DESIGN GUIDELINES

2023

Catawba Bend

PRESERVE

INTRODUCTION & PURPOSE

The Catawba Bend Preserve Design Guidelines will aide future development of the Catawba Bend Preserve (CBP). The development of CBP is anticipated to occur through multiple phases over the course of several years.

The primary function of these Guidelines establish a cohesive design language throughout the CBP over the course of its development. This document describes design principles for the buildings, landscaping, and site amenities that are anticipated throughout the CBP as outlined in the October 4, 2021 Catawba Bend Master Plan.

The following Guidelines were developed with the guidance of York County Staff. It is understood that the need for special use buildings and amenities may be required for future development and that these guidelines may be modified or waived at the discretion of York County. Other variances and modifications to this document need York County approval.

The Design Concepts and Material Selections in this document identify unique attributes of the site (the area's rich cultural history, diverse landscapes, and its history of forestry) and opportunities to promote the visitor experience (how to engage visitors, promote environmental stewardship, encourage connectivity to nature, and emphasize the identity that is unique to this place)

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York County

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Catawba Bend
PRESERVE

Design Guidelines

Building Elements

DESIGN ELEMENTS

ARTISTIC GATE
Commissioned entry gate as a statement and park identifier.

NATURAL STONE (NS-1)
Regional stone suggested as accent elements in building exterior and base.

PERIMETER FENCING
Perimeter fencing shall be composed of stone piers and wooden rails matching regional materials. Fencing shall incorporate opportunities for park identity.

GROUPED-LOG FENCE
On-site wood resources. Logs to weather naturally and create a monolithic entry feature that relates to the history as an experimental tree farm.

NATURAL PLANTINGS & APPROACH
Entry experience will be landscaped with native species and establish an allée approach as part of the formal access road.

Visitor Entrance

Visitor entrances should be highly visible, inviting, and provide a sense of arrival. Park entry identified with monumental signage that reflects the unique identity of CBP and incorporates natural elements with inspiration taken from the approved branding guidelines for the park. Attractive entrance barriers should be used as access control and site security. Lighting should be provided for entry elements and park signage.

Design Considerations

Entrance should be located to maximize visibility and provide efficient ingress and egress for vehicular, pedestrian, and non-motorized traffic. Configuration and location of the entry elements shall comply with all regulatory requirements including zoning and traffic. Decorative fencing adjacent to raodways should be provided near the entrance. A tree lined drive shall be incorporated near the main approach into the park. Landscaping shall be provided at the entry elements, and the zones adjacent to it. See Site & Landscaping sections of this Guide for additional information. Signage, including current CBP and York County branding, should be incorporated.

Building Form

Massing and scale of the entry elements should be sized to be clearly visible from the roadway and in compliance with any regulatory requirements.

Overall height of entry elements may vary in height, however, these are anticipated to be between 4 feet and 12 feet Unique artistic elements such as decorative traffic control gates should be utilized where appropriate.

Exterior Materials

Stone, Exposed wood timber, decorative entrance gates should be used. Signage and logos should be incorporated in the entrance and should reflect current branding adopted by York County.

DESIGN ELEMENTS

BOARD & BATTEN SIDING (BBS)
Where used, exterior cladding shall reflect regional vernacular and prioritize longevity and ease of maintenance.

NATURAL STONE (NS-1)
Regional stone suggested as accent elements in building exterior and base.

STANDING SEAM ROOF (SSR)
Durable with modern lines

PAINT COLORS (P)
Where necessary, paint shall be limited to neutral earth tones that compliment the building context.

Fee Station

Where required, fee stations or kiosks will incorporate elements outlined in this Guide. Prefabricated stations are discouraged.

Design Considerations
Fee stations shall be located away from the immediate entrance to minimize the possibility of queuing traffic and interference with the roadway. Landscaping shall be incorporated at the roadway edges near the building and be used to screen HVAC equipment or service structures.

Building Form
Massing of the kiosk should be a simple building form with a gabled roof. Roof slope shall be from 7:12 and 10:12. Interior space shall have direct visitibility to both entrance and exit drives and glazed sliding doors should be used to allow attendant to interact with visitors at the entrance drive.

