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Appendix

Development Checklist

This Development Checklist suggests exhibits, illustrations and other materials to facilitate the application process. They can assist in creating an application that implements the vision and addresses the recommendations of the Comprehensive Plan and these guidelines, as well as addressing other issues that typically arise during the development review process. Not all items will be applicable to every application; some items may be combined; and, additional or alternative materials may be provided to explain unique or innovative strategies proposed.

While there is some overlap for completeness, this list does not replace or supersede the application submission requirements set forth in the Zoning Ordinance.

The items in the 'Development Framework and Vision' section of the Checklist are appropriate to provide as exhibits in the pre-application phases of project development. Some of these items will also be appropriate to include as part of the formal zoning submission. The items in the remainder of the Checklist are appropriate to include as part of a zoning submission, either as proffered plans or as exhibits to aid in the evaluation of the application. In all cases, the Checklist should build on and reflect the process of the Development Framework and Vision section.



Restonians enjoying Town Center | Reston, VA | Image Credit: Fairfax County

7A Development Checklist

Development Framework and Vision (Chapter 2 & 3)	Achieved
Vision Statement:	
Describe the project vision.	
Describe how the project contributes to the Comprehensive Plan's vision for the TSAs and the desired character for the area.	
Include proposed uses by square footage and number of dwelling units.	
Context Plan:	
Show the proposed development with surrounding context (approximately ½ to 1 mile), including existing and proposed surrounding development, the grid of streets, distance to metro, open space, and other relevant contextual information.	
Open Space / Green Network Plan:	
Diagram existing and proposed open space and natural features onsite and adjacent to the site.	
Identify connections to offsite features.	
Identify potential active recreation locations.	
Describe strategies to utilize the environment (i.e. site features, solar access, and natural resources).	
Describe strategies to highlight and maximize innovative stormwater management.	
Transportation Network Plan:	
Diagram the grid of streets, street types and any proposed deviations.	
Diagram pedestrian circulation network, including destinations and major building entries.	
Diagram access to metro and other transit facilities.	
Diagram bicycle networks including features identified in the Bicycle Master Plan.	
Include offsite connections for all features.	
Building Framework Plan:	
Diagram building locations and uses.	
Identify orientation towards streets, pedestrian network and open spaces.	
Diagram general heights and describe strategies to transition to adjacent districts.	

7A

Site Design (Chapter 4)	Achieved
Open Spaces, Parks and Amenities:	
Identify the locations and proposed uses of natural areas, parks and plazas.	
Identify the locations and proposed uses of other publicly accessible and private amenities.	
Quantify open space on the site to demonstrate conformance with both Zoning Ordinance and Comprehensive Plan requirements.	
Identify potential locations for public art.	
Identify proposed landscape, plant materials, and hardscape materials for all proposed parks and open spaces.	
Provide enlargements, in plan view, of all parks and amenity spaces.	
Environmental Features:	
Locate and describe innovative stormwater management (SWM) features such as green roofs, low impact development techniques or best management practices.	
Illustrate how SWM features contribute to the character of the site or the open space features.	
Based on the shadow study, provide information regarding to what extent micro-climates may be created or altered, and strategies to mitigate impacts.	
Pedestrian Plan:	
Diagram the pedestrian hierarchy, identifying primary routes, secondary routes and Reston-Specific Streetscape locations.	
Identify connections to the greater Reston trails network.	
Identify major destinations such as Metro, parks, and building entrances.	
Bicycle Plan:	
Identify locations for bicycle sharing stations and short and long-term bicycle parking in relationship to the bicycle network and destinations.	
Street Grid & Vehicular Circulation:	
Provide block dimensions.	
Show Right of Way lines and any existing or proposed access easements.	
Show locations and access diagrams for parking structures and lots.	
Identify locations of loading and service areas, including access and (if appropriate) internal turning patterns.	
Site Constraints:	
Identify Fire Access features, including fire lane delineation treatments.	
Show utility and infrastructure locations and easements, including stormwater, electrical transformers, utility vaults, etc.	

7A

Building Design (Chapter 5)	Achieved
Street Activation:	
Diagram ground floor uses and building entrances in relationship to the pedestrian network.	
Indicate proposed build-to lines (BTL).	
Illustrate building articulation around the BTL.	
Show pedestrian views of proposed buildings and public realm.	
Identify locations for interior public spaces and major design elements such as staircases, atriums, or recreational features.	
Building Massing and Façades:	
Show bird's eye views of proposed building massing, including surrounding existing and approved buildings.	
Clearly denote minimum and maximum heights of major building elements, including heights at stepbacks, rooflines, penthouses and podiums.	
Provide sections to demonstrate relationships between buildings and site elevation and features, both on-site and off-site.	
Provide a shadow analysis clearly illustrating the impacts of the proposed development on public spaces and surrounding developments.	
Provide conceptual elevation drawings for major façades, showing articulation, possible materials, and other types of architectural treatments.	
Provide conceptual elevation drawings of any façades with long expanses without doors or windows, showing architectural or other treatments.	

