



# **Utility Standards and Provisions**

**December 2023**

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## **Utility Right-of-Way Management Program Standards and Provisions 2023**

The following standards and provisions are intended to provide reasonable parameters to the owners of public and private utility facilities located in the existing street right-of-way (R/W). As of January 1, 2008, these standards govern the installation, upgrade, relocation, and maintenance of all utility facilities. Please note that the adoption of these standards is not a mandate for utility companies to improve their existing systems to meet the defined standards. However, the City of Charlotte's expectation is that utility companies will comply with the standards on all future installation, upgrade, relocation, and maintenance projects.

The City of Charlotte recognizes that past facilities may have been installed varied depending on the environmental and economic conditions of any given location. The City of Charlotte further understands that accommodations may need to be made depending on the specifics of a given project. Therefore, it is the intent of the City of Charlotte to work closely with the utility companies to find a mutually agreeable solution to all reasonable requests when the standards and applicable conditions pose unique challenges. Finally, please note that quicker review times can be expected when projects have no or few deviations from the standards.

## I. Definitions

**Abandoned Facilities** – Any structure that has not been occupied or used, by its owner or by some person acting under the authority of its owner, for a continuous period of 30 days or longer.<sup>1</sup>

**Addendum** – An amendment or change order to the original construction, reflected on a set of plans, generally before the construction phase has begun.

**As-built Plans** – Plans that show the final design specifications for all utility management facilities and practices and the field location, size, and depth of all measures, controls, and devices, as installed.

**Citation** – Civil penalties authorized by the Charlotte Code of Ordinances that may be assessed against the utility company on whose behalf work is being performed and against the contractor or subcontractor who is performing such work. Billings not paid within 30 days will be assessed a late fee of one percent on the unpaid balance per month.<sup>2</sup>

**City Utility Pole** – A pole owned by the City, in the City R/W, that provides lighting, traffic control, or a similar function.

**Colocation** – The placement, installation, maintenance, modification, operation, or replacement of wireless facilities on, under, within, or on the surface of the earth adjacent to existing structures, including, utility poles, City utility poles, water towers, buildings, and other structures capable of structurally supporting the attachment of wireless facilities in compliance with applicable codes. The term “colocation” does not include the installation of new utility poles, City utility poles, or wireless support structures.<sup>3</sup>

**Detail Drawing** – An illustrated construction procedure, facility, or equipment, drawn to scale, that is generally repeated throughout the course of the project.

**Deviation** – Departing from the accepted practices without prior authorization or approval.

**Directional Drilling (Boring)** - A trenchless technology method of installing conduit by means of drilling non-vertical bores.

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<sup>1</sup> City of Charlotte Code of Ordinances Sec 11-46 (c)

<sup>2</sup> City of Charlotte Code of Ordinance Sec 19-347

<sup>3</sup> General Assembly of NC, House Bill 310 – 160A-400.51 (4)

**Director/Engineer** – The director of the Department of Transportation and/or the City Engineer or their designees. When authority is granted to the director/engineer, the director of the department of transportation and the City Engineer may, by administrative agreement or practice, determine whether the authority is to be exercised jointly or by one, with or without consultation with the other.<sup>4</sup>

**Door Hangers** – Printed handout or leaflet, provided by the utility provider and/or contractor, given to private property owners, containing information with regards to proposed construction including but not limited to: the project name, a brief job description, the contractor's 24-hour contact information, and proposed project schedule.

**Dripline** – A vertical line running through the outermost portions of the tree crown extending to the ground.<sup>5</sup>

**Duct Bank** – A concrete-encased underground facility used for laying conduits for electric and communication utilities.

**Easement (Utility)** – Authorization by an owner for the use, by others for a specific purpose, of a designated part of their property. They are property interests that document the conditions under which one party has permission to enter an easement area on private property to repair facilities and/or perform ongoing maintenance. It is a recorded, legal document that describes easement boundaries and any conditions and restrictions related to the permission granted by the property owner to another party (grantee).<sup>6</sup>

**Erosion Control** – All land disturbing activities, including those that disturb less than an acre, shall provide adequate measures, structures, or devices in accordance with Chapter 17 of the Charlotte Code of Ordinances, which include, but are not limited to identifying critical areas subject to erosion, a limit on the time of exposure, a limit on the exposed area, control of surface water, and control of sedimentation.

