE SITE IS FOUND TO BE IN COMPLIANCE AN EROSION CERTIFICATE OF COMPLETION WILL BE ISSUED. AFTER THE COMPLETION OF THE PROJECT, SUBMIT A NOTICE OF TERMINATION TO END COVERAGE UNDER THE NCG010000 PERMIT.

## 19. The following E&SC construction sequence notes:

- i. PRIOR TO SCHEDULING THE PRECONSTRUCTION MEETING, THE EROSION AND SEDIMENT CONTROL SURETY MUST BE SUBMITTED TO THE TOWN OF WAKE FOREST. THE NCG0100000 CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BY THE PERMITTEE, WHEN APPLICABLE. A COPY OF THE COC MUST BE SUBMITTED TO THE TOWN.
- ii. AFTER THE PRE-CONSTRUCTION MEETING IS HELD, THE CONTRACTOR CAN INSTALL INITIAL EROSION CONTROL MEASURES ONLY. THIS INCLUDES BUT IS NOT LIMITED TO CONSTRUCTION ENTRANCE, SILT FENCE, PERIMETER DIVERSION DITCH, CHECK DAMS (ROCK OR WADDLE TYPE).
- iii. TREE PROTECTION FENCE, EXISTING INLET PROTECTION, SKIMMER SEDIMENT BASINS, AND SEDIMENT TRAPS. CLEAR ONLY AS NECESSARY TO INSTALL THESE MEASURES.
- iv. CONTRACTOR IS RESPONSIBLE FOR E&SC WEEKLY INSTALLATION AND MAINTENANCE LOG INCLUDING DATES OF TEMPORARY/PERMANENT GROUND COVER, A RAIN GAUGE, COPY OF TOWF SIGNED PLANS ONSITE, REVISED SIGNED PLANS, NPDES LOG, AND CONSTRUCTION BOX MUST BE PRESENT AND EASILY ACCESSIBLE ONSITE.
- v. ONCE MEASURES ARE INSTALLED, CONTRACTOR/FRO TO CALL TOWF FOR AN INITIAL INSPECTION. IF SITE PASSES INSPECTION, A CERTIFICATE OF COMPLIANCE WILL BE ISSUED. CONTRACTOR CAN NOW BEGIN CLEARING, GRUBBING, AND GRADING.
- vi. CONTRACTOR TO MAINTAIN ACCESS ROAD FOR EMERGENCIES AT ALL TIMES.
- vii. PHASED PROJECT TO LEAVE AS LITTLE GROUND OPEN AS POSSIBLE.
- viii. TEMPORARILY SEED, STRAW AND TACK OR HYDROSEED WITHIN 14 DAYS OF ANY PHASE OF GRADING, INCLUDING SLOPES. SEED BASINS AND DITCHES IMMEDIATELY AFTER CONSTRUCTION.
- ix. PRIOR TO REMOVAL OF TEMPORARY MEASURES, TOWN MUST APPROVE REMOVAL. ALL AREAS ABOVE TEMPORARY MEASURE MUST HAVE 85% GROUND COVER.
- x. THE TOWN OF WAKE FOREST CONSTRUCTION INSPECTOR WILL EVALUATE THE SITE AT LEAST ONCE A MONTH. A COPY OF THE INSPECTION FORM WILL BE EMAILED TO THE FRO. THE WEEKLY EROSION LOG AND NPDES LOG MUST BE ONSITE AND AVAILABLE FOR REVIEW.
- xi. IF THE SITE IS FOUND OUT OF COMPLIANCE A NOTICE OF VIOLATION WILL BE ISSUED GIVING THE CONTRACTOR/FRO 7 WORKING DAYS TO REMEDY THE PROBLEM. IF THE SITUATION IS NOT RESOLVED WITHIN THE TIME PERIOD A FINE MAY BE ISSUED.

## H. Grading plan

*This plan is required if any modification of existing topography is proposed. It must show the following:*

1. Contours (existing and proposed), with minimum 2-foot contours and heavier line weight for proposed grades, labeled with grade height
2. Finished floor elevations
3. For lots adjacent to or within Special Flood Hazard Areas, Base Flood Elevation and ground elevation
4. Proposed storm structures, labeled with rim elevation, with pipes grayed out
5. Retaining walls, labeled with top of wall (TW) and bottom of wall (BW) elevations
6. Permanent swale/ditches, labeled with dimensions and lining; provide cross sections if needed
7. Stream centerlines, stream buffers (Zones 1 and 2), wetlands, and floodplains (1% and 0.2%)

## I. Storm drainage plan

*This plan is required if the stormwater management regulations in the UDO apply to the proposed activity (see UDO [Sec. 12.5.1](#)). The plan must show the following:*

