

Phase II Concord Development Ordinance Amendments

The following amendments are presented in redline/strikeout format with new text being shown in red with underlines and deleted text shown in red with strikethrough markings.

Section 1. In Article 4, Environmental/Land Disturbing Activities, amend Section 4.6 as follows:

4.6 VEGETATION AND UTILITY PROTECTION

4.6.1 APPLICABILITY.

No person shall perform land-disturbing activities that remove natural vegetation without performing the appropriate mitigation needed to protect water quality and the aesthetics of the area. No person shall perform land-disturbing activities that negatively impact utilities. The following activities are not subject to the remainder of the requirements of this section:

A. Land disturbances of less than one acre of land, provided that all of the following is true:

1. No land disturbance will occur within a utility corridor, and
2. No land disturbance will occur within a Watershed Protection Overlay District, and
3. No land disturbance will occur within an undisturbed perennial stream buffer or vegetative setback, and
4. No land disturbance will occur within an undisturbed intermittent stream buffer or vegetative setback, and
5. No land disturbance will occur within an undisturbed lake or impoundment buffer or setback.

~~5-6.~~ Existing tree canopy and significant trees have been assessed to meet tree preservation requirements of Article 11 or related modification has been obtained, where applicable.

B. Land disturbance for farm purposes on a bona fide farm; or

C. Land disturbance for harvesting timber in forestland.

4.6.2 STORMWATER INSTALLATION/GRADING PERMITS.

- A. For all land disturbances subject to this section, grading/stormwater plans shall be prepared for, and shall be approved by the Administrator pursuant to the application for a grading/stormwater permit. Grading/stormwater permits shall be issued before

developing or disturbing land. The application process for grading/stormwater plans and permits are found in Section 6.1.7. Grading/stormwater plans shall:

1. Include drawings, maps, supporting calculations, specifications, and summaries as outlined in the Manual¹;
2. Demonstrate techniques that will be used to protect existing trees and vegetation from land-disturbing activities. Removal of existing trees and vegetation shall only be allowed if no practicable alternative exists and their removal does violate any other provisions of this ordinance; and
3. Demonstrate techniques that will be used to protect existing utilities from land-disturbing activities.

B. **Vegetation Protection and Retention.** Grading/stormwater plans shall be designed to preserve existing trees and vegetation to the greatest extent possible and shall seek to incorporate existing significant stands of trees as well as individual trees; these plans shall also account for meeting tree preservation requirements in accordance with Article 11, where applicable. Certain excavation techniques used by utility companies and others can cause removal of vital roots, change drainage patterns and create conditions that could kill trees and plant materials or make them more susceptible to disease and deterioration. The intent of these regulations is to recognize the need to alter the landscape during site development activities while setting out standards necessary to ensure tree preservation to the greatest extent possible.

C. **General Requirements.** Existing trees and vegetation that are to be preserved shall be protected from all construction activities including installation and/or replacement of utilities, earthwork operations, movement and storage of equipment and materials and dumping of toxic materials. Tree and vegetation protection techniques shall be shown in the Grading/stormwater Plans and shall be in conformance with standard practices set forth in the NCDENR Stormwater BMP Manual, ~~and~~ the City of Concord Technical Standards Manual, and Section 11.9 of this ordinance for tree preservation.

D. **Repair of Damaged Buffers.** Any buffers lost due to any unapproved activity, including construction, shall be replaced with similar size and number of plants and revegetated using native plant species in accordance to the criteria established for riparian buffer restoration by the N.C. Department of Environment and Natural resources Ecosystem Enhancement Program and as required and approved by the Administrator. Violations

¹ EDITOR'S FOOTNOTE Requirements now at Appendix B7. Add stormwater requirements to Grading permits.

of Section 11.9 related to removal, damage, or death of trees in established tree save areas are subject to tree replacement requirements of Section 11.9.6.

Section 2. In Article 8, Use Regulations, Section 8.3.5 Supplemental Regulations for Commercial Uses, insert new sections S., T, and U as follows:

S. Storage Container Development. The City of Concord encourages creative design of development that is compatible and complementary to surrounding development. Recognizing the potential to design attractive developments that accomplish this goal, the City may approve the use of storage containers for principal and accessory structures in non-residential development subject to site plan approval. Storage containers shall not be used self-storage units in any district or for accessory storage in any residential district. In addition to the criteria established in Section 6.2 of this CDO, any development using storage containers for habitable or authorized accessory storage structures shall:

1. Be designed so that all structures comply with adopted building code requirements;
2. Have all habitable structures connected to public water and sewer service;
3. Comply with CDO requirements for landscaping, screening and buffering; and
4. Demonstrate through a site plan and site development elevation drawings from all sides that the development will be complementary to and compatible with adjacent development.

T. Variety Stores. For purposes of this section, a variety store is a retail store that sells a wide variety of relatively small and inexpensive items, with less than 50 percent of the floor space devoted to food items. A store with at least 50 percent of the floor space devoted to food items that include fresh produce, dairy and meats shall be considered a grocery store and shall not be subject to the provisions of this section.

1. Variety stores are prohibited unless the proposed use is located more than 5,000 feet from another variety store.
2. If located less than 5,000 feet from another variety store, this use may be permitted by special use permit (“SUP”) only. In addition to the criteria for a SUP set forth in Section 6.2 of this CDO, when reviewing a request for SUP for a variety store use, the Planning and Zoning Commission shall consider:

- a. Whether the proposed variety store will likely have a detrimental impact on the development of grocery stores and other businesses that sell fresh and healthy food items in the area to be served by the proposed use.
 - b. The availability of healthy food options in the area of the proposed use including the proximity of full-service grocery stores within one-half mile of the proposed use and effect of the use on the retail food environment index as defined by the Centers for Disease Control and Prevention.
 - c. Whether the proposed use is within a food desert, as defined by the United States Department of Agriculture at the time of application.
3. A SUP approved under this section must stipulate that a minimum of 10 percent of the floor area of the variety store must be dedicated to fresh produce, meat and dairy products.
 4. Incidental outdoor display is prohibited at all variety stores.
 5. A nonconforming variety store in existence on date of adoption of the provisions in this section, may relocate on the same parcel or within the same shopping center that it currently exists without obtaining a SUP provided the nonconforming variety store has not been terminated.

U. Truck and Heavy Equipment Rental. The provisions of this section apply to businesses renting or selling commercial trucks or heavy equipment.

1. Up to three vehicles may be displayed in front of the principal structure or in an unscreened area abutting or visible from public right-of-way.
2. Other than authorized display vehicles, all machinery, equipment, or vehicles stored outdoors shall be screened from view from adjacent sites, streets or sidewalks.
3. Screening shall consist of an opaque fence, wall, berm or combination thereof measuring six to ten feet in height and a vegetative screen planted outside the fence, wall or berm. Plantings shall be evergreen, shall be at least eight feet in height at the time of planting and shall have a mature height sufficient to obscure outdoor storage areas within five years of planting.