**Excavation** – Any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal.

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<sup>4</sup> City of Charlotte Code of Ordinance Sec 19-1

<sup>5</sup> City of Charlotte Code of Ordinance Sec 21-2

<sup>6</sup> City of Charlotte Unified Development Ordinance Sec 2.3

**Illicit Discharges** – Any discharge not composed entirely of stormwater that may directly or indirectly enter the stormwater system or the waters of the state, except as allowed pursuant to Section 18-81 of the Charlotte Code of Ordinances. Examples of illicit discharge include, but are not limited to: oil; grease; household and industrial chemical waste; sanitary sewage; wastewater; paint; paint wash water; garbage; yard waste; animal waste; food waste; cooking oil/grease, swimming pool/hot tub/spa water containing pollutants; concrete; concrete equipment wash water; commercial vehicle wash water; heated water; soaps/detergents; sediment/silt or any other discarded or abandoned substances or waste materials.<sup>7</sup>

**Inspector** – Any person who is authorized by the Department of Transportation Director, or their designee, to conduct inspections to enforce these standards and provisions.

**Joint Trench** – Multiple utility companies sharing the same path within the R/W.

**Maintenance** – Maintain and operate the utility infrastructure to preserve and continue its function in controlling communications quality and quantity at the degree or amount of function for which the utility infrastructure was designed.

**Noise Ordinance** – Ordinance amending Chapter 15, Article III of the City Code, entitled “Noise”, which has set standards to mitigate noise nuisances for residents and visitors while balancing the needs of businesses to operate effectively.<sup>8</sup>

**Planting Strip** – Ground surface free of impervious cover and/or paved material which is reserved for landscaping purposes.<sup>9</sup>

**Restoration** – Any street or sidewalk opened or excavated under any permit or license shall be restored to the condition in which it was before such work or excavation was commenced, or better, by and at the expense of the person to whom such permit or license was issued.<sup>10</sup>

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<sup>7</sup> City of Charlotte Code of Ordinance Sec 18-77

<sup>8</sup> City of Charlotte Code of Ordinance Chap. 15 Article III

<sup>9</sup> City of Charlotte Code of Ordinance Sec 21-2

<sup>10</sup> City of Charlotte Code of Ordinance Sec 19-141

**Right-of-Way (R/W)** – The area on, below, and above an existing or proposed public roadway, highway, street, bicycle lane, sidewalk, or similar facility, and associated adjacent land that is dedicated or otherwise legally established for public use.<sup>11</sup>

**Root Protection Zone** – 18 inches to 24 inches deep and a distance from the trunk of a tree equal to one-half its height or its dripline, whichever is greater.<sup>12</sup>

**Sidewalk** – The portion of the street R/W which is improved and designated for the use of pedestrians.

**Stormwater System** – The network of curbs, gutters, inlets, catch basins, manholes, pipes, ditches, swales, ponds, detention, and retention basins, and other natural or manmade facilities and appurtenances that serve to collect and convey stormwater through and from a given drainage area to the waters of the state. For purposes of this article only, the stormwater system includes the City's municipal stormwater system and privately owned and operated stormwater systems on private property that discharge or flow to the City's municipal stormwater system or the waters of the state.<sup>13</sup>

**Street** – Any public way, road, highway, street, avenue, boulevard, parkway, lane, path, viaduct, or any other name a street is commonly known by or any public place and the approaches thereto within the City when any part thereof is open to the use of the public and established for purposes of vehicular traffic.

**Trenching** – An open, linear, excavation within the R/W.

**Utility Company** – A company that owns and provides service to customers through utility facilities located in the R/W. This definition shall include the City for purposes of the City's ownership of water, wastewater, and stormwater utility facilities.<sup>14</sup>

**Utility Facility** – A pole, tower, water main or line, sanitary sewer pipe or line, stormwater pipe or structure, gas pipe or gas line, telecommunications line or equipment, power line, conduit, or any like structure.<sup>14</sup>

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<sup>11</sup> City of Charlotte Unified Development Ordinance Sec 2.3

<sup>12</sup> City of Charlotte Code of Ordinance Sec 21-2

<sup>13</sup> City of Charlotte Code of Ordinance Sec 18-77

<sup>14</sup> City of Charlotte Code of Ordinance Sec 19-332

**Utility Right-of-Way Work Permit** – An official administrative authorization issued by the City prior to beginning construction of a Utility Facility within the City R/W, consistent with standards and provisions herein.