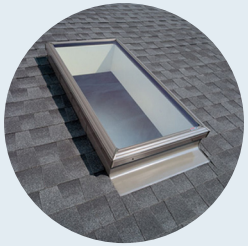
Exterior Materials
Board and batten siding above a stone water table base shall be considered as the exterior material selections. Windows shall be prefinished metal. Roof shall be standing seam metal. See exterior material palette for paint and finish selections.

DESIGN ELEMENTS

STANDING SEAM ROOF (SSR)
Durable with modern lines

PHOTOVOLTAIC PANELS
In addition to conventional power service, alternative energy sources should be considered when appropriate for the building use and site conditions.

GEOTHERMAL LOOP
As appropriate, ground source renewable energy to be considered for heating and cooling needs.



NATURAL LIGHT (W-1)
Interior lighting demand mitigated by introduction of natural light via skylights & slot windows.

PAINT COLORS (P)
Where necessary, paint shall be limited to neutral earth tones that compliment the building context.

TONGUE & GROOVE SIDING & SOFFIT (TG-1)
Durable siding that weathers naturally with building. Wooden elements from on-site wood when appropriate.

Public Building

The public building typology refers to all accessory buildings within the park and does not include marquis structures (i.e. The Lodge or Environmental Education Center) specifically identified in the Master Plan. The building should be inviting to visitors and provide programmed space for guests and park management.

Design Considerations

Building should be sited for a high level of public visibility, with a vegetated buffer between parking areas and roadways to promote a connection to nature as a key visitor experience. A meandering walkway is established to approach the building to soften the buildings placement on the site. Solar orientation of the building should be considered to maximize views and minimize glare. Daylighting, natural materials, and environmental stewardship, are elements that should be incorporated and displayed as part of the building design.

Building Form

The building should emphasize public spaces and be arranged to provide clear views beyond the building. Public areas should incorporate large amounts of glazing shaded by building overhangs or other elements. Staff and support spaces should be secondary spaces with limited glazing. Roof slope shall be from 6:12 and 10:12. Design elements that emphasize a connection to the surrounding site should be considered.

Exterior Materials

Stone, exposed timber, board and batten siding, and glazed aluminum storefront or glazed aluminum curtain wall should be used. Roof shall be standing seam metal with exposed wood soffits and decking. See exterior material palette for paint and finish selections.

DESIGN ELEMENTS

Public Building

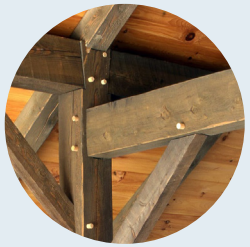
NATURAL STONE (NS-1)
Regional stone suggested as accent elements in building exterior and base.

BOARD & BATTEN SIDING (BBS)
Where used, exterior cladding shall reflect regional vernacular and prioritize longevity and ease of maintenance.

EXPOSED TIMBER
Heavy timber framing evocative of surrounding nature and connection to the site's history as an experimental seedling farm.

DESIGN ELEMENTS

NATURAL STONE (NS-1)
Regional stone suggested as accent elements in building exterior and base.



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Durable siding that weathers naturally with building. Wooden elements from on-site wood when appropriate.

Picnic Shelters

Picnic Shelters describe open air structures intended for visitor day use. The design of these elements should be considered scalable for park implementation at various sites with the main module holding approximately 4 picnic tables of 8 feet in length. Other areas of implementation are envisioned as small 'stop and sit' shelters, or more expansive rentable pavilions programed to host large attendance events within the park. Larger structures should take into consideration proximity to parking and ease of access for hosted gatherings.

Design Considerations
Building location should be sited in locations convenient to day use areas. Related amenities such as visitor parking, comfort station, and information kiosks should be located nearby. Consider providing lighting, power, and cooking amenities nearby. Building design should reflect the park setting.

Building Form
The shelter will feature a single gable roof with a pitch ranging between 7:12 and 10:12 with an exposed heavy timber truss structure supported on stone piers. Typical shelters are anticipated to accommodate four, eight foot long picnic tables.