Section 3. In Article 8, Use Regulations, insert new Section 8.3.8 as follows:

8.3.8 SOLAR FARMS

- A. Applicability.** The provisions of this section shall apply to all ground mounted solar energy systems that are not accessory to another use on the same site on which the facilities are located.
- B. Approval Process.** All solar energy systems producing more than 5 kilowatts that function as a principal use shall require special use permit approval pursuant to Section 6.2 of this CDO.
- C. Approval Criteria.** In addition to the requirements of Section 6.2 solar farms shall comply with the following standards:
- 1. Solar Access.** A property owner may obtain a solar easement from another property owner for the purpose of ensuring a Ground Mounted SES adequate exposure to sunlight.
 - 2. Lighting.** To reduce light pollution, lighting of a Ground Mounted SES shall:
 - a. be limited to the minimum reasonably necessary for its safe operation;
 - b. be directed downward where reasonably feasible;
 - c. incorporate full cut-off fixtures; and
 - d. reasonably use motion sensors.
 - 3. Tree Removal.** The removal of trees or natural vegetation for a Ground Mounted SES shall be avoided to the extent reasonably practicable and shall comply with the requirements of the CDO.
 - 4. Decommissioning.** Unless otherwise approved by the City, decommissioning shall begin no later than 12 months after a Ground Mounted SES has ceased to generate electricity:
 - a. For a Ground Mounted SES allowed without a permit, within 6 months of the beginning of decommissioning, the SES and all structures associated with it shall be removed, all materials shall be recycled or otherwise reused to the extent reasonably practicable, and the property shall be returned to its condition prior to the installation of the SES or to some other condition reasonably appropriate for the designated land use; and
 - b. For a Ground Mounted SES allowed with a permit, the SES shall be decommissioned in accordance with the most recent decommissioning plan

approved by the Administrator, and as further described in the Special Use Permit provision of this CDO.

5. **Location.** A SES shall be located no closer than the required setback for the applicable zoning district or 50 feet from any residential zoning district.
6. **Visual Buffers.** An Intermediate Scale SES in a residential or agricultural district shall have, to the extent reasonably practicable, a visual buffer of natural vegetation, plantings, earth berms, and/or fencing that provides a reasonable visual and lighting screen to reduce the view of the SES from residential dwelling units on adjacent lots (including those lots located across a public right-of-way). The existing natural tree growth and natural landforms along the SES perimeter may create a sufficient buffer and shall be preserved when reasonably practicable. Any visual buffer must be established and maintained in accordance with the most recent visual buffer plan approved by the Planning and Zoning Commission pursuant to a Special Use Permit
7. **Signage.** An Intermediate Scale SES shall display signs stating the risks that may result from contact with a SES, identifying the owner or operator of the SES, and providing a 24-hour emergency contact phone number.

D. Special Use Permit Requirements. The following shall be contained in any special use permit application for a SES in addition to the requirements pursuant to Section 6.2:

1. A site plan of the property that depicts the locations of all existing and proposed structures (including solar arrays, inverters, transformers, electrical substations, and buildings), property lines, rights-of-way, roads, required setbacks, and visual buffers;
2. A topographic map that depicts vegetative cover, watersheds, or wetlands on the property;
3. A visual buffer plan that demonstrates that any visual buffer (a) minimizes impacts of the SES on adjacent residential dwelling units, as required by this [ordinance], (b) preserves natural tree growth and natural landforms along the SES perimeter, as required by this CDO, and (c) adheres to any additional visual buffer requirements of this CDO that may further minimize impacts of the SES on the community character;
4. A list that identifies (a) federal or state endangered, threatened, or candidate species that may be present on the property or within 1,000 feet of the property, and (b) critical habitat on the property or within 1,000 feet of the property;

5. If the SES is located in an agricultural district, a map that identifies prime farmland and farmland of statewide importance on the property; and
6. A decommissioning plan that contains the following:
 - a. The name, address, telephone number, and e-mail address of the person(s) or entity(ies) responsible for implementing the decommissioning plan;
 - b. A statement of conditions that require the decommissioning plan to be implemented;
 - c. As part of decommissioning, a removal plan that identifies all structures, components, and non-utility owned equipment that shall be removed;
 - d. As part of decommissioning, a plan for recycling or otherwise reusing all materials to the extent reasonably practicable;
 - e. As part of decommissioning, a restoration plan to return the property to its condition prior to the installation of the SES or to some other condition reasonably appropriate for the designated land use after the SES is removed; and
 - f. A timeline to complete decommissioning.

Section 4. In Article 8, Use Regulations, insert new Section 8.4.7 as follows:

8.4.7 ACCESSORY SOLAR FACILITIES

A. PURPOSES. The purposes of this section are to:

1. Meet the goals of the Comprehensive Plan and preserve the health, safety and welfare of the Community's citizens by promoting the safe, effective and efficient use of active solar energy systems.
2. Encourage the use of local renewable energy resources, including appropriate applications for solar energy.
3. Promote sustainable building design and management practices in residential, commercial, and industrial buildings to serve the needs of current and future generations.
4. Assist local businesses to lower financial and regulatory risks and improve their economic, community, and environmental sustainability.
5. Efficiently invest in and manage public infrastructure systems to support development and growth.

6. Reduce dependence on nonrenewable energy resources and decrease the air and water pollution that results from the use of conventional energy sources.
7. Enhance the reliability and power quality of the power grid and make more efficient use of Concord's electric distribution infrastructure.
8. Diversify the community's energy supply portfolio and exposure to fiscal risks associated with fossil fuels.

B. Applicability.

1. This section applies to the siting, construction, and installation of any new SES to be constructed or installed after adoption of the regulations in this section within the City of Concord. Any SES that, prior to adoption of the regulations in this section is in operation, is being lawfully sited, constructed, or installed, or has caused the incurrence of substantial liabilities relating to siting, construction, or installation shall be exempt from complying with this section, unless the surface area of an integrated ses or rooftop SES or the footprint of a ground mounted SES is increased by more than 25 percent after adoption of the regulations in this section.
2. Unless otherwise expressly stated herein, an SES shall comply with all applicable federal, state, and local laws, including the requirements of the CDO and applicable building, fire, electric, and plumbing codes. If a provision in this section directly conflicts with a requirement of the CDO, this section shall control.