**Urban Street Design Guidelines (USDG)** – A vital supporting component of the Transportation Action Plan (TAP), which includes methodologies and recommendations for increasing the quantity and quality of streets, enhancing the integration of land use and transportation decisions (sometimes on a block-by-block basis), and providing “complete” streets for residents, property owners, and all types of travelers.

**Variance** – A field change requested by the contractor to the City Inspector during construction, by altering the proposed construction for the continuation of a project.

**Vehicular Wheel Path** – The area on the road in which a vehicle’s wheels are most likely to drive over.

**Vertical Surface Discontinuities** – Any surface that is not leveled or maintains a continuous and consistent height with respect to the ground surface.

**Wireless Facilities** – Equipment at a fixed location that enables wireless communications between user equipment and a communications network, including equipment associated with wireless communications and radio transceivers, antennas, wires, coaxial or fiber-optic cable, regular and backup power supplies, and comparable equipment.



## II. General

1. These Standards and Provisions are intended to provide the City with the maximum authority available to the City in the regulation of applicable utilities, to comply with the City's obligations under applicable State and federal law, and to promote the public's health, safety, and welfare. Accordingly, they shall be interpreted in light of such intention and consistent with State, federal, and local laws and regulations.
2. All utility construction and maintenance work in City-maintained streets require a Utility R/W Work Permit issued by the Charlotte Department of Transportation (CDOT) per City Ordinance Chapter 19 Article XIII.
3. The permit application must be submitted by the Utility Company and include a contractor that has successfully completed the CDOT Street Maintenance Street Cut Certification Class. Permit application review and approval timeframes will vary depending on the accuracy of the application and information provided, the length of the route being submitted for review, and coordination with existing City projects within the proposed route. Permitting for maintenance of existing facilities will be determined by CDOT on a case-by-case basis.
4. The permit applicant must provide, if requested by the City, a report describing the technical purpose and function of the proposed facilities.
5. All R/W lines are to be shown on submitted plans. City tax plat information is not to be used as R/W data. A review of the utility plans by the City is not an approval or verification of R/W lines shown on the plans. The City of Charlotte does not guarantee the R/W of the road, nor will it be responsible for claims of damages brought by any property owner.
6. North Carolina General Statutes (NCGS) § 89 Article 8A, known as the latest revision of the "Underground Utility Safety and Damage Prevention Act", applies to all construction covered by Permits issued by the City of Charlotte.
7. Construction should not occur or be scheduled to occur before the permit and plan are approved. The area CDOT inspector must be notified 48 hours prior to the start date.
8. If a Street/Sidewalk Cut is required, CDOT Street Maintenance Division must be notified 48 hours prior to the actual start of work when the street is to be cut.
9. CDOT inspector may determine, on a case-by-case basis, that a Pre-Construction meeting is necessary.

10. A copy of the Permit and CDOT-approved plans must always be kept at the construction site.
11. The proposed installation shall be built in compliance with the approved plans on file. If the project deviates from the approved plans on file during construction, a variance should be approved by the CDOT inspector prior to installation and captured on as-built drawings.
12. CDOT reserves the right, at any time, to require that a utility company representative be on site until the project is completed.
13. The current version of the CDOT Work Area Traffic Control Handbook (WATCH) shall be in force when performing any work in the City's R/W.
14. All work within the R/W must adhere to Chapter 18 of the Code of Ordinance for the City of Charlotte which prohibits illicit discharges and disposal of materials in the stormwater drainage system. Best practices expected include erosion control, containment, collection, and proper disposal of any waste and/or slurry generated.
15. These standards shall apply to all City-maintained Street R/W and Sidewalk Utility Easements. Exceptions may be granted by the City on a case-by-case basis, at the City's sole discretion. These standards do not apply to alleyways or unopened R/W's.
16. Note that if crossing another entity's R/W (e.g., NCDOT, rail lines, etc.), the standards and requirements of that entity may differ from, or supersede, these standards. It is the responsibility of the permit applicant to meet all applicable standards and obtain necessary property rights for R/W work.
17. All utility facilities shall be designed and installed in accordance with appropriate industry standards, applicable laws, and national and state building codes, including, but not limited to, the National Electric Code and National Electric Safety Code.
18. Utility companies or their representatives shall take all reasonable steps necessary to protect and structurally support existing utilities, facilities, and structures within the City R/W.
19. Utility companies are prohibited from accessing other utility companies' facilities without prior approval from the respective utility owner.