Streetscape (Chapter 6)	Achieved
Streetscape Plan:	
Label street type designation for each existing and proposed street.	
Identify streetscape and roadway dimensions in cross sections and plan view.	
Provide enlargements, in plan view, of each distinct type of streetscape.	
Annotate proposed modifications to recommended standards.	
Identify building and garage entries on streetscape plans.	
Plantings:	
Identify proposed landscape and plant materials or plant palette.	
Identify surface treatment (open ground, cantilevered pavers, tree grates) around trees to demonstrate tree viability.	
Materials:	
Identify hardscape materials for all streetscapes.	
Indicate special treatments for special areas such as adjacent to parks or building entrances.	
Identify locations, materials, and design details for crosswalks.	
Fixtures:	
Identify proposed locations for streetscape furniture and fixtures, including benches, bicycle racks, bicycle lockers, water fountains, bus shelters, public art and lighting.	
Provide style or design palette for streetscape furniture and fixtures.	
Identify locations for free standing signage, if desired.	

7A

Phasing of Public Realm Implementation (as appropriate)	Achieved
In cases where a development is expected to be phased in over time, additional information should be provided to allow for evaluation of both the timing of improvements and the design of interim stages.	
Clearly indicate which ultimate public realm elements will correspond with each proposed phase of development, including open spaces and parks, as well as streets and pedestrian connections.	
Demonstrate continuous and interconnected pedestrian, bicyclist and vehicular circulation, particularly to the Metro and other key locations.	
Indicate locations for interim public open spaces, particularly in relation to early phases of residential development.	
Show interim conditions of all urban parks and other public spaces, if they are phased.	
Indicate interim improvements for any existing surface parking to remain on a temporary basis, including the use of low-impact development techniques to reduce stormwater run-off and the addition of pedestrian elements.	

7B Reference Materials

FAIRFAX COUNTY

Fairfax County Board of Supervisors: <https://www.fairfaxcounty.gov/boardofsupervisors/>

Fairfax County Comprehensive Plan, Reston (Area III):

<https://www.fairfaxcounty.gov/planning-zoning/sites/planning-zoning/files/assets/compplan/area3/reston.pdf>

Fairfax County Department of Planning and Zoning: <https://www.fairfaxcounty.gov/planning-zoning/#gsc.tab=0>

Fairfax County Department of Public Works and Environmental Services (DPWES)

Recommended Plant List: https://www.fairfaxcounty.gov/publicworks/sites/publicworks/files/assets/documents/bioretention_plant_list.pdf

Stormwater fact sheet: <https://www.fairfaxcounty.gov/publicworks/stormwater/facility-fact-sheets>

Fairfax County Department of Transportation: <https://www.fairfaxcounty.gov/transportation/#gsc.tab=0>

Fairfax County Department of Transportation - Bike & Walk Fairfax: <https://www.fairfaxcounty.gov/transportation/bike-walk#gsc.tab=0>

Fairfax County Bicycle Master Plan: <https://www.fairfaxcounty.gov/transportation/bike/master-plan>

Fairfax County Bicycle Parking Guidelines: https://www.fairfaxcounty.gov/transportation/sites/transportation/files/assets/documents/pdf/bikeprogram/fcdot_bicycle_parking_guidelines_final2.pdf

Fairfax County Heritage Resources: <https://www.fairfaxcounty.gov/planning-zoning/historic>

Fairfax County Planning Commission: <https://www.fairfaxcounty.gov/planningcommission/>

Fairfax County Policy Plan - Parks and Recreation Section - Appendix 2 Urban Park Types and the Design Elements (Urban Parks Framework):

<https://www.fairfaxcounty.gov/planning-zoning/sites/planning-zoning/files/assets/compplan/policy/parksrec.pdf>

Fairfax County Public Facilities Manual (PFM): <https://www.fairfaxcounty.gov/landdevelopment/public-facilities-manual>

Fairfax County Stormwater Management Ordinance: https://library.municode.com/va/fairfax_county/codes/code_of_ordinances?nodeId=THCOCOF1976_CH124STMAOR

Fairfax County Trails Plan: <https://www.fairfaxcounty.gov/planning-zoning/sites/planning-zoning/files/assets/documents/maps/trails-plan-map.pdf>

Fairfax County Zoning Evaluation Division: <https://www.fairfaxcounty.gov/planning-zoning/about-us/zoning-evaluation-division>

Zoning Applications: <https://www.fairfaxcounty.gov/planning-zoning/zoning/application-review>

7B**OTHER REFERENCE MATERIALS**

Crime Prevention Through Environmental Design (CPTED): <http://www.cpted.net/>

EPA SmartWay: <https://www.epa.gov/smartway>

NOVA (Northern Virginia Regional Park Authority) Parks: <https://www.novaparks.com/>

Plant NOVA Natives: <http://www.plantnovanatives.org/>

Public Art Reston: <http://publicartreston.org/>

Complete Guide for Developers to Public Art in Reston; Developer's Checklist: Public Art Project Plan; Public Art Maintenance Plan

Public Art Master Plan for Reston: <http://publicartreston.org/discover/about/masterplan/>

Reston Association: <http://www.reston.org/RestonAssociation-Home/tabid/144/Default.aspx>

Design Review Board: <http://www.reston.org/AboutRestonAssociation/Governance/DesignReviewBoard/tabid/799/Default.aspx>

Walking, Hiking & Cycling: <http://www.reston.org/Parks,RecreationEvents/NatureEnvironmentalResources/Walking,HikingCycling/tabid/937/Default.aspx>