C. Definitions

1. Solar Energy System (SES) means a device or structural design feature that provides for the collection of solar energy for electricity generation, consumption, or transmission, or for thermal applications. For purposes of the CDO, SES refers only to (1) photovoltaic SESs that convert solar energy directly into electricity through a semiconductor device or (2) solar thermal systems that use collectors to convert the sun's rays into useful forms of energy for water heating, space heating, or space cooling. SES as used in the CDO excludes concentrated solar power, which uses mirrors to focus the energy from the sun to produce electricity.
2. Integrated Solar Energy System means an SES where solar materials are incorporated into building materials, such that the two are reasonably indistinguishable, or where solar materials are used in place of traditional building components, such that the SES is structurally an integral part of a house, building,

or other structure. An Integrated SES may be incorporated into, among other things, a building facade, skylight, shingles, canopy, light, or parking meter.

3. Rooftop Solar Energy System means an SES that is structurally mounted to the roof of a house, building, or other structure and does not qualify as an Integrated SES.

4. Ground Mounted Solar Energy System means an SES that is structurally mounted to the ground and does not qualify as an Integrated SES. For purposes of the CDO, any solar canopy that does not qualify as an Integrated SES shall be considered a Ground Mounted SES, regardless of where it is mounted. Ground Mounted SES may be accessory or principal uses. See Section 8.3.8 for regulations applicable to SES as a principal use.

5. Accessory SES may be established in any zoning district subject to the regulations in this section.

D. Permitted Accessory Use - Solar energy systems shall be allowed as an accessory use in all zoning classifications where structures of any sort are allowed, subject to certain requirements as set forth below.

E. Requirements for Solar Energy Systems.

1. Solar Access. A property owner may obtain a solar easement from another property owner for the purpose of ensuring the Integrated SES adequate exposure to sunlight.

2. Tree Removal. The removal of trees or natural vegetation for an Integrated SES shall be avoided to the extent reasonably practicable and shall comply with the requirements of the CDO.

3. Height - Active solar energy systems must meet the following height requirements:

a. Building- or roof-mounted solar energy systems shall not exceed the maximum allowed height in any zoning district. For purposes for height measurement, solar energy systems other than building-integrated systems shall be given an equivalent exception to height standards as building mounted mechanical devices or equipment.

b. Ground- or pole-mounted solar energy systems shall not exceed twenty (20) feet in height when oriented at maximum tilt.

4. Setback - Solar energy systems must meet the accessory structure setback for the zoning district and primary land use associated with the lot on which the system is located.

- a. **Roof-mounted Solar energy systems** - In addition to the building setback, the collector surface and mounting devices for roof-mounted solar energy systems shall not extend beyond the exterior perimeter of the building on which the system is mounted or built, unless the collector and mounting system has been explicitly engineered to safely extend beyond the edge, and setback standards are not violated. Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure.
- b. **Ground-mounted Solar energy systems** - Ground-mounted solar energy systems may not extend into the side-yard or rear setback when oriented at minimum design tilt.

5. Visibility.

- a. **Building Integrated Photovoltaic Systems** - Building integrated photovoltaic solar energy systems shall be allowed regardless of whether the system is visible from the public right-of-way, provided the building component in which the system is integrated meets all required setback, land use or performance standards for the district in which the building is located.
- b. **Solar Energy Systems with Mounting Devices** - Solar energy systems using roof mounting devices or ground-mount solar energy systems shall not be restricted if the system is not visible from the closest edge of any public right-of-way other than an alley. Roof-mount systems that are visible from the nearest edge of the street frontage right-of-way shall not have a highest finished pitch steeper than the roof pitch on which the system is mounted, and shall be no higher than twelve (12) inches above the roof.

6. Coverage - Roof or building mounted solar energy systems shall allow for adequate roof access.

7. Historic Buildings - Solar energy systems on buildings within designated historic districts or on locally designated historic buildings (exclusive of State or Federal historic designation) may be approved by the Administrator unless the Administrator determines that the systems have a significant impact on the appearance of the structure, in which case the solar energy system will require a certificate of appropriateness as provided in this ordinance.

F. Approved Solar Components - Electric solar energy system components must have a UL listing and solar hot water systems must have an SRCC rating.

G. Plan Approval Required - All solar energy systems shall require plan approval by the Administrator.

1. Plan Applications - Plan applications for solar energy systems shall be accompanied by to-scale horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the building or on the property for a ground-mount system, including the property lines.

a. Pitched Roof Mounted Solar Energy Systems - For all roof-mounted systems other than a flat roof the elevation must show the highest finished slope of the solar collector and the slope of the finished roof surface on which it is mounted.

b. Flat Roof Mounted Solar Energy Systems - For flat roof applications a drawing shall be submitted showing the distance to the roof edge and any parapets on the building and shall identify the height of the building on the street frontage side, the shortest distance of the system from the street frontage edge of the building, and the highest finished height of the solar collector above the finished surface of the roof.

2. Plan Approvals - Applications that meet the design requirements of this ordinance, and do not require an administrative variance, shall be granted administrative approval by the Administrator. Plan approval does not indicate compliance with Building, Plumbing or Electric Code.

H. Compliance With Building Codes - All solar energy systems shall comply with applicable building, electric, plumbing and fire codes.

I. Utility Notification - All grid-integrated solar energy systems shall comply with the interconnection requirements of the electric utility. Off-grid systems are exempt from this requirement.

J. Administrative Exceptions. Concord encourages the installation of productive solar energy systems and recognizes that a balance must be achieved between character and aesthetic considerations and the reasonable desire of building owners to harvest their renewable energy resources. Where compliance with the standards would prevent achievement of the minimum reasonable performance of the solar energy system, an exception may be sought from the Administrator. An exception shall be granted by the

Administrator if the applicant meets the following safety, performance and aesthetic conditions:

1. **Aesthetic Conditions** - The solar energy system must be designed to blend into the architecture of the building or be screened from routine view from public rights-of-way other than alleys to the maximum extent possible while still allowing the system to be mounted for efficient performance.

2. **Safety Conditions** - All applicable health and safety standards are met.

3. **Non-Tracking Ground-Mounted Systems** - Pole-mounted or ground-mounted active solar energy systems must comply with setback standards for accessory buildings.

K. **Restrictions on Solar Energy Systems Limited.** No homeowners' agreement, covenant, common interest community, or other contract between multiple property owners within a subdivision of concord shall restrict or limit solar energy systems to a greater extent than concord's solar energy standards.

L. **Solar Access.** Concord encourages solar access to be protected in all new subdivisions and allows for existing solar to be protected.

1. **Solar Easements Allowed** - Concord has elected to allow solar easements to be filed. Any building owner can purchase an easement across neighboring properties to protect access to sunlight. The easement is purchased from or granted by owners of neighboring properties and can apply to buildings, trees, or other structures that would diminish solar access.

2. **Easements within Subdivision Process** - Concord may require new subdivisions to identify and create solar easements when solar energy systems are implemented as a condition of a PUD, conditional zoning or special use permit.