1. Horizontal clearance from other subsurface utilities and easements
2. Linear footage, slope, and material of all storm drainage facilities:
  - i. Plan labels should correspond to associated stormwater calculations
  - ii. All storm drainage pipes located within rights-of-way or Town easements shall be a minimum of 15" in diameter and of RCP material
3. All proposed and existing easements for drainage, and for SCM access and maintenance (all easements should extend to the public ROW)

# Construction Plans Submittal Checklist



4. Outfall protection and diffused flow design
5. Required tree save areas and protection measures
6. Stream centerlines, stream buffers (Zones 1 and 2), wetlands, and floodplains (1% and 0.2%)
7. Water Supply Watershed buffer, if applicable
8. Details of all proposed Stormwater Control Measures (SCMs), sufficient to provide information to construct and review the structure for compliance with the NC Stormwater Design Manual (additional sheets may be needed):
  - i. Consideration for safety and access should be noted/shown
  - ii. A minimum one-foot freeboard for 100-yr storm must be demonstrated
  - iii. Design storm elevations should be shown on the profile view
  - iv. Landscaping requirements must be noted or a reference to the landscaping plan provided

## J. Utility plan

*This plan is required if the proposed activity proposes any extension of utilities or any modification of existing utilities or utility easements. It must show the following:*

1. Subsurface utilities and easements
2. Detailed water and sewer information per City of Raleigh Water
3. Profiles for proposed utilities systems, including water, sewer, and storm drainage systems (this can be included with road profiles or can be separated for clarity), showing the following:
  - i. Ground elevations (existing and proposed)
  - ii. Structure information (such as top elevation and invert elevation)
  - iii. Vertical clearance at utility crossings
4. Hydrants and Fire Department Connections (FDCs)
5. Transformer pads (note spacing and truck accessibility requirements)

## K. Lighting plan

*This plan must include the following information:*

1. Location of light poles and fixtures indicating the height and orientation of each fixture, with reference to corresponding detail(s)
2. Proposed hours when the fixture will be turned on and any proposed use of motion activation and/or timing devices
3. Photometric report

4. Table of light levels (taking into consideration all proposed, existing, and approved lighting) including the following illumination information for the applicable site areas (e.g., property line, parking areas, streets – see UDO Sec. 10.3.2 and Sec. 10.3.7):
  - i. Minimum
  - ii. Average
  - iii. Maximum
  - iv. Minimum/average ratio

## L. Pavement and signage plan

*This plan is required if the proposed development includes traffic control/directional signage and/or pavement markings, such as on streets, alleys, drive aisles, loading areas, etc. The plan must show the following:*

1. Traffic control signage and pavement marking and its conformance to the MSSD (note: thermoplastic required for crosswalks, stop bars, and directional markings)
2. Location of stop bars, crosswalks, parking
3. Parallel street parking
4. Reference to submitted greenway wayfinding plan, if applicable (see Y below)

## M. Roadway plan

*This plan is required if the proposed development includes new streets, curb cuts, or driveways or requires street improvements. It must show the following:*

1. Streets and rights-of-way showing existing and proposed dimensions in accordance with Wake Forest Comprehensive Transportation Plan, with reference to street sections detail for any new roadways or existing roadways being widened having curb and gutter added
2. Location and dimensions of existing and proposed driveways or curb cuts on site and adjoining properties





## N. Landscape plan

*This plan is required if the proposed activity is subject to Chapter 8 of the UDO (see UDO [Sec. 8.2](#)). A landscape plan is a scaled plan shows proposed landscaping and buffering on the site and how the site will comply with the applicable UDO standards. It must show the following:*

