



New Services Site Plan Review Checklist

General Comments

- Set of Electronic Utility Plans (full sheet, to scale)
- Vicinity Map with Street names and North Arrow
- North Arrow
- The Project Name, Address and Tax Parcel number of the project
- Name, Address and Phone number of contact person
- The size, type and location of proposed services and connections shall be clearly marked, including the connection points to our main
- Verify if GIS reflects all existing water or sewer mains surrounding site.
 - Site Plan to reflect ALL surrounding existing water and sewer mains
 - Confirm correct locations and sizes of existing water and sewer mains
- Verify there are no conflicting fences, telephone poles, etc. and that the proposed service locations have no conflicts in Google Street view
- Add Note to Site Plan: “Approval for backflow prevention requirements is not part of this review. Backflow Prevention review entails plan submittal via Mecklenburg County’s Code Enforcement permitting process at the time of application for building permits. Backflow program requirements are available at <http://charlottenc.gov/Water/Pages/BackflowConstructionGuidelines.aspx> . Please contact Mark Bullins at 704-432-5800 for more information.” Any revision to the service configurations and/or meter locations will require a resubmittal to Backflow for review.
 - Verify water service configurations reflected on new service site plan matches water service configurations on backflow plans
- Engineer shall note on Site Plan: “Customer is responsible for staking site as necessary to determine service locations and elevations prior to Charlotte Water Contractor mobilizing to install services.”
- Engineer shall note on Site Plan: “Customer is responsible for relocating any applicable conflicting utilities necessary to complete service installations”.

Road Comments

- _____ Complex Site _____ Non-Complex Site

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- Located inside CBD? ____ Yes ____ No
- If site is located inside CBD, is it located in the Tryon Street 'no cut' vicinity?
____ Yes ____ No
- NCDOT, CDOT or Town Maintained Road? ____ Yes ____ No
 - Indicate Governing Agency maintaining Road
 - If NCDOT, meter shall be located outside Road R/W
 - If CDOT or Town maintained, water meter shall be located inside Road R/W unless site constraints require meter to be located outside Road R/W
- Does site contain brick pavers? ____ Yes ____ No
 - If site contains brick pavers, indicate on site plan that "on site contractor shall be responsible for removing and replacing brick pavers"
 - If site sidewalk contains brick pavers inside the CBD, verify with CDOT if recessed meter vault door is required to include brick pavers
 - If recessed vault door is required, indicate appropriate traffic rated recessed vault door on plans and request quote from contractor.
 - Additional fees for recessed vault door shall be included in quote to customer
- Is a Fire Lane proposed? ____ Yes ____ No
 - Fire Lane limits shall clearly be depicted if applicable. Engineer to indicate.
- Determine age of CDOT Pavement per internal Virtual Charlotte website layer
 - Indicate age of pavement on site plan
 - If pavement age is less than 2 years, CDOT will require milling and resurfacing by CLT Water for 50 LF in each direction from trench cut limits and for the width of a lane.

General Service Comments

- **Identify:** ____ Water and Sewer Services ____ Water Only ____ Sewer Only
- Private utility easement **required** for private water/sewer lines encroaching into adjacent property that will not be served by new services
- Full extent of private water and/or sewer shall be reflected on site plan including final structure utilizing private system
- All Proposed service connections must be perpendicular to existing main unless site conditions preventing this are identified on Plan

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- Confirm whether or not angled tap is allowed if proposed
- Existing utilities (telephone, fiber optic, gas, electric, cable) or any other structures that will impact the location or installation of service connections shall be clearly labeled with:
 - Size, Material and Owner
- Soft Dig and Soft Dig Report(s) required for existing utilities in close proximity to proposed services? ___Yes ___No
 - Existing Utilities requiring soft digs are as follows:
 - Anything inside the CBD and Major Thoroughfares where elevations may not be determined by referencing existing inverts.
 - Water Lines
 - Duct Banks
 - Major Gas Lines (4" and larger)
 - Power Conduits
 - Other significant utilities
 - Sewer Lines if inverts cannot be accessed to determine slope and elevation
 - Storm Lines if inverts cannot be accessed to determine slope and elevation
 - Soft Dig elevations shall be reflected on Site Plan and Report provided
- Water and Sewer Services are **NOT** allowed within the curb and gutter radius point
- Site Plan shall indicate Installation Method of Services
 - Bore, Punch, Directional Drill or Open Cut
 - Applicable Trench, Street Cut, Bore Pit/Receiving Pit, Punching Pit, Directional Drill Pit Dimensions shall be indicated
 - NCDOT and CDOT Thoroughfares require Bores, Punch's or Directional Drills for long side taps to prevent pavement cuts
 - If bore is required, site plan shall indicate the following:
 - Casing Diameter, Casing Thickness, LF of Casing, LF of **DIP** pipe inside Casing, Distance of Bore and Receiving Pits from EOP
 - Distance of Pits shall meet 1:1 from EOP
- Note on site plan for Engineer to "show and label any applicable existing services to be dismantled".