M. **Solar Roof Incentives.** Concord has identified the following incentives for development applications or subdivisions that will include buildings using active solar energy systems.

1. **Density Bonus** - Any application for subdivision of land in the **RE, RL, RM-1, RM-2, RV, RC, PUD, PRD, MUD or TND** Districts that will allow the development of at least four new lots of record shall be allowed to increase the maximum number of lots by 10% or one lot, whichever is greater, provided all building and wastewater setbacks can be met with the increased density, if the applicant enters into a development agreement guaranteeing at least two kilowatts of PV or 64 square feet of solar hot water collector installed for each new residence.

2. Commercial Parking Requirement Offset - On a site where 90% of the potential solar access is unimpeded, and that has access to mass transit within 800 feet of the development site, or which has an approved Travel Demand Management (TDM) plan, or that has entered into a shared parking arrangement with another commercial business that has distinct peak parking profiles, the applicant substitute a requirement for grid-integrated photovoltaic systems for up to 30 percent of the parking requirement. For each parking space for which a solar energy substitution is made:

a. The photovoltaic system must have at least one (1) kilowatt (KW) of capacity with 90% unobstructed solar access; or

a.b. An active solar thermal system must have at least 64 square feet of solar collector.

Section 5. In Article 9, Special Purpose and Overlay Districts, amend Section 9.2.4 as follows:

9.2.4 DESIGN STANDARDS

In additional to ~~the design standards described in Section 8.28,~~ other requirements of this CDO, the following design standards shall be applied to all developments with single-family dwellings ~~or and~~ buildings containing more than one dwelling unit shall incorporate the following design features.

- A. Garages.** Garage fronts shall be de-emphasized and not be the most prominent architectural feature of any dwelling in the development. This should be accomplished by providing side access garages, detached “in-line” garages, and/or L-shaped floor plans on not less than fifty percent (50%) of the lots. Garages should be recessed at least one car length in order to provide interest and relief from the street. The front elevation shall prominently feature an entrance for persons rather than automobiles with the garage area not to exceed forty percent (40%) of the front façade. See Article 7.7 for acceptable garage placement alternatives.
- B. Front Porches.** At least fifty percent (50%) of all single family, patio style, duplex, or townhome units in the development shall have a useable front porch measuring at least eight (8) feet in depth covering at least 30 percent of the building width.
- C. Recreation.** At least seventy percent (70%) of all residential units shall be located no further than 660 feet from a pedestrian (excluding sidewalks), equestrian or bicycle trail measured from the boundary of the lot. Recreation and open space facilities shall be aligned with the community parks and open space network, as provided in any locally adopted land use plans or parks and recreation master plans. For infill PUD’s the

Administrator may consider other elements, such as sidewalks, in order to meet this requirement.

- D. **Multi-Modal Requirements.** Bicycle lanes shall be included along at least seventy percent (70%) of the linear frontage of all planned collector streets.
- E. **Development Entrances.** Customized entrances shall be provided at all streets intersecting a thoroughfare or collector. Such locations may include a waterfall, sculpture, monument signage, special landscaping, specialty pavement, enhanced fence or wall details, boulevard median or other similar treatment. The extent of such features shall match the scale of the proposed development (more significant features shall be required for larger developments).
- F. ~~**Preservation of Tree Cover.** At least one third (1/3) of the tree canopy shall be protected for property covered with forest. Existing tree locations shall be clearly marked on the master plan.~~

Table 9.4-2: Design Standards for a TND

(A) OPEN SPACE USES	(B) Minimum Land Allocation	(C) Maximum Land Allocation	(D) Minimum Floor Area Ratio (FAR)	(E) Maximum FAR	(F) Design Standards
Open Space	Greater of 5% Gross Land Area (GLA) or 5 acres See Table 10.5-1	40% GLA	n/a	n/a	Open space should be bounded by streets on at least 25% of their perimeter.
Square	15,000 sq. ft.	70,000 sq. ft.	n/a	n/a	<p>Square shall count toward required open space</p> <p>A minimum ½ acre square should front or be located within the Town Center.</p> <p>Squares should adjoin streets on at least two sides.</p> <p>Squares should be distributed throughout the TND so as all dwelling units are located within 1,000 feet (walking distance) of a square.</p>

(A) <i>OPEN SPACE USES</i>	(B) Minimum Land Allocation	(C) Maximum Land Allocation	(D) Minimum Floor Area Ratio (FAR)	(E) Maximum FAR	(F) Design Standards
<i>Greenbelts</i>	May be provided at the perimeter of a TND if adjacent land is incompatible	n/a	n/a	n/a	Greenbelts differ from other types of open space in that existing natural vegetation and wildlife is undisturbed except for bikeways and walking trails. Greenbelts should average at least 100 feet in width and not less than 25 feet at any point.

Section 6. In Article 9, Special Purpose and Overlay Districts, amend Section 9.10.8 as follows:

9.10.8 TREE PROTECTION GUIDELINES

- A. The clustering of existing trees and native vegetation should be incorporated into all LID site and building designs in order to protect natural and environmentally sensitive areas, open spaces, trees vegetation, natural terrain and drainage. Retained trees shall be credited towards the minimum landscaping and buffering requirements specified in Article 11. All retained trees that are proposed to be credited toward meeting the minimum requirements of Article 11 shall be clearly identified by species and size on the proposed site plans. Individual trees located within areas that are not proposed to be credited toward meeting the requirements of Article 11 are not required to be identified by species and size.
- B. Clearing of trees on the site shall be the minimum necessary to support construction of the streets and infrastructure, and the driveways and building pads for each structure. The areas of tree removal shall be clearly indicated on the overall site plan for the development, and on subsequent site plans submitted for individual permits.
- C. Removed trees exceeding ten (10) inches diameter at breast height (dbh) shall be replaced at a rate of one-half inch for each inch removed, within the overall project boundary, provided that such replacement practice meets acceptable horticultural and forestry standards. To the greatest extent possible, replacement trees shall be native trees, as illustrated in **Table 9.10 2**. Alternate species may be substituted upon the approval of the Administrator, provided that evidence is submitted as to their appropriateness. Areas where replacement trees are proposed shall be clearly indicated on the project site plan and on subsequent site plans submitted for individual permits.

In lieu of conducting an inventory of individual trees to be removed at the initial site plan stage, the inventory may be conducted during the construction plan stage.

D. In order to provide maximum design flexibility in subdivision development, replacement trees may be transferred to a different parcel (or proposed parcel) from where trees were removed, provided they are planted within the overall project boundary.

~~D.E.~~ Tree save areas established in accordance with Article 11 may be used to fulfill the guidelines and requirements of this section.