20. Utility companies are encouraged to proactively accommodate for future growth when designing their facility needs, especially in urban and high-density areas; and to consolidate wherever commercially reasonable onto one pole, pole line, or in one joint trench or duct bank. CDOT may require the colocation of utilities on a case-by-case basis, at CDOT's sole discretion.
21. Pole lines consisting of continuous runs of distribution facilities paralleling a roadway shall be limited to one side of the roadway except when the facilities are within a 3/4-mile radius of an existing or future power distribution substation. This standard does not prohibit pole lines from moving from one side of the street to the other or from crossing the street.
22. Installation of utility facilities on highway structures such as bridges or culverts is prohibited unless explicitly approved.
23. Any relocation involving a streetlight requires prior approval from CDOT.
24. All utility installations crossing signalized intersections requiring pole replacements must be bored underground. For maintenance purposes, this does not apply to pole owners.
25. The R/W shall be promptly restored to "equal or better" condition than existing immediately before the commencement of the utility installation and must meet all current Americans with Disabilities Act (ADA) regulations.
26. Utilities shall maintain documentation of their respective facility locations/relocations and shall provide such PDF documentation to the City of Charlotte upon completion of work. The City recognizes that some of the information provided may be proprietary in nature. In such instances, utilities shall mark clearly and with particularity the sections of information it considers to be proprietary or otherwise not subject to the Public Records Act so that the City can make any necessary determinations regarding such information.
27. Vertical utility markers are not permitted within the City's R/W. However, flat curb and flush-mounted markers are acceptable.
28. Approved utility construction projects that have not been constructed within 6 months of the permit approval date will be void. A permit extension will not be approved until CDOT determines that the existing conditions have not changed.

29. The facility shall be developed, maintained, and operated in full compliance with the conditions of any applicable permit, and any law, statute, ordinance, or other regulation applicable to any development or activity on the site. Any violation of the conditions of approval for any applicable permit, or any other law, statute, ordinance, or other regulation applicable to any development or activity may result in the revocation of this permit. The remedies specified in this section shall be cumulative and the City may resort to any other remedy available at law or in equity.
30. Approval must be granted through the State Historic Preservation Office and the local Historic District Commission within historical areas of the City.
31. The City may, at its sole discretion, allow for the testing of innovative construction methods that are not explicitly contemplated in these standards and provisions where there is a mutual advantage to the City and the utility company. Upon successful evaluation, the City may amend the Standards & Provisions to incorporate the construction methods as a new practice.
32. A facility that is not used and maintained by the utility company shall be deemed to be abandoned. Upon abandoning a facility, the utility company shall either remove the utility facility or ask the City for permission to leave the abandoned utility facility in place. If the City refuses to allow an abandoned utility facility to be left in place, the utility company shall remove the utility facility within a reasonable period of time as prescribed by the City at the cost of the utility company. The City, its officers, employees, agents, servants, and contractors shall not be liable to utility companies for damage to or removal or destruction of an abandoned utility facility.<sup>15</sup>
33. The City's permit approval does not authorize any construction on private property, rail R/W, utility easement, or state-maintained streets. Any crossing or parallel routing of a system along state-maintained streets requires an Encroachment Agreement with the North Carolina Department of Transportation (NCDOT). To obtain an NCDOT Encroachment Agreement in the Charlotte area, contact 980-523-0000.
34. Steel plates shall have a mark or tag identifying the owner. All steel plates must comply with CDOT's Street Maintenance Manual.