Reston on Foot and Bicycle: <https://www.reston.org/portals/3/2013%20GENERAL/reston%20on%20foot%202014.pdf>

Reston Planning & Zoning Committee: <http://rpz.korchy.com/>

Reston Town Center: <http://restontc.org/>

Design Review Board: <http://restontc.org/design-review-board/>

Sustainable SITES Initiative: <http://www.sustainablesites.org/>

Virginia Department of Environmental Quality Stormwater BMP Clearinghouse: <https://www.vwrrc.vt.edu/swc/StandardsSpecs.html>

Virginia Department of Rail and Public Transportation (DRPT): <http://www.drpt.virginia.gov/>

Multimodal System Design Guidelines: <http://www.drpt.virginia.gov/planning/multimodal-guidelines/>

Virginia Department of Transportation (VDOT) Road Design Manual Appendix B2: [http://www.extranet.vdot.state.va.us/locdes/Electronic_Pubs/2005%20RDM/AppendB\(2\).pdf](http://www.extranet.vdot.state.va.us/locdes/Electronic_Pubs/2005%20RDM/AppendB(2).pdf)

7C Glossary

Active Open Space - Open space that is used for sports, exercise or active play, and typically programmed for such uses.

Active Use - A use located within a building that is designed for occupation and has views to the adjacent streetscape or open spaces. Active uses can include retail, commercial, office and residential uses.

Articulation (Façade) - The variation in an exterior building wall to provide changes in depth, horizontal or vertical patterning, or fenestration.

Base (Building) - The lower portion of a building where it meets the ground adjacent to the streetscape. The base typically includes the first few floors, but may vary in height depending on the architecture.

Best Management Practices (BMPs) - A practice, or combination of practices, that is determined to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to meet water quality goals.

Biodiversity - Refers to the variety of life in a particular habitat or ecosystem.

Build-To Line - The line along which the primary mass of a building façade should be set. It is typically located at the back of the building zone. The line should be consistent within a block, unless it is intentionally varied to achieve façade articulation, streetscape uses such as outdoor dining, or other public open spaces.

Crime Prevention through Environmental Design (CPTED) - An approach to deterring criminal activity by implementing specific strategies in the built environment, such as increasing natural surveillance and eliminating potential hiding places for offenders.

Façade (Building or Parking) - The exterior surface of a building which faces a street or public open space.

Fenestration - Refers to the pattern of opening in a building façade typically through the use of windows and other glazed areas.

Floor Area Ratio (FAR) - An expression of the amount of development allowed on a specific parcel of land. FAR is determined by dividing the total square footage of buildings on a site by the amount of site square footage.

Focal Point - A location of interest or activity. Typically refers to a point which is highly visible due to its location and impact. May include design features intended to focus the eye in a particular area.

Frontage (Building) - The portion of a building which faces and aligns to the adjacent street.

Hardscape - Refers to paved or built areas which are not planted or contain exposed soil.

Landscape Buffer - A continuous strip of land provided along the edge of a structure or property where landscaping is used to screen or provide a transition between uses or public space.

LED - Light-emitting diode.

7C

Leadership in Energy and Environmental (LEED) - The U.S. Green Building Council's Design certification program for green buildings. Green building structures and their associated landscapes are located, designed, constructed, and operated in an environmentally responsible manner to minimize short-term and long-term negative impacts on the environment and building occupants.

Liner (Active Use) - An active use that is used to hide parking, mechanical, storage, or other similar uses. Active use liners may include retail, commercial, office and residential uses.

Low Impact Development (LID) - Low Impact Development (LID) is an innovative stormwater management approach with a basic principle that is modeled after nature: manage rainfall at the source using uniformly distributed decentralized micro-scale controls. LID's goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source.

Microclimate - The climate of a specifically defined area, particularly one that is different from or contrasts with the climate of the surrounding area.

Open Space (Public) - Any open space for public use directly accessible by an abutting street on at least one side, and with pedestrian access from a public sidewalk or right-of-way.

Parking Garage - A building, or portion thereof, used for parking and its access, including automated and mechanical parking systems. Also referred to as a parking structure.

Passive Open Space - Open space which is generally used for sitting or relaxing, and is typically not programmed with specific activities.

Permeability - A material or a construction assembly's capacity to absorb water or to allow water to pass through. Synonymous with perviousness.

Podium (Building) - The base portion of a building which typically includes the first few floors, but can vary in height. The podium is a type of building base typically comprised of parking decks.

Public Facilities Manual (PFM) - The Public Facilities Manual sets forth the guidelines which govern the design of all public facilities which must be constructed to serve new development. It is intended to serve as a technical manual in the effort to implement the requirements of the Subdivision and Zoning ordinances and other applicable chapters of the Code of the County of Fairfax, Virginia (County Code).

Public Realm - All spaces physically or visually accessible regardless of ownership, including, but not limited to, streets, sidewalks, plazas, parks, viewsheds, and landmarks.

Sign Band - A general zone where building-mounted tenant signs are placed, located above the storefront and below the façade above, to provide continuity and organization in sign placement.

Step-back - The stepping back of floors of a building to reduce its apparent mass at the street level. Step-backs typically occur between the building podium and tower, and can vary in height and depth.