Section 7. In Article 10, Development and Design Standards, amend Section 10.3.1A. as follows:

10.3.1 GENERAL STANDARDS

A. **Applicability.** The provisions of this Section shall apply to any application for Zoning Clearance or Site Plan approval, except:

1. Detached single-family dwellings or duplex developments on individual lots of record (except that single-family units and duplexes shall maintain an improved area large enough to accommodate two off-street parking spaces not to exceed 30 percent of the area of the front yard); or

~~a.2.~~ All developments in the CC district; or if.

Section 8. In Article 10, Development and Design Standards, amend the parking requirements for Banks (with drive through) and Personal Care Services (Hair, skin, etc.) in Table 10.3-2 as follows:

Table 10.3-2 Required Minimum and Maximum Parking Spaces

Land Use	Min. Vehicle Spaces	Max. Vehicle Spaces
Professional Office/Business Services		
Banks (with drive-through)	1 per 200 300 sf GFA, plus sufficient stacking spaces to accommodate any drive-through lane(s)	1 per 150 sf GFA, plus sufficient stacking spaces to accommodate any drive-through lane(s)
Personal Care Services (Hair, skin, etc.)	<u>1 per 200 sf GFA</u>	± <u>1 per 100 GFA</u>

Section 9. In Article 10, Development and Design Standards, insert new section 10.3.4 Bicycle Parking as follows:

10.3.4 BICYCLE PARKING

- A. **Purpose.** Bicycle parking requirements are intended to encourage the use of bicycles to promote healthy mobility options and improve the public health safety and welfare through improved air quality, reduced energy consumption and more efficient use of vehicular parking areas.
- B. **Applicability.** The bicycle parking requirements of this section shall apply to all new development, additions to existing development and redevelopment of commercial property as defined in section 7.10.2.
- C. **General Requirements.**
 - 1. Bicycle parking shall be provided in accordance with the standards of this section and shall be made available prior to the issuance of any Certificate of Occupancy for the use being served.
 - 2. Covered bicycle parking is encouraged wherever the design of the building or use being served by the bicycle parking facility includes a covered area that could accommodate such facilities either as proposed or through economical redesign.
 - 3. Bicycle parking located within a parking garage must be located within 50 feet of a pedestrian access point which includes an elevator, stairwell, or first floor sidewalk connection. If the bicycle parking is located within an enclosed room within the parking structure, the distance requirement to an elevator, stairwell, or pedestrian entrance is no more than 200 feet.
- D. **Number of Spaces Required.** The minimum number of bicycle parking spaces required is shown in **Table 10.4-1**. When the calculation of the number of required bicycle parking spaces results in a fractional number of spaces, any fraction up to and including 0.5 shall be disregarded and any fraction over 0.5 shall require one bicycle parking space. For any use not listed in **Table 10.4-1**, bicycle parking spaces may be substituted for vehicle parking spaces at a rate of 8 bicycle parking spaces per vehicle parking space. The

maximum substitution shall be 5% of the vehicle parking spaces required under this Part or 10 spaces, whichever is greater.

Table 10.4-1: Minimum Number of Bicycle Parking Spaces Required

<u>Land Use</u>	<u>Minimum Number of Bike Parking Spaces</u>
<u>Retailing, Eating & Drinking</u>	<u>4 spaces plus 1:7,500 sf GFA</u>
<u>Heath, Fitness, or Sports Club</u>	<u>4 spaces plus 1:10,000 sf GFA</u>
<u>Office</u>	<u>4 spaces plus 1:15,000 sf GFA</u>
<u>Hotels/Motels</u>	<u>1:30 Rooms</u>
<u>Warehouse, Manufacturing & Processing</u>	<u>4 spaces plus 1:50,000 sf GFA</u>
<u>Self-Storage Facilities</u>	<u>4 spaces</u>
<u>Schools - High</u>	<u>3:1 classroom</u>
<u>Schools - Elementary & Middle</u>	<u>4:1 classroom</u>
<u>Schools -College, University, Adult</u>	<u>1:5 classrooms</u>
<u>Hospitals</u>	<u>8 spaces plus 1:50,000 sf GFA</u>
<u>Medical Office, Laboratory, or Clinic (Including Veterinarian)</u>	<u>1 per 5 employees</u>
<u>Libraries, Museums, Theaters, Bowling Alleys, Skating Rinks, Community Center</u>	<u>8 spaces plus 1:5,000 sf GFA</u>
<u>Multi-family Dwellings</u>	<u>1:5 units</u>
<u>Religious Institution</u>	<u>4 spaces plus 1:10,000 sf GFA</u>

E. **Location.** Bicycle parking spaces shall be located within 50 feet of the main entrance to the building as measured along the most direct pedestrian access route. For a building with more than one entrance, the bicycle parking must be distributed along all facades with a main entrance and located within fifty (50) feet of at least one main entrance, as measured along the most direct pedestrian access route.

F. **Design.**

1. **Bicycle Parking Space Design.** All bicycle parking spaces shall comply with the following standards:

a. **Minimum aisle width: sixty (60) inches, to allow for access and maneuvering.**

- b. Accessibility: Accessible to users without climbing or descending stairs.
- c. Safety: Separated from vehicle parking spaces by physical barriers, such as curbs, wheel stops, bollards or other similar features, to protect bicycles from damage.
- d. Site Coordination: Consistent with the design, color and character of the buildings, street furniture and other features on the building site, but clearly discernible as bicycle parking.
- e. Design: Enable users to lock the frame and both wheels.
- f. Construction: Anchored, so that they cannot be easily removed.
- g. Distance: Bicycle racks not be placed closer than thirty (30) inches from each other and not closer than thirty-six (36) inches from walls or any other obstructions.
- h. Style: The inverted "U" style bicycle rack that can hold two bicycles is the preferred type of rack (also known as a "staple", "hoop", or "U" rack). Bicycle racks that are prohibited in the City of Concord are the wave, comb, schoolyard, coat hanger, wheel well, and bollard style as defined in the Association of Pedestrian and Bicycle Professionals', Essentials of Bike Parking, Rev. 1, 2015.

2. Standard Bicycle Rack Design. All standard bicycle racks shall comply with the following standards:

- a. Maximum rack height: thirty-six (36) inches.
- b. Minimum depth for each row of parked bicycles: seventy-two (72) inches.
- c. Minimum separation between horizontal rows: thirty (30) inches on center to allow enough room for two (2) bicycles to be secured to each rack element.
- d. Capacity: Designed to accommodate (2) or more bicycle parking spaces per rack.
- e. Finish: Powder coated, or other weather-proof surface, as approved by the Transportation Official.
- f. Simplicity: Easy to understand and operate, with no moving parts.

- g. Operation: Usable without lifting the bicycle onto the device. (Applies to Short-Term racks only).