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<sup>15</sup> City of Charlotte Code of Ordinance Sec 19-336

35. In residential areas, where multiple parcels are impacted, the contractor shall utilize door hangers 72 hours in advance before construction. Door hangers shall include the project name, a brief description of the work, the contractor's 24-hour contact information, and the proposed schedule for work in the immediate area. This does not apply to emergencies.
36. The contractor shall comply with the requirements of the current City's Noise Ordinance.
37. While working, special attention shall be given to the placement of construction equipment (such as boring rigs and contractor vehicles) and materials (e.g., brick pavers, cable, fiber optic conduit, and conduit reels, etc.) to comply with City Ordinance 19-245, "Obstructions to cross visibility at intersections deemed nuisance" and to avoid compaction of soil and damage to existing roots in the root protection zone of areas of protected trees.
38. The contractor shall not close or block the sidewalk on both sides of a street.
39. All restoration shall be completed on a block-by-block basis. The contractor must begin restoration of the "first" block upon starting the new installation of the "second" block.
40. CDOT shall be provided notice of the final inspection upon completion of the installation. All punch list items shall be addressed within 30 days.
41. Any drainage pipe partially or completely filled with sediment or debris shall be cleaned out by the contractor. Culverts damaged during relocation or cleaning may require replacement at the contractor's expense, as determined by the City. Storm Water Services shall be provided notice prior to commencement of any cleaning or repair activities.
42. On longitudinal installations, utilities should be located on a uniform alignment at or adjacent to the R/W line to minimize interference with drainage, the structural integrity of the traveled way, shoulders, and embankments, for the safe operation of the roadway, and maintenance of the R/W.
43. The applicant shall comply with all applicable provisions of these rules, any permit issued under these Standards and Provisions, and all other applicable federal, state, and local laws. Any failure by the City to enforce compliance with any applicable laws shall not relieve any applicant of its obligations under these Standards and Provisions or all other applicable laws and regulations.

### III. Underground Construction Guidelines

1. All proposed utilities shall be placed in such a way as to not impact the operation and maintenance of existing stormwater systems, utilities, facilities, roadways, driveways, or pedestrian walkways within the public R/W or easements.
2. A minimum cover of 3 feet is required for all facilities being installed within the planting strip and sidewalk area. All installations installed within the paved roadway will require a minimum coverage of 4 feet.
3. In areas with City street trees, parallel conduit installations shall maintain a minimum cover of 6 feet. All pull boxes, hand holes, manholes, vaults, and bore pits shall be installed outside the dripline of the tree or centered evenly between the existing trees. All variances will require approval from Landscape Management at 704-336-4262.
4. Temporary tree protection fencing is required to be installed before any trenching.
5. Open cuts and trenching permitted by CDOT shall be performed following CDOT's Street Maintenance Utility Cut Specifications Manual.
6. Contractors should follow the construction and safety practices as described in the "Horizontal Directional Drilling Installation Guidelines" manual, current edition, published by the National Utility Contractors Association (NUCA).
7. All bore pits less than 5 feet deep shall be a minimum distance of 5 feet from the back of the curb or the edge of the pavement. All bore pits 5 feet deep or greater shall be a minimum distance from the back of the curb or the edge of the pavement based on a ratio of one foot of separation per one foot of depth. For example, a 10-foot deep bore pit shall be a minimum of 10 feet from the back of the curb or edge of the pavement.
8. Bore pits shall be protected and made safe by providing a fence around them and covering them with a steel plate.
9. Conduit proposed to be installed by horizontal directional drilling shall include a drilling detail as part of the construction plans.
10. A minimum of three (3) 1.25-inch conduits or equivalent are required when installing facilities on City streets classified as Parkways, Boulevards, Avenues, and Main Streets in order to minimize future construction impacts. CDOT reserves the right to extend this rule on other City street classifications on a case-by-case basis.



11. In areas with no curb and gutter, underground facilities are to be installed as close to the R/W line as possible.
12. Jack and Bore operations should follow the construction and safety practices as described in the current edition of “Guide to Pipe Jacking and Micro Tunneling Design” manual, published by the National Utility Contractors Association (NUCA).
13. All proposed facility installations crossing laterally at an intersection shall be drilled, bored, or tunneled. If drilling, boring, or tunneling are agreed upon by CDOT to not be cost-effective or pose potential impacts to other existing critical utility infrastructure then open cutting may be permitted.
14. All crossings of the Charlotte Area Transit System (CATS) (light rail and streetcar) must be at street intersections. No mid-block crossings are permitted without permission from CATS.
15. A minimum cover of 15 feet is required under CATS Rail Systems.
16. Handholes are to be placed at a minimum distance of 35 feet from the centerline of tracks.
17. All creek crossings shall maintain a 10-foot minimum cover below the surface of the creek bed.
18. All non-metallic underground facilities shall be installed with a tracer wire providing the ability to be tracked from the surface by conventional electronic tracing technology.
19. Pull boxes, hand holes, and/or vaults 4 feet by 4 feet in area or smaller shall be acceptable. Larger pull boxes, hand holes, manholes, and vaults may be permitted on a case-by-case basis by CDOT.
20. Pull boxes and hand holes shall have a mark or tag identifying the utility owner.
21. Pull boxes, hand holes, manholes, and vaults shall not be in driveways or within the intersection corner radius. A minimum 30 feet (20 feet in Uptown Core District) corner radius shall be recognized, where the existing corner radius is smaller. If the existing corner radius is greater, then the facility shall be placed beyond the end of the radius.