Storefront - The area of the building façade at sidewalk level which faces the streetscape or public open spaces. Storefronts enclose ground floor active uses, and provide the major visual and primary physical access to those spaces.

Streetscape - The full compliment of materials, both horizontal and vertical, that compose the publicly accessible space located between the street curb and the build-to line.

Tree Space - The area that is dedicated for planting and growing a street tree. Synonymous with tree pit or tree box.

Tower (Building) - The portion of a building located above the building base. The tower can vary in height but is primarily comprised of active uses, and does not include parking.

Treatment (Architectural) - Architectural or landscape elements on a building façade intended to conceal parking, mechanical, storage, or other similar uses. Architectural treatments may include the use of varying materials, fenestration, architectural features, screens, meshes, louvers, and glazing, or

the incorporation of vegetated surfaces and planters. Architectural treatment does not include the application of paint.

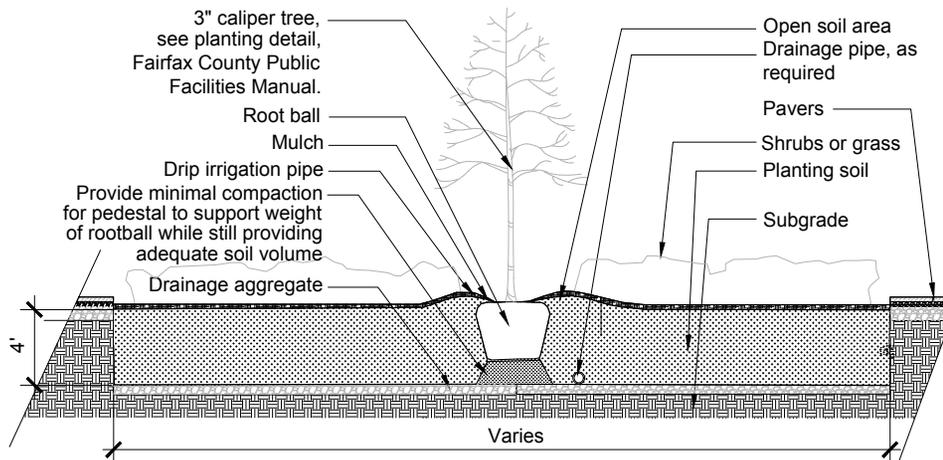
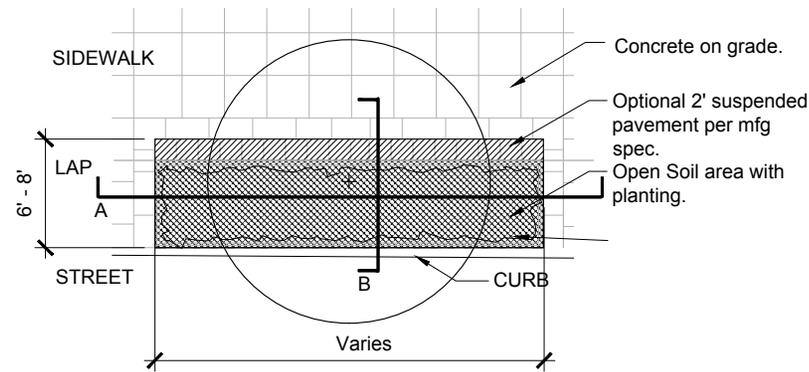
Tree Root Zone - The area of soil in which tree roots extend and where the predominant root activity occurs.

Transit Oriented Development (TOD) - In Fairfax County, defined as compact, pedestrian-friendly and biking-friendly, mixed-use development containing medium to high density residential, office and retail uses within walking distance of rail transit stations identified in the Comprehensive Plan.

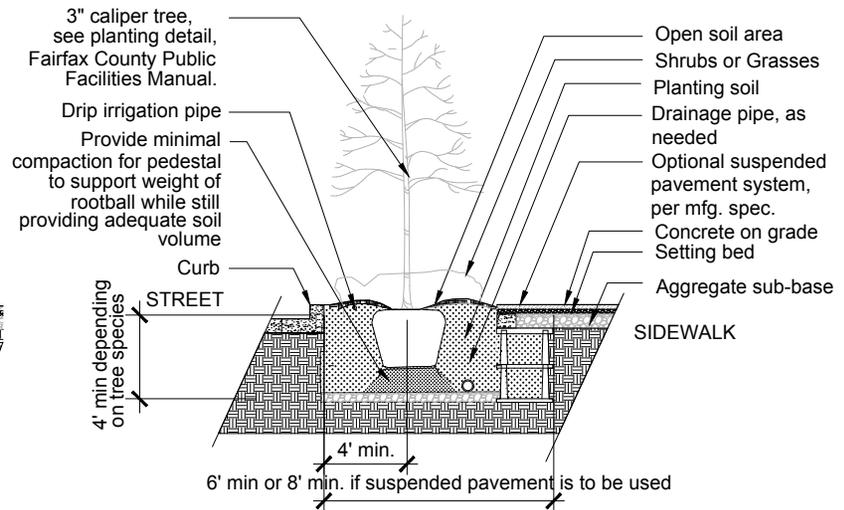
Urban Park Network - A system of interconnected, interrelated urban parks, including pocket parks, common greens, civic plazas, and recreation-focused urban parks, that are existing and planned throughout Reston TSAs.