Images: Examples of Standard Bicycle Rack Designs

3. Alternative Bicycle Rack Design. Alternative bicycle parking rack designs may be approved, in compliance with the following standards:

- a. Size: Accepts multiple bicycle frame sizes and styles.
- b. Compatibility: Accommodates the use of cable and U-type locks.
- c. Purpose: Allows the frame and at least one (1) wheel of the bicycle to be locked to the rack.
- d. Scale: Visible to pedestrians and the visually impaired, but consistent with the scale of the bicycle locked to the device.
- e. Durability: Maintenance-free or fabricated from materials that weather in an aesthetically pleasing manner.
- f. Simplicity: Easy to understand and operate, with no moving parts.
- g. Operation: Usable without lifting the bicycle onto the device.



Images: Examples of Alternative Bicycle Rack Designs

Section 10. In Article 10, Development and Design Standards, modify Section 10.5 Open Space as follows:

10.5 OPEN SPACE STANDARDS

10.5.1 PURPOSE

Open spaces preserve natural resources and provide areas for active and passive recreation in developed areas.

10.5.2 APPLICABILITY

Open space, as defined in Article 14, shall be reserved in major subdivisions of land, planned unit developments, planned residential developments, traditional neighborhood developments, and developments requiring site plan review in accordance with Article 5. Buffers and setbacks in Article 4 and active open space shall not overlap. Passive open space may overlap buffers and setbacks in Article 4 that are located outside of the floodway. Active open space shall not overlap the planting yards required in Section ~~911~~-3. Passive open space may overlap buffer yards and street yards required in Sections ~~9-3~~11.4 and 11.7. Developments that meet all of the following criteria shall not be subject to the requirements of this section:

- A. Contains less than ~~thirty (5030)~~ proposed dwelling units, and
- B. Located less than ½ mile of walking distance from an existing or planned public park (or a public school with recreation facilities accessible to the general public), and
- C. Includes a proposed connection to the park or school by a sidewalk or greenway trail.

10.5.3 REQUIRED IMPROVEMENTS

Land designated as open space shall be maintained as open space and may not be separately sold, subdivided, or developed except as provided below. Developers shall be responsible for making certain improvements to the land they dedicate as open space within their development for park, playground, ~~and~~ public active open space, and other open space purposes as follows:

- A. Provide finish grade and turf establishment for all disturbed areas and provide landscaping and/or screening in accordance with ~~Section 9-3~~Article 11 and the Manual.
- B. Complete, construct, and surface walkways, which may be required as trail connectors in accordance with this section. Such walkways may be within or abutting residential street rights-of-way. Such connections shall not be used in the financial investment described in Item (2).
- C. Complete and construct improvements as set forth in Table 10.5-2 below.
- D. The size of open space(s) required shall be the minimum shown in Table 10.5-1 below.

~~D.E.~~ Establish tree save areas in accordance with Section 11.9; tree save areas may be counted towards passive open space.

~~E.F.~~ Provide any other recreational areas and associated facilities as required by the Planning and Zoning Commission.

10.5.4 USE OF STORMWATER DETENTION BASINS

Retention areas or detention basins, which may be required as part of Article 4 shall not qualify as open space for residential developments unless:

- A. Fifty percent (50%) or more of the active and usable area is above the area submerged during a ten (10) year storm, and
- B. The detention basin is designed for multiple uses and the usable areas conform to all of the requirements of this Subsection, (d).
- C. Retention or detention areas may meander through the development rather than exist as a single basin. Retention areas shall be improved so as to be usable and accessible. Detention areas shall not be permanently inundated so as to be unusable for their designated recreational purposes.
- D. Retention or detention areas shall be given a natural character and shall be constructed of natural materials. Terracing, berming, and contouring are required in order to naturalize and enhance the aesthetics of the basin. Basin slopes shall not exceed a 3:1 slope.

10.5.5 SIZE

Unless otherwise specified below, open spaces shall be reserved based on zoning districts and proposed densities and equal or exceed the minimum total land area identified in **Table 10.5-1**. The minimum dimension for usable open space shall be fifty (50) feet in width, excluding areas reserved for trails, medians, greenways, and sidewalks that meet the intent of this ordinance and have a minimum dimension of 15 feet. If the open space includes agricultural areas, the agricultural areas shall have a contiguous area of not less than fifty (50) acres. The agricultural areas may be combined with adjacent agricultural lands provided, however, that the minimum width prescribed above shall be met on all portions of the agricultural open space. If the required open space area cannot be reserved, developers may apply for an exemption and pay the required in-lieu-of fee in accordance with Section 10.5.12.

10.5.6 OPEN SPACE REQUIRED

Open space shall be required in all developments as set forth in **Table 10.5-1**.

10.5.7 LOCATION

- A. **Distance to Dwellings.** Open space shall be located within one-quarter (1/4) mile radius from each buildable lot within the proposed development. This radius shall be measured in a straight line, without regard for street, sidewalk or trail connections.
- B. **Connectivity.** The Administrator may require connection to a community open space network and/or trails system if the proposed development is adjacent to the boundary of an established community public open space as included in the Livable Communities Blueprint for Cabarrus County or any other park, recreation, greenway, or open space plan adopted by the City Council, which are all hereby incorporated by reference as if set forth in their entirety herein.
- C. **Accessibility.** Active open space areas shall be accessible to all residents of the development. Accessibility to pedestrians within the proposed development shall be provided by one of the following means. Upon review of the design by the Administrator, additional pedestrian access points may be required.
 - 1. Access shall be provided via frontage on a public street right-of-way containing a sidewalk; or
 - 2. Access shall be provided via a recorded pedestrian easement (minimum 15 feet wide).
- D. **Contiguity.** At least sixty percent (60%) of the required open space shall be in a contiguous tract. For the purposes of this section, contiguous shall include any open space bisected by a residential street (including a residential collector), provided that:
 - 1. A pedestrian crosswalk is constructed to provide access to the open space on both sides of the street; and
 - 2. The right-of-way area is not included in the calculation of the minimum open space required.