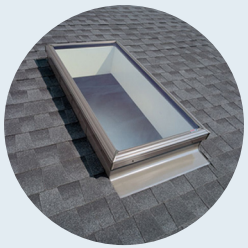
Exterior Materials
Stone and exposed timber structure should be used. Roof shall be standing seam metal with exposed decking. See exterior material palette for paint and finish selections.

DESIGN ELEMENTS

STANDING SEAM ROOF (SSR)
Durable with modern lines

PHOTOVOLTAIC PANELS
In addition to conventional power service, alternative energy sources should be considered when appropriate for the building use and site conditions.

WATER COLLECTION & CONSERVATION
Water collection displayed as landscape elements to complement the building form.



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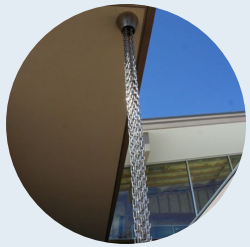

GUTTERS & RAIN CHAIN
Display of water management as features of the building

TONGUE & GROOVE SIDING (TG-1)
Durable siding that weathers naturally with building. Wooden elements from on-site wood when appropriate.

Primary Comfort Stations

Primary restrooms should be located near high traffic areas of the park. These facilities should be visible and welcoming to visitors with adjacent way-finding and park information. The building shall highlight efforts of site stewardship and conservation as appropriate.

Design Considerations
Building location should be convenient to day use areas. Related amenities such as visitor parking, picnic areas, and information kiosks should be located nearby. Incorporate sustainable design elements such as photovoltaic panels and rainwater collection devices into the building design. Natural lighting should be incorporated into the building design with obscure glazing or skylights.

Building Form
Massing of the building should be simple with single gabled roof. Roof slope shall be from 8:12 and 10:12. Roofs will end at the building edge and not extend beyond with overhangs. Gutters are suggested as a means of controlling run-off and directing water for on-site collection.

Exterior Materials
Exterior walls will be primarily stone with T&G siding as accent elements. Roof will be standing seam metal and structures secondary to the primary building for will be of heavy timber construction.

DESIGN ELEMENTS

Primary Comfort Stations

PAINT COLORS (P)
Where necessary, paint shall be limited to neutral earth tones that compliment the building context.

NATURAL STONE (NS-1)
Regional stone suggested as accent elements in building exterior and base.

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STANDING SEAM ROOF (SSR)
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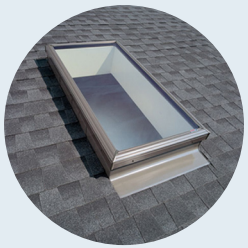

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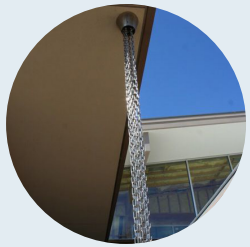

GUTTERS & RAIN CHAIN
Display of water management as features of the building.

TONGUE & GROOVE SIDING (TG-1)
Durable siding that weathers naturally with building. Wooden elements from on-site wood when appropriate.

Remote Comfort Stations

Satellite restrooms should be located near picnic shelters at other key areas of the park. Design character and materials should be similar to primary restroom facility outlined above, at a smaller scale with combined or single user facilities in one structure instead of two. The building shall highlight efforts of site stewardship and conservation as appropriate.

Design Considerations

Building location should be sited in locations convenient to day use areas. Related amenities such as visitor parking, picnic areas, and information kiosks should be located nearby. Incorporate sustainable design elements such as photovoltaic panels and rainwater collection devices into the building design. Natural lighting should be incorporated into the building design with obscure glazing or skylights.

Building Form

Massing of the building should be simple with single gabled roof. Roof slope shall be from 8:12 and 10:12. Roofs will end at the building edge and not extend beyond with overhangs. Gutters are suggested as a means of controlling run-off and directing water for on-site collection.

Exterior Materials

Exterior walls will be primarily stone with T&G siding as accent elements. Roof will be standing seam metal and structures secondary to the primary building for will be of heavy timber construction.

DESIGN ELEMENTS

Remote Comfort Stations

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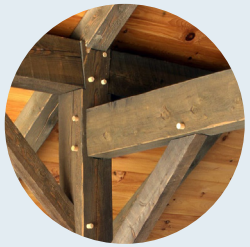


EXPOSED TIMBER
Heavy timber framing evocative of surrounding nature and connection to the site's history as an experimental seedling farm.