7D Tree Planting Details

OPEN SOIL PLANTING DETAIL

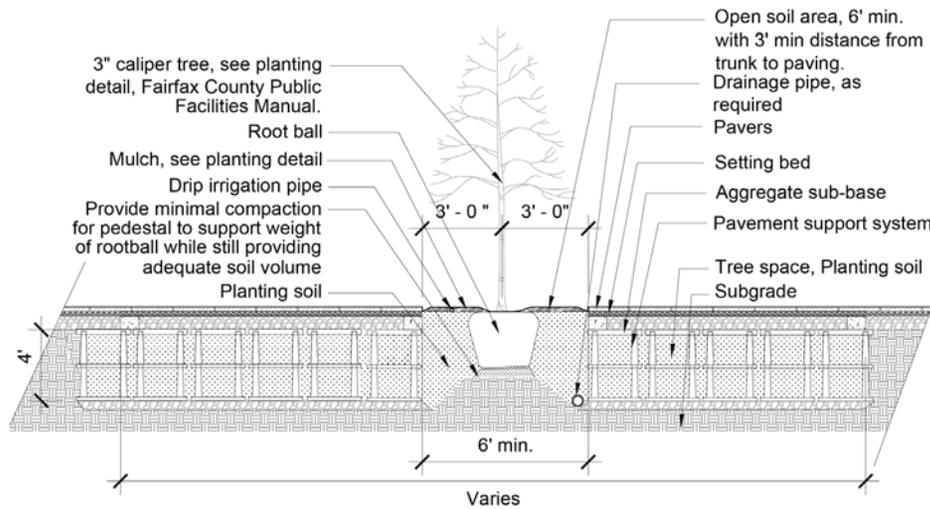
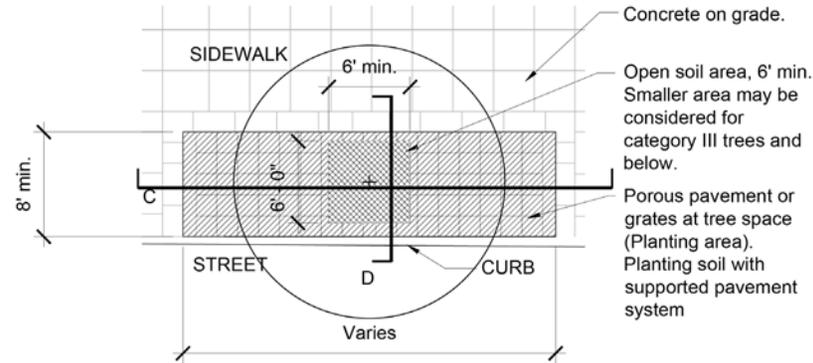