10.5.8 MAINTENANCE

- A. Open-space areas shall be owned, preserved, and maintained as approved by the City Council by any of the following mechanisms or combinations thereof:
 - 1. Dedication to the City, an appropriate public agency, or a non-profit entity (such as a land conservancy) if such an agency or entity is willing to accept the dedication and is financially capable of maintaining such open space, or
 - 2. Common ownership by a property owners' association, which assumes full responsibility for the maintenance of the open space. In the event the association fails to maintain the open space according to the standards of this Ordinance, the City may, following reasonable notice:
 - a. Demand that the deficiency of maintenance be corrected; or

- b. Enter the open space to perform the needed maintenance. The cost of such maintenance shall be charged to the association.
- B. Open-space areas shall be maintained so that their use and enjoyment as open space are not diminished or destroyed.
 - 1. **Active Open Space.** Maintenance shall include ensuring that there exist no hazards, nuisances, or unhealthy conditions.
 - 2. **Passive Open Space.** ~~Passive open space maintenance~~ Maintenance for passive open space areas that are not designated tree save areas, as defined in Article 11, shall include the removal of litter, dead tree and plant materials (that is obstructing pedestrian movement), and brush; weeding; and mowing. Human-made litter and debris shall be removed from passive open space areas that are tree save areas. ~~Litter~~ For all passive open space areas, litter and debris shall not inhibit the flow of natural watercourses. Stream channels shall be maintained so floodplains elevations remain unchanged.
 - 3. **Open Space on Farms.** No specific maintenance is required for open space with agricultural uses. No specific maintenance is required for open space with forestry uses provided that a current forest management plan is filed with and approved by the appropriate State agency.
 - 4. **Greenways.** Greenways connecting residences, schools, and recreational areas are encouraged. Maintenance shall include the removal and avoidance of hazards, nuisances, or unhealthy conditions.

10.5.9 SUBMITTAL REQUIREMENTS

All areas reserved as open space shall be delineated and labeled on required preliminary and/or final subdivision plats, and required site plans.

10.5.10 OPEN SPACE PROVISION AND MAINTENANCE PLAN

An Open Space Provision and Maintenance Plan shall be submitted as a part of the application for development approval including the project-phasing schedule. The plan shall:

- A. Designate areas to be reserved as open space. The location and use of open-space areas shall be sensitive to the physical and design characteristics of the site.
- B. Designate the type of open space that will be provided (passive or active) and identify tree save areas, as defined in Article 11.
- C. Specify the manner in which the open space shall be perpetuated, maintained, and administered.

10.5.11 UTILITY RIGHTS-OF-WAY

Open space may be located within a utility right-of-way provided that permanent structures and other obstructions are not located in the right-of-way.

10.5.12 OPEN SPACE FEE-IN-LIEU

- A. In lieu of land dedication, the Planning and Zoning Commission or City Council may permit the developer to contribute a cash payment to the City. The value of such payment shall be 300 percent of the pre-development tax value of the required open space area.
- B. If, at the option of the Planning and Zoning Commission, it is determined that a cash dedication may be made, said cash shall be paid to the City Finance Director and shall be deposited into a special Parks and Recreation Service Area fund prior to final plat approval. Money in the fund, including accrued interest, shall be expended solely for acquisition, development, or rehabilitation of recreational lands or improvements related thereto.
- C. Collected fees shall be appropriated by the City for a specific project to serve residents of the subdivision. Collected fees shall be expended within a budgetary year no more than ten years after the receipt of the recreation improvement request. If such fees are not so committed, these fees shall be distributed and paid to the then record owners of

the subdivision in the same proportion that the size of their lots bears to the total area of all lots in the subdivision.

Table 0-1: Open Space Calculations

Zoning District(s)	Total Percentage of Open Space
AG	N/A
CS	See Table 9.13-1
RE, RL, RM-1, RM-2, RV and RC	8%10% (0 - 2 units per acre)* 10%15% (2.1 - 4 units per acre)* 12%20% (greater than 4 units per acre)*
B-1, O-I, CC, C-1, C-2, I-1 and I-2	N/A
PUD, PRD, TND	16% (0 - 2 units per acre)* 20% (2-10 - 4 units per acre)* 24%25% (greater than 4 units per acre)*
TND	See Table 4.10-1

Section 11. In Article 11, Development and Design Standards, insert new section 11.9 Tree Preservation as follows:

11.9 TREE PRESERVATION

11.9.1. PURPOSE

The purpose of this section is to establish a series of standards and measures necessary to preserve tree canopy cover and significant trees, which provide aesthetic and environmental benefits, as part of the development process. Requirements for tree save areas are designed to enhance and preserve the City's tree canopy and wooded sites and improve the overall quality of life.

11.9.2. APPLICABILITY

- A. The standards in this section shall apply to:
 - 1. All new residential subdivisions containing thirty (30) dwelling units or more in one or more phases of contiguous development
 - 2. Existing residential subdivisions containing thirty (30) dwelling units or more that are expanded by an amount equal to or greater than five (5) percent of the existing site area shall be required to comply with this section only for the expansion area.
- B. Single-family detached dwellings on individual lots of record are exempt from the provisions of this section.

11.9.3. MODIFICATIONS & WAIVERS

- B. Where necessary to accommodate creativity in site design or where topographic or physical site conditions make strict adherence impractical, the Administrator reserves the right to review unique situations on a case by case basis and to make necessary modifications provided they meet the performance goals as set forth in this section, Section 9.10.8 Tree Protection Guidelines, Section 10.5 Open Space Standards, and Article 11 Landscape and Buffering Standards. The Administrator shall also have the authority to modify certain standards in this section in either of the following instances:

 - 1. Topographic or physical site conditions make adherence to these standards wholly impractical.
 - 2. Due to existing unusual or unique site characteristics, adhering to these standards would create an undue or unreasonable hardship.
- A. A written request shall be submitted to the City along with any necessary site plans to demonstrate the hardship. The findings of the Administrator shall be final and binding to all parties. Appeals of the Administrator’s decisions may be made to the Board of Adjustment.
- B. The provisions of this ordinance may be waived during a period of emergency (such as a major storm, hurricane, tornado, other severe natural disaster, medical emergency, etc.) if compliance would impede the preservation of health and safety, rescue of life, protection of property from immediate danger, or the repair of utilities. Any emergency work shall follow as closely as possible the standards outline herein. This provision shall not be interpreted to be a general waiver of the intent of this chapter.