22. Pull boxes, hand holes, manholes, and vaults, if permitted to be in pedestrian/non-motorized areas, shall have tier 15 rated lids with a skid-resistant surface. Lids shall have a minimum vertical load capacity of 22,500 lbs. in accordance with ANSI/SCTE 77 (Specification for Underground Enclosure Integrity) testing provisions. In the Uptown Core District (CBD) lids shall be one piece for boxes 30 inches by 30 inches and smaller unless otherwise approved by CDOT.
23. Pull boxes and hand holes shall be flush and centered within a single sidewalk panel. Vertical surface discontinuities shall be no more than  $\frac{1}{2}$  inch maximum and those between  $\frac{1}{4}$  inch and  $\frac{1}{2}$  inch shall be beveled with a slope of no more than 50%. Any sinking that occurs shall be repaired within 30 days of the notice from CDOT.
24. New manholes are not permitted within the sidewalk. Manholes installed in the street pavement must be located outside the vehicular wheel path.
25. All handholes, vaults, bore pits, manholes, and/or utility poles are to be placed a minimum of 10 feet from all storm drain structures. When crossing storm drain systems, all facilities are to be bored under pipes 36 inches or larger, with a 2-foot vertical clearance from the bottom of the existing pipe. If this is unattainable due to subsurface conditions, the following process may apply:
  - a) *Steel pipe encasement is required when utilities cross above 36 inches or larger storm drainage pipes and structures. The horizontal limits of the encasement shall be determined by extending a line at a 2:1 slope from the bottom of each side of the storm drainage pipe or structure to the existing ground plus an additional 10 feet on each side.*
  - b) *There shall be a minimum of 12 inches of vertical clearance between the proposed steel pipe and the existing storm pipe or structure.*
  - c) *Or pipes with less than 4 feet of cover, every effort should be made to re-route or bore under the storm drainage pipe or structure.*
26. All pull boxes, hand holes, manholes, and vaults, shall not be placed in the natural flow line of roadside ditches and channels in such a manner as to interfere with the maintenance of stormwater systems.
27. Damaged facilities shall be made safe within 24 hours upon notification from CDOT. CDOT understands that repair or replacement of such facility may take longer; nevertheless, utility companies should provide appropriate notifications of their efforts.



28. Charlotte Water and Storm Water Services may have existing, critical infrastructure lines within your proposed construction route. Before starting construction, you must contact the Charlotte Water Zone Manager and Storm Water Services Representative assigned to your work zone area.

## IV. Aboveground Construction Guidelines

1. Aboveground structures in accordance with the standard set forth below shall not interfere with the operation and maintenance of existing stormwater systems, utilities, roadways, bike lanes, or sidewalks within the public R/W.
2. If an existing aboveground facility is determined by CDOT to be in a location that has a higher-than-average crash potential, CDOT may require that the facility be relocated.
3. All new poles are to be installed outside of the clear zone, sight triangle, existing trees, and 10 feet from existing stormwater structures to the maximum extent possible. Variances will be granted for spacing from City-owned structures on a case-by-case basis.
4. Replacement poles or pole modifications shall meet all applicable standards of the pole owner.
5. Where pole lines are in the planting strip, the lowest facility attached to the pole line shall be a minimum of 25 feet above the existing or proposed grade. This distance will allow the City to plant small maturing trees (20 feet tall or less) with a minimum clearance to the lowest overhead facility of 5 feet. This standard shall apply to permit requests for new facilities where three or more consecutive poles are installed.
6. New pole installations for electrical or telecom distribution/transmission lines are not permitted within the I-277 loop except when the applicant can demonstrate there are no suitable alternatives. CDOT requires that all facilities within the Uptown Core District be placed underground.
7. The longitudinal location of new pole lines shall be behind the sidewalk as near as practical to the R/W line or easement line on a uniform alignment and as close to side property lines as possible.
8. New poles and existing poles being replaced within the R/W are to be installed to meet all State and Federal Requirements and ADA regulations. The pedestrian access route shall be a minimum of 48 inches clear width. This continuous clear width is measured from the edge of the pole and excludes the width of any curb.
9. Utility pole guy wires and anchors are not permitted within sidewalk areas. All crossings of an existing or proposed sidewalk shall span the width of the sidewalk plus one foot, at a minimum height of 8 feet.