Section A

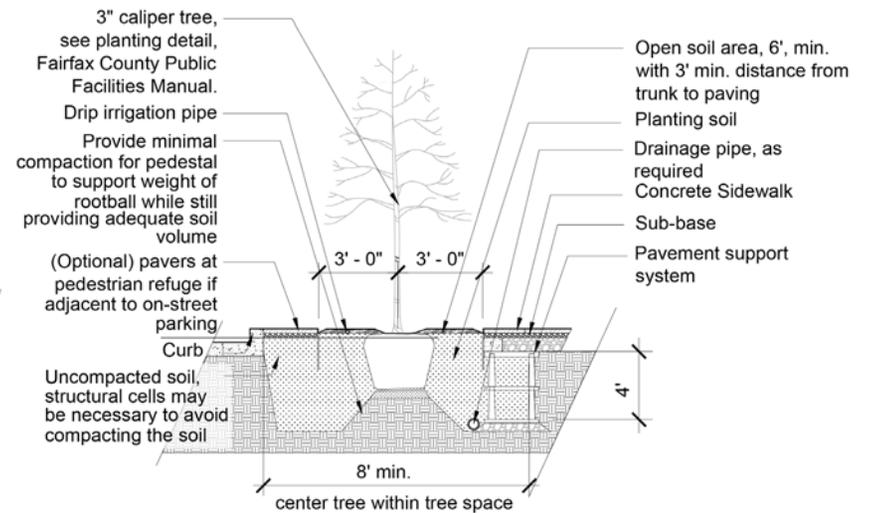


Section B

COVERED SOIL PLANTING DETAIL



Section C

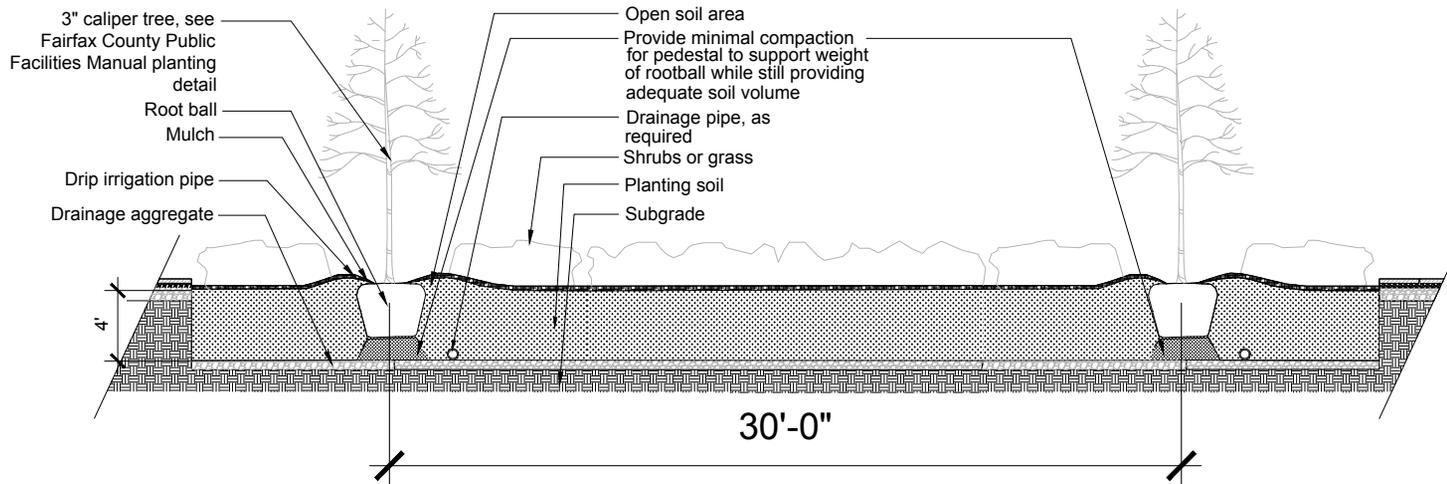
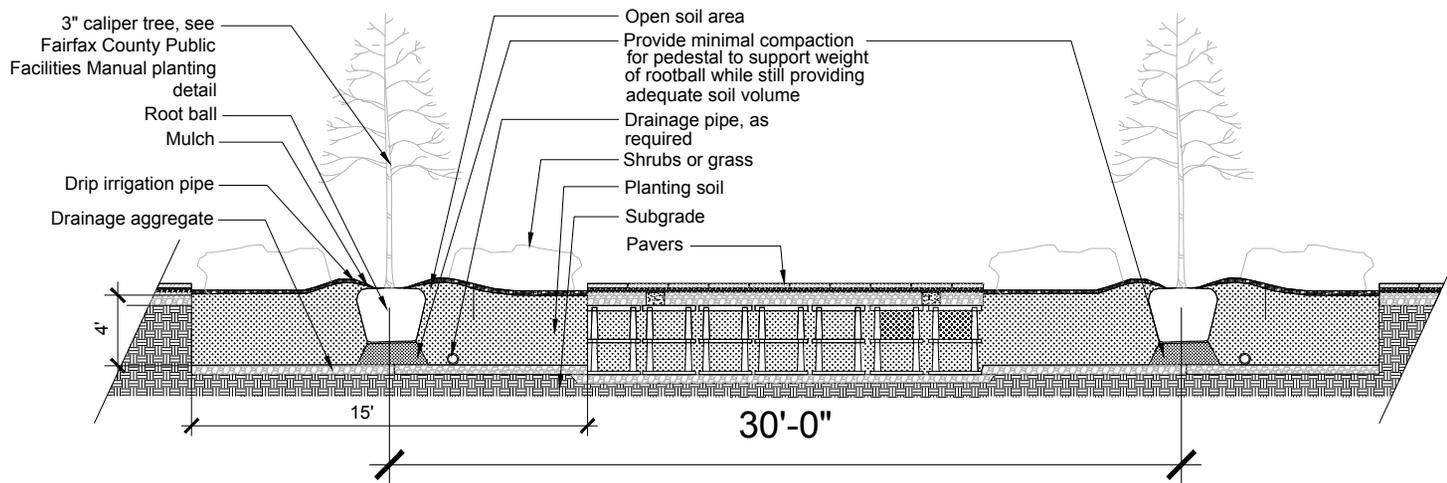