PAINT COLORS (P)
Where necessary, paint shall be limited to neutral earth tones that compliment the building context.

Information Kiosk

Information kiosks provide basic visitor information such as maps, wayfinding, and regulations.

Design Considerations
Kiosks should be located at key directional points throughout the park and near related amenities such as visitor parking, picnic areas. Structures should be open air and highly visible. When located at trail heads or rest points consider integrated seating.

Building Form
Massing should be simple with single slope roof to cover kiosk information boards. Roof slope shall be shallow and not exceed 4:12 pitch.

Exterior Materials
Exposed timber structure should be used. Roof shall be standing seam metal. See exterior material palette for paint and finish selections.

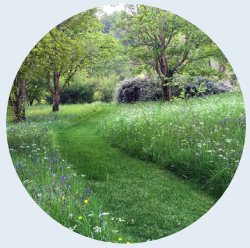
Design Guidelines

Site & Landscaping

DESIGN ELEMENTS

ENTRANCE ALLÉE
Formal access road lined with oak trees at least forty feet apart to establish a naturally shaded and scenic drive into the Preserve.

ENTRY PLANTINGS
Signage decorated with a diversity of beautiful native and flowering vegetation.



NATIVE GRASSES
A variety of grasses native to the landscape placed in pockets of meadows along entrance.

POLLINATOR PLANTS
Colorful flowers added to the meadows to attract butterflies and other pollinators to the landscape.

FENCING
Wooden fence met with rock and stone columns. See building elements for more details.

TURF GRASS
Turf grasses may be used minimally along the edge of the road and shoulder.

Park Entrance

Recommended Plant List for Entrance:

ENTRY-LINED OAKS

- White Oak (*Quercus alba*)
- Pin Oak (*Quercus palustris*)
- Red Oak (*Quercus rubra*)
- Willow Oak (*Quercus phellos*)
- Overcup Oak (*Quercus lyrata*)
- Chestnut Oak (*Quercus montana*)

MEADOW GRASSES

- Little Bluestem (*Schizachyrium scoparium*)
- Virginia Wildrye (*Elymus virginicus*)
- Switchgrass (*Panicum virgatum*)
- Muhly Grass (*Muhlenbergia capillaris*)
- Purpletop Tridens (*Tridens flavus*)
- Yellow Indiangrass (*Sorghastrum nutans*)
- Sedge Species (*Carex var.*)

MEADOW FLOWERS

- Sweet Joe Pye Weed (*Euthrochium purpureum*)
- Butterfly Weed (*Asclepias tuberosa*)
- Black-Eyed Susan (*Rudbeckia hirta*)
- Lanceleaf Tickseed (*Coreopsis lanceolata*)
- Carolina Rose (*Rosa carolina*)
- Common Yarrow (*Achillea millefolium*)
- Purple Coneflower (*Echinacea purpurea*)

DESIGN ELEMENTS

REMOVAL OF INVASIVES
Clear out overgrown and invasive vegetation that screens the appealing views of the Catawba.

MINIMAL IS BETTER
Vegetation located beside waterway shall resemble natural form while appearing groomed of undesired debris.

TRANSITION VEGETATION
Existing flowering plants and native wetland grasses that create a natural buffer into waterway.

NATURAL EDGE
Addition of rugged boulders and rocks to provide a formal border, common to the site.

ACCESS TO RIVER
Existing flowering plants and native wetland grasses that create a natural buffer into waterway.