1. Parcel boundaries
2. Limits of disturbance
3. Cemeteries, with reference to cemetery detail
4. Boundaries of common open space and recreation areas
5. Easements, labeled with width and type
6. Roadways and driveways and associated rights-of-way or easements
7. Sight distance triangles for all road and driveway intersections
8. Sidewalk(s), multi-use path(s), and greenway(s) and associated easements
9. Vehicular use areas and loading areas
10. Buildings
11. Light poles (street and other), labeled with height and distance from trees
12. Fences, walls, retaining walls, and berms, labeled with height and material
13. Table showing calculations for the following:
  - i. Minimum canopy coverage (required and provided)
  - ii. Mitigation for specimen tree removal (required and provided)
  - iii. Credits for tree preservation
14. Boundaries of tree save areas/tree protection zones, labeled with reference to tree protection area detail (see UDO Sec. 8.4)
15. Required buffers, labeled with buffer type and width (see UDO Sec. 8.5)
16. Planting strips and/or tree pits proposed to contain required street trees (see UDO Sec. 8.6)
17. Table for each perimeter and street yard buffer that includes:
  - i. Buffer type and option
  - ii. Length (linear feet) of buffer
  - iii. Number of required plantings (including supporting calculation)
  - iv. Number of provided plantings
  - v. Location, height, material, and graphic of any fences and walls proposed as buffer screening
- (may reference detail sheet in lieu of showing on plan)
- vi. Location, width, and height of any proposed berms
18. Vehicular use area planting areas, including:
  - i. Perimeter landscaping strips between vehicular use areas and adjacent streets and property lines, labeled with width (see UDO Sec. 8.7.1)
  - ii. Planting areas and strips within and between parking bays, labeled with dimensions and area (see UDO Sec. 8.7.2)
19. Dumpsters, loading docks, outdoor storage areas, and utility structures, which are visible from a public street or adjacent property line, and proposed screening (see UDO Sec. 8.8)
20. Existing vegetation within perimeter and street yard buffers to be used towards required buffer screening (supported by a tree survey or other appropriate documentation), labeled with species and height
21. Plantings, labeled with reference to plant schedule and quantities (in reference to groupings)
22. Plant schedule that includes the following:
  - i. Plant type (canopy, understory, shrubs, and groundcover/grasses)
  - ii. Key symbol (e.g., "AR" for Acer Rubrum")
  - iii. Quantity
  - iv. Scientific name
  - v. Common name
  - vi. Caliper at planting
  - vii. Height at planting
  - viii. Root (e.g., B&B)
  - ix. Spacing
  - x. Location (street tree, VUA, buffer etc.)
23. The following notes:
  - i. All landscaping shall be maintained in perpetuity in accordance with Wake Forest UDO standards
  - ii. All hotboxes and other on ground/free standing mechanical equipment shall be screened with vegetation prior to the issuance of a Certificate of Compliance/Occupancy

# Construction Plans Submittal Checklist



## O. Details

*Sheets showing the following details must be included as the last items in the Construction Plans, where indicated in the plans checklists above. Reference applicable details from the [MSSD](#) and City of Raleigh.*

### 1. Street sections

*For each new street or street proposed to be modified, provide the following (using scaled drawings, images, labels, and/or tables, as appropriate):*

- i. Cross section, consistent with Comprehensive Transportation Plan and UDO requirements
- ii. Pavement schedule for all asphalt and concrete pavement, including private infrastructure

### 2. Pavement sections

### 3. ADA parking sign

### 4. Bicycle parking

*For each area where bicycle parking is proposed, the following must be provided:*

- i. Scaled drawing or photograph of proposed bike racks
- ii. Scaled drawing of proposed configuration of the bicycle parking area, showing the location of bike racks in relation to any abutting buildings, fences, walls, curbs, landscaping, or other features, and the location of the bicycle parking area in relation to sidewalks and the building(s) served by the bicycle parking
- iii. Proposed surfacing of the bicycle parking area

### 5. Commercial container enclosure

*For each commercial container enclosure, the following must be shown in sufficient detail to determine compliance with UDO standards:*

- i. Proposed plantings, labeled with species, size, spacing, etc.
- ii. Proposed berm, including dimensions and vegetative cover
- iii. Proposed fences and walls, and proposed gates, specifying materials, dimensions, and method for securing gates

### 6. Tree protection area

*For each tree save area/tree protection zone, the following must be shown in sufficient detail to determine compliance with UDO standards:*

- i. Critical root zones of all trees (for stands or larger groupings, critical root zones need be

shown only along the periphery of the tree save area)

- ii. Proposed fencing, including silt protection measures
- iii. Proposed signage pertaining to the tree protection zone

### 7. Cemetery protection

*For each cemetery to be retained on the site, the following must be shown in sufficient detail to determine compliance with UDO standards:*

- i. Protective temporary fencing and signage around the boundaries of the cemetery to be maintained during ALL construction activities with the following label: "do not enter/sensitive area"
- ii. Fence and gate to be installed with project is complete

### 8. Erosion and sediment control measures

*For each erosion and sediment control measure, the following must be shown in sufficient detail to determine compliance with UDO standards and state requirements:*

- i. Concrete washout pits

### 9. NCG01 Ground Stabilization and Material Handling and Inspection, Recordkeeping and Reporting detail sheets, or equivalent

### 10. Drainage

*Standard Town details per MSSD 9.50 – 9.75, as applicable*

### 11. Lighting

*For each pole or fixture, provide the following (using scaled drawings, images, labels, and/or tables, as appropriate):*