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- Circle new proposed services, existing services to be dismantled and proposed public fire hydrants on site plans.
- Inset of water services and meters shall be provided reflecting proposed topography contours to help determine meter placements.
- Engineer shall provide Final Elevation on site plans for all 1.5" and larger vaults

Water Service Comments

- Label size and material of all surrounding existing water mains
- Private Water Permit Required? Yes No
 - If "Yes", request private water plans
- Connections to existing water main shall be labeled with proper size TS & V or Tapping Saddle & Corp. Stop
- Full Body DI TS & V's are required when tapping size on size
 - Size on size taps are prohibited when existing water mains are galvanized due to the durability of the existing line and necessity to eliminate galvanized material in our system.
- RJ DIP service lines shall be labeled accordingly for all 3" and larger water services.
- Site Plan shall include a profile of long side water services if being bored or crossing multiple existing underground utilities
- Split Water Services are **ONLY** allowed to split from long side single Fire Lines and are preferred when applicable. Comment accordingly.
 - Verify if Fire Department will allow services to split from fire line when commenting for services to split from long side fire lines
 - All short side water services connecting to existing main outside pavement shall have separate connections to main
- Manifold for Water Services Proposed? Yes No
 - If "Yes", do lots to be served meet the Manifold Policy? Yes No
 - Are the Engineer's calculations provided on the site plan indicating sufficient pressure to the highest plumbing fixture furthest away per the Manifold Policy?
- Meter Vaults shall be shown to scale to assure conflicts will not be present with existing utilities or site constraints
- Is water meter in vicinity of Fire Lane? Yes No

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- If “Yes”, meter vault shall be completely outside of fire lane limits
- Are Bollards required to protect meter vaults in close proximity to travel lanes or parking lots? ___ Yes ___ No
 - If “Yes”, site plan shall reflect appropriate number of Bollards
- Will water service serve a High Rise Commercial Building (70’ or higher)? ___ Yes ___ No
 - If “Yes”, ensure dual Fire Line connections are proposed to comply with Fire Code
 - If “Yes”, ensure “In-Line Valve” is proposed between Fire Lines connecting to same existing water main
 - If “Yes”, ensure additional services are **NOT** proposed to split from dual Fire Lines
- Are Water Services in close proximity to CATS light rail? ___ Yes ___ No
 - If “Yes”, do Services require Cathodic Protection? ___ Yes ___ No
 - If “Yes”, Site Plan to reflect appropriate Cathodic Protection
- Is a public FH proposed?
 - If “Yes”, analyze system to determine if existing FH spacing requirements are met
 - If existing FH spacing requirements are met, a public FH will **NOT** be allowed and a fire line service will be required
 - If existing FH spacing requirements are not met, a public FH may potentially be allowed based on further analysis of the system by the CLT Water Engineer
 - The following requirements shall be met when a new public FH is allowed:
 - verify it is located behind the road ditch line if there is no curb
 - proposed and relocated FH’s shall be a minimum of 6’ BOC and outside of sidewalks

Transmission Water Main Service Taps

- Water Main Extensions are required when tapping the following mains:
 - **30-Inch and Larger Transmission Water Mains**
 - Singular Residential site
 - Singular Commercial site
 - Multiple residential sites

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- May be applied as singular site initially but surrounding vacant lots exist that may require additional new service taps in the future
 - Multiple Commercial sites
 - May be applied as singular site initially but surrounding vacant lots exist that may require additional new service taps in the future
- Water Main Extensions are NOT required when tapping the following mains:
 - **20-Inch through 24-Inch Transmission Water Mains**
 - New services acceptable to directly tap 20-inch through 24-inch water mains if smaller mains are not accessible (regardless of size or number of service requests)
 - **16-Inch and Smaller Water Mains**
 - No analysis of the system is required

Sewer Service Comments

- Label size and material of all surrounding existing sewer mains
- Flow Direction of Existing Sewer Mains shall be provided
- WWTP site discharges to shall be labeled
 - IF Mallard Creek, does sewer lateral connect to PCB Contaminated Sewer Line? ___Yes ___No
 - If Yes, additional measures shall be taken
- Clean Out / Private MH shall always be located outside Road R/W
- Profile of sewer lateral required, regardless of size
- LF, Size, Material and Slope shall be indicated for all proposed sewer laterals in plan and profile
 - Maximum slope is 10.00% for all sewer laterals
 - Minimum slope is 1.00% for 4" and 6" sewer laterals and 0.60% for 8" and larger sewer laterals
- Laterals connecting directly to sewer mains (not MH's) shall be shown connecting at a 45 degree angle from the pipe and bending shortly after to meet desired slope.
- 6" and Larger Sewer Laterals shall connect to existing main at existing MH or with proposed doghouse MH unless the existing public sewer line size is double the size of the proposed lateral.

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- 8" sewer laterals required when serving 2 or more structures (residential or commercial)
- Existing and Proposed invert elevations required in plan and profile
 - Invert shall be 0.2' above invert out for laterals same size as mains
 - Invert shall match crowns for laterals smaller than existing mains
 - Proposed outside drop structures shall meet drop requirements and provide additional drop invert
 - Drop invert shall be a minimum 5' from Rim and Drop Structure shall be a minimum 2.5'
 - Inside drops only allowed inside 5' diameter MH's and larger
 - Drops shall not be installed in MH's less than 10' deep unless a utility conflict requires it
- Will property discharge into gravity sewer lateral with pressurized main?
 - ___ Yes ___ No
 - If "Yes", ensure private manhole is proposed just outside Road R/W to accept flow from private force main
- Will private Sewer Lateral serve 2 Structures or more? ___ Yes ___ No
 - If "Yes", confirm Private Sewer Permit has been received in PLL "CAR" case

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