River Bank

Recommended Plant List for Removal:

INVASIVE VEGETATION

- Tree of Heaven (*Ailanthus altissima*)
- Japanese Privet (*Ligustrum japonicum*)
- Mimosa, Silk Tree (*Albizia julibrissin*)
- Thorny Olive (*Elaeagnus pungens*)
- Meadowsweet (*Spiraea japonica*)
- Japanese Barberry (*Berberis thunbergii*)
- Nandina (*Nandina domestica*)

INVASIVE VINES

- Kudzu (*Pueraria montana*)
- Japanese Climbing Fern (*Lygodium japonicum*)
- Chinese Wisteria (*Wisteria sinensis*)
- English Ivy (*Hedera helix*)
- Japanese Honeysuckle (*Lonicera japonica*)
- Bigleaf Periwinkle (*Vinca major*)
- Bushkiller (Cayratia japonica)

INVASIVE GRASSES

- Cogongrass (*Imperata cylindrica*)
- Chinese Silvergrass (*Miscanthus sinensis*)
- Common Reed (*Phragmites australis*)
- Golden Bamboo (*Phyllostachys aurea*)
- Silver Pampas Grass (*Cortaderia selloana*)
- Nepalese Browntop (*Microstegium vimineum*)

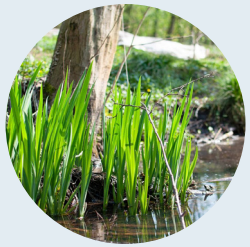
DESIGN ELEMENTS

WATER EDGE ACCESS
Ponds shall be linked to trail systems and pedestrian boardwalks at limited points of access through landscape.

MINIMAL IS BETTER
Restore and maintain the natural plantings that diversify pond areas.

REMOVAL OF INVASIVES
Minimal reintroduction of healthy pond plants to enhance the biodiversity.

LOW MAINTENANCE
All landscape elements along pond edge to be simplified and resilient for future growth.



AQUATIC PLANTS
Designated pond perimeter plants shall be able to thrive in submerged water conditions and filter the pond's water.

RISING WATER
Surrounding landscape designed to account for seasonal changes in the pond's water levels.

Ponds and Streams

Recommended Plant List for Ponds:

AQUATIC VEGETATION
- Coontail (*Ceratophyllum demersum*)
- Gray Fanwort (*Cabomba caroliniana*)
- Little Floating Heart (*Nymphoides cordata*)
- Tape Grass (*Vallisneria americana*)
- Underwater Banana (*Nymphoides aquatica*)
- American Lotus (*Nelumbo lutea*)
- Hard Water Lillies (*Nymphaea var.*)

SHORELINE PLANTS
- Umbrella Palm (*Cyperus alternifolius*)
- Elephant Ear (*Colocasia esculenta*)
- Native Water Canna (*Canna flaccida*)
- Club Rush (*Schoenoplectus lacustris*)
- Sweet Flag (*Acornus calamus*)
- Horsetail (*Equisetum arvense*)
- Butterfly Ginger (*Hedychium coronarium*)

INVASIVE PLANTS
- Uraguary Primrose (*Ludwigia uruguayensis*)
- Brazilian Elodea (*Egeria densa*)
- Giant Salvinia (*Salvinia molesta*)
- Duck Lettuce (*Ottelia alismoides*)
- Common Reed (*Phragmites australis*)
- Water Hyacinth (*Pontederia crassipes*)
- African Oxygenweed (*Lagarosiphon major*)
- Exotic Burreed (*Sparganium erectum*)
- Water Chestnut (*Tapa natans*)
- Hydrilla (*Hydrilla verticillata*)
- Floating Heart (*Nymphoides peltata*)
- Mosquito Fern (*Azolla pinnata*)
- Alligatorweed (*Alternanthera phuloxeroides*)

DESIGN ELEMENTS

DEEP WATER
Limited plant materials available in this region capable of surviving in a depth of 1-6 feet of water.

SHALLOW WATER
Vegetation capable of surviving in a depth of 1 foot of water to the top of the permanent pool.

SEMI-WET (ZONE A)
Capable of surviving along the edge of the permanent pool and up to 1 foot above the pool.

SEMI-WET (ZONE B)
Survive up to 4 feet above the normal pool and subject to saturated soil after flooding.

MINIMAL IS BETTER
Selective and intentional plantings; Less disturbance the better to enhance the natural ecosystem.

REMOVAL OF INVASIVES
Extract overgrown, harmful, and aggressive plantings from wetland regions.