10. Damaged poles, abandoned poles, or aboveground facilities shall be “made safe” by the owner immediately following notification by CDOT. Full repair, removal or replacement shall occur within 30 days or as soon as replacement materials are available. Existing decorative/metal street light poles may, upon approval of CDOT, be replaced by the pole owner (e.g., Duke Energy) at the cost of the applicant, for all third-party facility attachments.
11. Historical Tryon Street (between 11<sup>th</sup> Street and Good Samaritan Way) lights/pedestrian lights, traffic signals, or streetcar catenary poles will require additional coordination and approval by CDOT.
12. The City requires the installation of wireless facilities (or other third- party equipment) on existing structures to avoid unreasonable duplication of poles within the R/W.
13. In cases where all existing poles have been utilized with wireless equipment, the utility requesting one of those locations must attempt to colocate with the current pole user before CDOT will allow a new pole to be placed. Colocated facilities and equipment may be separately owned and used by more than one entity.
14. As a condition of installing a new pole for any wireless facility, the owner of a new pole shall reasonably consent to allow future requests for colocation by other providers of wireless services on reasonable terms and conditions that do not discriminate between similarly situated providers of wireless communication services.
15. All poles should not be located directly in front of any single-family dwellings, and/or front doors to homes, or entrances to businesses; but should be installed on dividing property lines between dwellings.
16. In areas that do not have existing poles to be utilized, new poles may be installed if the proposed pole design matches the aesthetics of the existing area and is approved by CDOT.
17. The maximum diameter of all small cell poles should not exceed 10 inches unless otherwise approved by CDOT.
18. All wireless equipment must be attached to the pole, parallel to the street, opposite oncoming traffic. No equipment is permitted on the sidewalk side, or the street side of the pole.

19. All wireless equipment on all poles protruding outside of the pole base must be installed on the pole 8 feet or higher, from surface grade, excluding the meter and disconnect.
20. All equipment must be shrouded, including, but not limited to radios, antennas, wires, cables, brackets, plugs, etc.
21. All equipment and shrouding shall match the existing pole color.
22. The size of the shrouding can be no larger than 24 inches in diameter unless a larger size is demonstrated as a necessity and approved by CDOT. A transition taper must be included from the outside diameter of the pole to the antenna shroud.
23. Side-mounted antennas may only be used on wood poles where the top of the existing pole prohibits attachments by the pole owner. The antenna must be attached to the pole, parallel to the street, opposite oncoming traffic. No equipment is permitted on the sidewalk side, or the street side of the pole.
24. No aerial lines are permitted to be installed crossing rail corridors, either light rail or streetcar, without permission from CATS.
25. Aboveground structures shall have a mark or tag identifying the owner.

26. In determining whether to issue a permit for a new or expanded aboveground structure in the R/W, CDOT shall consider whether the structure would create an unacceptable sight obstruction or other safety hazard. Preferred locations that may minimize the aesthetic impact of the proposed aboveground structure are:
- a) *Dead end streets*
  - b) *Property line between two homes*
  - c) *Heavily wooded areas*
  - d) *Corner lot side yards.*
  - e) *In front of residential privacy fences*
  - f) *Next to existing aboveground structures*
  - g) *Outside the line of sight from driveways/intersections*
  - h) *Back of City R/W*
27. Cabinets are not to be placed within pedestrian walkways or so that doors swing into the pedestrian walkways.
28. The City may, at its discretion, require additional screening to be installed in order to minimize the visual impact of any new or expanded aboveground structures. If screening, appearance, or other conditions are not adequate to minimize the impact of the structure, additional reasonable camouflage may be required, or the permit may be denied.