11.9.4. TREE PRESERVATION REQUIREMENTS

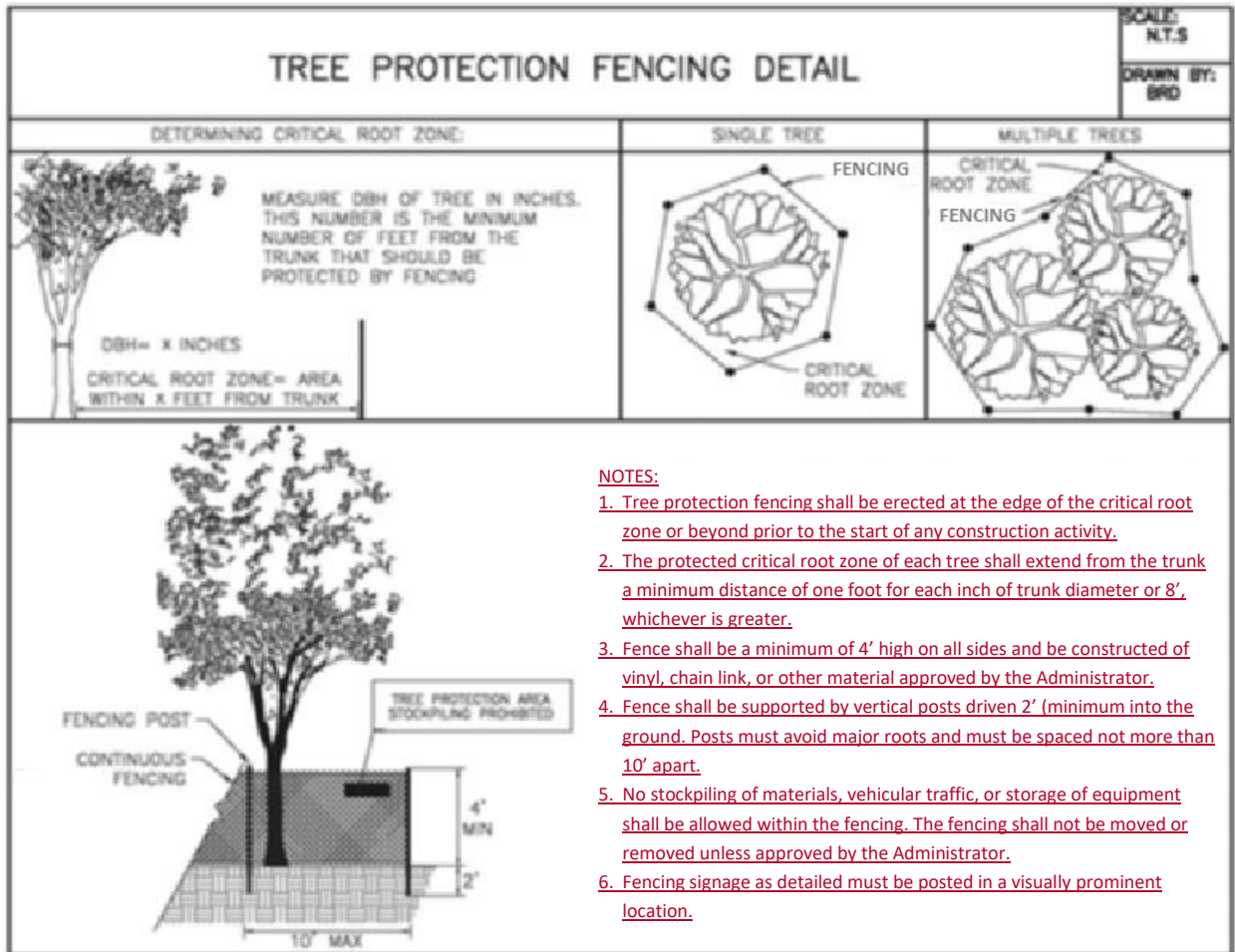
To protect the existing tree canopy of wooded areas and to enhance the tree canopy of areas of diminished canopy, the following tree preservation and tree planting provisions are required:

- A. An informal site assessment of existing tree canopies using aerial photography, aerial drones, or other methods approved by the Administrator prior to site preparation or development/redevelopment activities. The site assessment shall also include an inventory of significant trees on the site. No tree removal or land clearing shall be permitted on a site prior to the tree canopy assessment unless approved through the waiver process or early grading has been approved through the Site Plan review process.
- B. For residential subdivisions, at least fifty (50) percent of the required open space as set forth in Table 10.5-1 shall be comprised of tree canopies identified during the informal site assessment that are contiguous to the extent possible, with priority given to canopied areas that include significant trees, and designated as a tree save area. Tree

save areas shall count towards passive open space and shall be provided in a manner consistent with provisions in Section 10.5.

- C. Trees may be excluded from preservation requirements in the event that they that are dead, diseased or unsafe as determined by the Administrator, or at the general discretion of the Administrator.
- D. If the tree save area does not meet the minimum required percentage of open space from canopies identified during the site assessment, then additional trees must be planted at a spacing of thirty-five (35) feet by thirty-five (35) feet and in compliance with materials and installation provisions in Article VII of the City's Technical Standards Manual and additional installation provisions of this section.
- E. Results from the initial site assessment for tree canopies and significant trees, identified tree save areas, and identified areas where trees, vegetation, and soils may be removed or modified shall be submitted as part of the landscape plan requirements in Section 11.2.1. The approval of this plan shall require an enforceable restriction on property usage that runs with the land to ensure that future activities maintain the tree save area consistent with the approved project plans.
- F. Tree save areas shall not be disturbed, cut, damaged, or removed, except for in instances described in Section 11.9.3.
- G. Protective barricades shall be placed around the tree save areas at least one (1) foot of radial distance from trunks of perimeter trees for every inch of tree DBH of the perimeter trees or at least eight (8) feet radial distance from trunks of perimeter trees, whichever is greater, prior to the start of development activities or grading. Refer to (Figure 11.9-1) for tree protection fencing specifications. The protective barricades shall be identified on the landscape plan as per Section 11.2.1.

Figure 11.9-1: Tree Protection Fencing Detail (Source: City of Concord)



H. To prevent unintended compaction of soil, the area within the protective barricade shall remain free of all building materials, dirt or other construction debris, construction traffic, storage of vehicles and materials, and mass grading.

I. Except for driveway access points, sidewalks curb and gutter, no paving with concrete or other impervious materials within five (5) feet of protective barricades are allowed unless otherwise approved by the Administrator.

11.9.5. INSPECTIONS

The City Arborist, landscape architect or other qualified persons designated by the City are authorized to inspect the tree save areas. These designees are authorized to:

A. Inspect the tree save areas at any time during construction.

B. Inspect the tree save areas once a year after the issuance of a Certificate of Occupancy in order to ensure compliance with the approved site plan and to ensure that the tree save areas are properly maintained.

C. The Administrator may issue a Notice of Violation for developments found to be in violation to comply with the provisions of this section.

11.9.6. TREE REPLACEMENT

A. The following replanting requirements apply to those who commit a violation of these provisions resulting in the removal, damage, or death of trees in a tree save area. Trees removed in the tree save area due to emergencies, as specified in Section 11.9.3(C), and death by natural causes are excluded from these requirements.

1. If tree save area affected by the violation is less than one (1) acre and tree stumps are present, replace at a one-to-one (1:1) ratio each removed, damaged, or dead tree with a tree of the same species.

2. If tree save area affected by the violation is less than one (1) acre and tree stumps are not present, replant trees in the affected area based on the requirements specified in Section 11.9.4.(D).

3. If tree save area affected by the violation is one (1) acre or more, replant trees in the affected area based on the requirements specified in Section 11.9.4.(D).

B. Trees planted within the tree save area during site development/redevelopment activity and that die within one (1) year of construction completion shall be removed and replaced by the applicant.

C. A plan denoting the proposed location and species of replacements shall be submitted to the Administrator for approval.