Wetland Vegetation

Recommended Plant List for Wetland Zones:

STANDING WATER AREAS:

- Cardinal Flower (*Lobelia cardinalis*)
- Lance-leaf Arrowhead (*Sagittaria lancifolia*)
- Pickerelweed (*Pontederia cordata*)
- Softstem Bulrush (*Schoenoplectus tabernaemontani*)
- Swamp Lily (*Crinum pedunculatum*)
- Virginia Chain Fern (*Woodwardia virginica*)
- American Water Lotus (*Nelumbo lutea*)
- Soft Rush (*Juncus effusus*)
- Fragrant Water Lilly (*Nymphaea odorata*)
- Yellow Water Lilly (*Nuphar lutea*)
- Bald Cypress (*Taxodium distichum*)
- Pond Cypress (*Taxodium distichum var. imbricarium*)

SEMI-WET (ZONE A):

- Bushy Broom Grass (*Andropogon glomeratus*)
- Cinnamon Fern (*Osmunda cinnamomea*)
- False Nettle (*Boehmeria cylindrica*)
- Royal Fern (*Osmunda regalis*)
- Upland Sea-Oats (*Chasmanthium latifolium*)
- Swamp Tupelo (*Nyssa biflora*)
- Black Willow (*Salix nigra*)
- Pond Pine (*Pinus serotina*)
- Sweetbay Magnolia (*Magnolia virginiana*)
- River Birch (*Betula nigra*)
- Water Oak (*Quercus nigra*)
- Willow Oak (*Quercus phellos*)

(ZONE B):

- Forsythia (*Forsythia suspensa*)
- Hawthorn (*Crataegus monogyna*)
- Ironweed (*Vernonia noveboracensis*)
- Yellow Indiangrass (*Sorghastrum nutans*)
- Spiked Gayfeather (*Liatris spicata*)
- Black Tupelo (*Nyssa sylvatica*)

DESIGN ELEMENTS

DIVERSITY
Oaks, maples, and other beautiful fall foliage trees, dispersed throughout the upland landscape.

SCALE
The forest vegetation shall vary in size while providing a high ceiling of shade coverage to travelers.

VEGETATION
Native flowering trees and shrubs maintained along paths to create a natural deciduous forest.

LINKAGE
System of low-impact nature trails and scenic paths connected for pedestrian leisure.

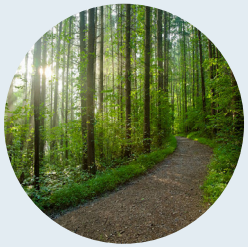
ROCK OUTCROP
Exposed rock and stone visible through the upland forest floor and landscape.

Deciduous Upland Forest

Recommended List of Natives:

- Red Maple (*Acer rubrum*)
- Big Leaf Maple (*Acer macrophylla*)
- Southern Magnolia (*Magnolia grandiflora*)
- Bald Cypress (*Taxodium distichum*)
- American Beech (*Fagus grandifolia*)
- Post Oak (*Quercus stellata*)
- Willow Oak (*Quercus phellos*)
- Red Oak (*Quercus rubra*)
- Green Ash (*Fraxinus pennsylvanica*)
- American Elm (*Ulmus americana*)
- Winged Elm (*Ulmus alata*)
- Sassafras (*Sassafras albidum*)
- Red Mulberry (*Morus rubra*)
- Bitternut Hickory (*Carya cordiformis*)
- Hackberry (*Celtis occidentalis*)
- Black Gum (*Nyssa sylvatica*)
- American Hollies (*Ilex opacta*)

DESIGN ELEMENTS



FOREST TRAILS
Scenic pedestrian & hiking paths formed through site to engage the dense forest environment.

FOREST FLOOR
Specific regions of pine forest left natural and untouched. Floor shall be native ground covers.

TRANSITION SPACES
Trailways and paths to pine forest shall be surrounded by staggered evergreen plants and trees.

SHRUBS AND GRASSES
Minimal reintroduction of healthy shrubs and plants to enhance the biodiversity entering the forest.

EVERGREEN PLANTS
Vegetation located within pine forest shall cast a tall canopy of shade for travelers, year-round.

PRESERVATION
Historically connected & man-made areas shall have minimal distrubance with a natural edge and cleared of debris.