Section D

7D

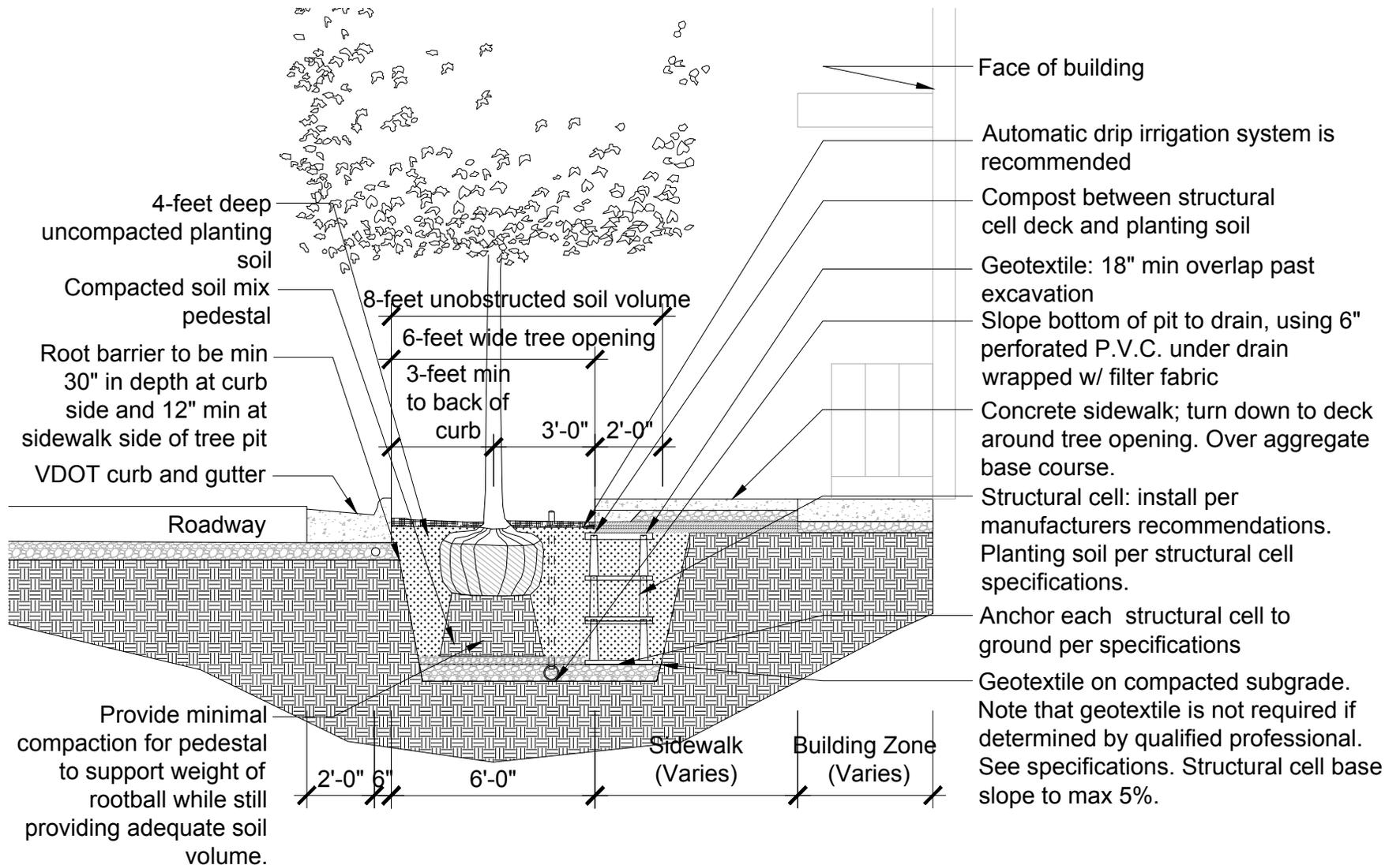
CONNECTED TREE WELLS PLANTING DETAIL - OPEN SOIL (TOP), COVERED SOIL (BOTTOM)