- i. Height (fixture and pole, if applicable)
- ii. Color and material (fixture and pole, if applicable)
- iii. Type of shielding of the fixture (e.g., full cutoff)
- iv. Manufacturer's specifications sheet indicating model and type of fixture, source of illumination, light output, energy consumption, etc.
- v. Image of fixture, including how the fixture is proposed to be mounted on the pole or other structure or building

### 12. City of Raleigh Utilities

### 13. Color photo of retaining wall material



## P. Annexation Petition

*If lands are outside the Town's corporate boundary, annexation is required prior to construction plan approval (the annexation petition may be submitted and reviewed concurrently with the construction plans application). See [Annexation Petition Submittal Checklist](#).*

## Q. Agent Authorization Form

*If the applicant is not the owner(s) of record of the lands involved, a completed [agent authorization form](#) signed by the owner(s) of record must be submitted with the application.*

## R. Construction Management Plan

*A Construction Management Plan is required for all applications. It must address the following:*

1. Traffic control
2. Access
3. Parking

## S. Floodplain Development Permit application materials

*Include Floodplain Development Permit application materials for development activities proposed in the Special Flood Hazard Area including, but not limited to filling, grading, excavation, drilling, storage of material, stream crossings, infrastructure, etc. Materials should include:*

1. FIRM map (identify site)
2. FEMA approval letter or No-Rise Certification
3. Additional materials necessary to show compliance with UDO [Sec. 12.4.2](#)

## T. Land Disturbance Permit application materials

*Include the following if land-disturbing activity is proposed. If approved, a Land Disturbance Permit will be issued by the Town after Construction Plans approval and provided to the applicant at the pre-construction meeting.*

1. Copy of Town of Wake Forest Land Disturbing (E&SC) Permit Application, Plan Checklist, and Financially Responsible Owner Form
2. Project narrative describing the nature and purpose of construction activities.
3. Erosion control phasing sequence
4. E&SC Calculations for temporary and permanent measures
5. Stormwater calculations, including the construction phases
6. Copy of USGS quadrangle and NCRS Soils maps
7. Name of the river basin and name and classification of receiving water course.
8. Erosion and Sediment Control Performance Security Estimate
9. DWQ 401 Permit
10. USACOE 404 Permit
11. Location/Vicinity map
12. Drainage area map showing drainage to all proposed measures

## U. Stormwater report

*A stormwater report is required for all development activities within areas designated on the Stormwater Map, unless an exception applies (see [UDO Sec. 12.5.1.A](#)), or if any stormwater devices are proposed for the site. Stormwater reports must include the following:*

1. Narrative or abstract of stormwater management approach
2. Preliminary runoff calculations report for all proposed storm drainage structures including, but not limited to culverts, storm drain systems, inlets, ditches, open channels, SCMs, outlet protection, etc.
3. Pre- and Post-Development Drainage Area Maps (on a full-size plan sheet) Drainage area maps both overall and site specific. Must include aerial imagery, soils overlay, and impervious surface
4. Calculations of pre- vs. post- development runoff
5. The site area and the corresponding watershed area for the proposed improvements shall be delineated on the mapping
6. USGS Quad map (identify site)
7. FIRM map (identify site)
8. Wake County Soil Survey (1970 version) map (identify site)
9. Calculations for nutrient removal, if necessary
10. Runoff coefficient calculations:
  - i. Rational Formula (up to 50 acres)



- ii. SCS Method
- 11. Stormwater Quality (85% TSS removal)/Quantity Stormwater Control Measures (SCMs)
- 12. Calculations for Stormwater Control Measures including hydrographs, storage calculations, buoyancy calculations, drawdown calculations, etc.
- 13. Analysis of the stormwater runoff impacts that the proposed development or construction activity will have on the surrounding properties both upstream and downstream
- 14. HGL profiles for required design and check storms.
- 15. SCM detention routing (1, 2, 10, 25, and 100-year storm event)
- 16. Stormwater management checklist

- 2. Table listing number of signs and corresponding detail from the [Wake Forest Parks & Greenways Wayfinding Design Workbook](#)

## V. Wake County Street name approval

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*Wake County approves new street names. If the development includes new streets, evidence of Wake County's approval of the street names must be provided. See the county's [Road Name Approval Guide](#).*

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## W. Wake County Residential Development Notification application

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*Required for new residential developments in Wake County. The [online form](#) is submitted to the Wake County Public School System.*

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## X. Operations and Maintenance Agreement and Manual

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*This draft agreement and manual are required for proposed SCMs. It must include the following:*

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- 1. Draft Operations and Maintenance Agreement
- 2. Draft Operations and Maintenance Manual

## Y. Greenway wayfinding plan

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*This plan is required if there is a private or public greenway associated with the proposed development. It should include:*

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- 1. Plan set showing location of signs, sign type, and emergency code and directional information, if applicable