SECTION E



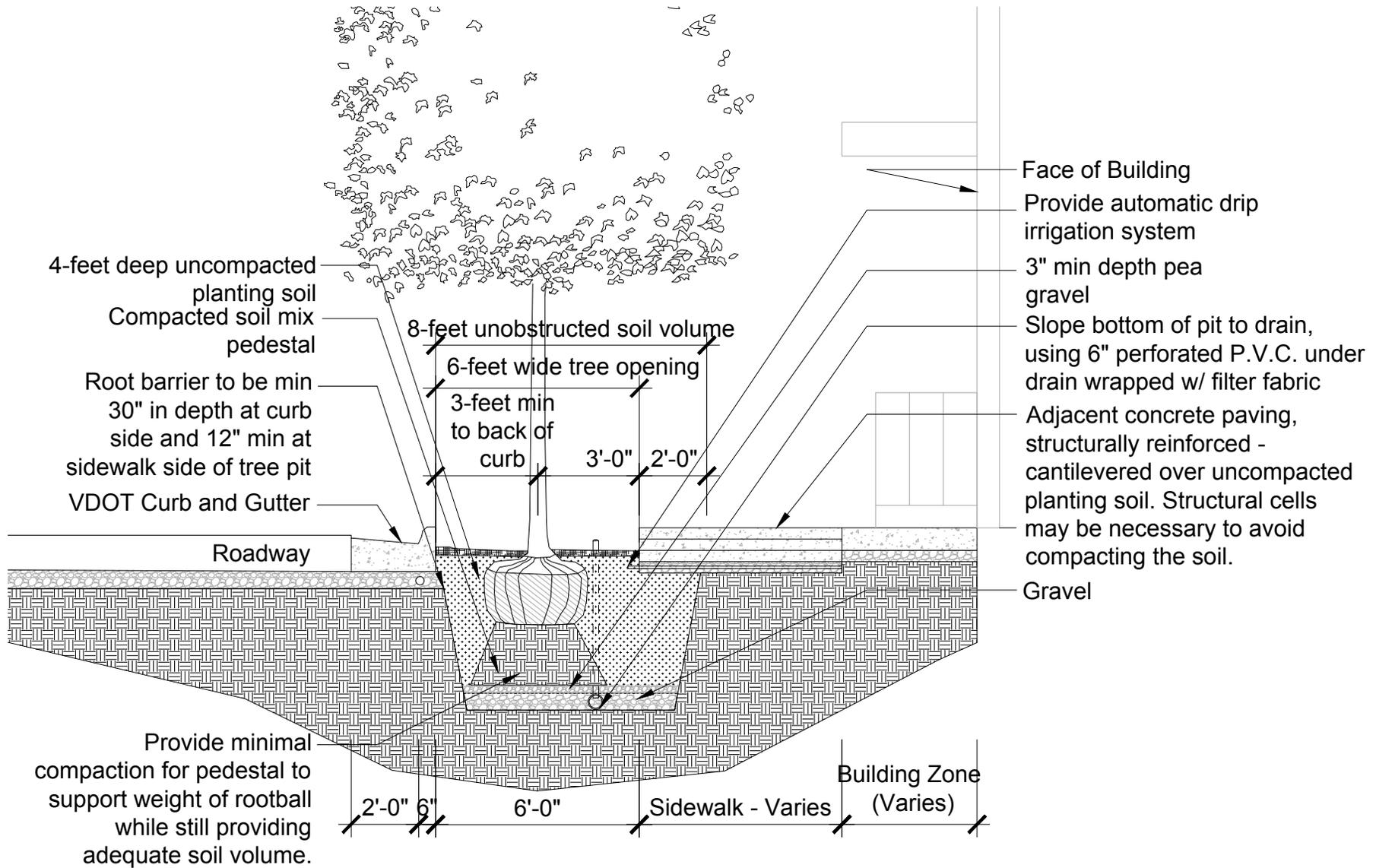
SECTION F

STRUCTURAL CELL TREE PLANTING DETAIL



7D

CANTILEVERED SOIL TREE PLANTING DETAIL



7E Design of Stormwater Management Features: Low Impact Design Features and Practices

Low Impact Design (LID) practices can include, but are not limited to, bioretention or biofiltration facilities (commonly known as rain gardens), vegetated swales, porous pavement, vegetated roofs, tree box filters and the collection and reuse of stormwater runoff. Use [Fairfax County Stormwater ordinance](#), DEQ Stormwater BMP clearinghouse and [DPWES Stormwater fact sheets](#) as resources.

Open Space Protection or Creation

The best way to improve surface water quality is through protecting natural areas that have uncompacted soils and dense coverage by non-invasive native plant species. Protecting and restoring natural areas with healthy native plant communities not only protects water quality, but provides tremendous benefits for humans and wildlife.

Wetlands and Wet Swales

Slowing water flow through vegetated depressions has tremendous benefits for removing pollutants and nutrients, detention, aesthetics and habitat. In some cases wetlands can be used, mimicking those natural filters found throughout stream valleys. Where site conditions or other considerations will not allow pooled water, wet swales can provide many of the same benefits.

Infiltration Practices

In natural systems, water infiltrates through soils to groundwater, where it is filtered, cooled, available for plant uptake, and flows slowly to our streams supporting healthy base flows and wildlife populations. Stormwater practices such as use of vegetative filter strips, soil restoration and amendment, reforestation, infiltration trenches and bioretention seek to maximize opportunities for water to infiltrate the ground.

Soil Restoration/Remediation

Amending soils and/or relieving compaction improves soil porosity, water holding capacity, infiltration and the ability to support healthy vegetation. Soil restoration and amendment should follow the guidelines set forth in the [Fairfax County Public Facilities Manual](#).

Rainwater Harvesting

Captured rainwater can be reused for irrigation, heating-cooling, and other non-potable water uses. Rainwater harvesting often takes water from rooftops and other relatively clean surfaces and places it in cisterns or tanks for reuse.

Bioretention Facilities

One of the most effective ways to capture rainwater, filter it, allow infiltration and uptake in the environment is to use facilities with porous soils and plant materials, mimicking the benefits provided in natural systems.

- Rain Gardens – Engineered detention facilities that treat areas generally an acre or less in size. They typically have ponding depths less than one foot, but store water and release it slowly over two to three days. Rain gardens in our region generally have underdrain systems where soil infiltration rates will not allow rainwater to access groundwater.
- Vegetated or Green Roofs – The incorporation of soil layers and plants into rooftop areas can provide detention of significant amounts of rain water as well as aesthetic, habitat and building heating and cooling benefits.
- Bioswales – Modified drainage swales that use deep, amended soils and plants to absorb most stormwater, providing filtration, detention, aesthetic and habitat benefits in almost any space.

7E

- Biofilters – By using amended soils with plants, these facilities can remove sediment and pollutants at points where stormwater concentrates. They can act as modified buffer strips, be incorporated with curb-cuts streetside and combined with many other treatment methods in small spaces.
- Green/Living Walls
- Planter Boxes – Provide a direct and visible benefit by placing stormwater into a filtering medium that can detain water and provide uptake through plants. Easy to incorporate into virtually all landscapes and use in conjunction with harvesting, vegetated roofs (intensive), etc.
- Sand Filters

Permeable Surfaces and Curb Cuts

- Porous Asphalt
- Porous Concrete
 - Modular Porous Concrete Blocks
- Porous Pavers
- Flexi-Pave
- Curb Cuts – Allow immediate streetside benefits by placing stormwater into biofiltration areas that can remove pollutants and provide both water quantity and quality benefits.

Manufactured BMPs

Where space is limited or to ease design and maintenance, manufactured products can be used to remove sediment, nutrients and pollutants as well as provide detention. These products are designed to meet specific design criteria for installation, performance and maintenance, reduce design costs and simplify construction.

7F Acknowledgments

The Office of Community Revitalization (OCR) and Fairfax County would like to thank the many people who provided their time, insight, and comments in preparing this document. In particular, OCR would like to thank the Urban Design Advisory Group for lending their thoughtful input and expertise:

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