Evergreen Pine Forest

Recommended List of Evergreens & Pines:

EVERGREEN PLANTINGS

- Inkberry Holly (*Ilex glabra*)
- Evergreen Witch Hazel (*Distylium myricoides*)
- Black Haw (*Viburnum prunifolium*)
- Yaupon Holly (*Ilex vomitoria*)
- American Holly (*Ilex opacta*)
- Fragant Tea Olive (*Osmanthus x fortunei*)
- Southern Magnolia (*Magnolia grandiflora*)

NATIVE PINE TREES

- Loblolly Pine (*Pinus taeda*)
- Longleaf Pine (*Pinus palustris*)
- Eastern White Pine (*Pinus strobus*)
- Virginia Pine (*Pinus virginiana*)
- Cedar Pine (*Pinus glabra*)
- Pond Pine (*Pinus serotina*)

ADDITIONAL PLANTINGS

- Sweetbay (*Gordonia lasianthus*)
- Eastern Red Cedar (*Juniperus virginiana*)
- Eastern Hemlock (*Tsuga canadensis*)
- Dogwood Species (*Cornus var.*)
- Redbud Species (*Cercis var.*)
- Wire Grass (*Aristida stricta*)

DESIGN ELEMENTS

RAIN GARDENS
Collects and absorbs storm water to prevent immediate runoff from impervious site surfaces.

EXISTING SYSTEMS
Bioretention areas on site shall be cleared of debris and improved with fresh mulch for future use.

BIORENTENTION BASINS
Essential in the removal of pollutants, waste materials, and treating stormwater before allowing re-entry into waterway.

BIOSWALES
Introduction of vegetation to beautify hardscapes while being the most effective practice to slow runoff velocity and cleanse water.

EDUCATION ELEMENTS
All vegetation for bioretention systems shall be noted by signage. Signs to describe and explain water conservation and stewardship within systems.

LOW MAINTENANCE
All landscaped areas shall be easily accessible, planted accordingly, and resilient for future matienance.

Bioretention Systems

Recommended Plant List for Bioretention Systems:

TREES

- Bald Cypress (*Taxodium distichum*)
- American Witchhazel (*Hamamelis virginiana*)
- Swamp White Oak (*Quercus bicolor*)
- Black Tupelo (*Nyssa Sylvatica*)
- River Birch (*Quercus nigra*)
- Swamp Chestnut (*Quercus michauxii*)
- Sweet Bay Magnolia (*Magnolia virginiana*)

SHRUBS

- American Beautyberry (*Passiflora incarnata*)
- Red Twig Dogwood (*Cornus servicea*)
- Sweet Pepperbush (*Clethra alnifolia*)
- Winterberry (*Ilex verticillata*)
- Virginia Sweetspire (*Itea virginica*)
- Spice Bush (*Lindera benzoin*)
- Swamp Hibiscus (*Hibiscus coccineus*)

FLOWERS

- Prarie Dropseed (*Sporobolus heterolepis*)
- Virginia Wildrye (*Elymus virginicus*)
- Yellow Iris (*Iris pseudacorus*)
- Blue Flag (*Iris versicolor*)
- Black-Eyed Susan (*Rudbeckia hirta*)
- Swamp Sunflower (*Helianthus angustifolus*)
- Sweet Joe Pye Weed (*Eutrochium purpureum*)

GRASSES

- Little Bluestem (*Passiflora incarnata*)
- Broom Sedge (*Andropogon virginicus*)
- Muhly Grass (*Muhlenbergia capillaris*)
- Switchgrass Species (*Panicum var.*)

DESIGN ELEMENTS

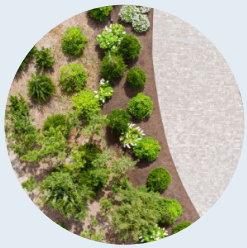
BUILDING PLANTINGS
The edge of site structures shall be decorated with low-rising and beautiful native plants.

EMBRACING ECOSYSTEM
Highlight the surrounding evironment by including specimen plantings in the disturbed areas.

WATER COLLECTION
Features installed in building landscape to assist in irrigation. Educational signage to explain importance of conservation.

PLANT SELECTION
Introduction of healthy native plants to enhance the biodiversity of the Preserve.

PARKING ISLANDS
Concrete islands placed within parking lot to break up the hardscape surface and reintroduce shade for visitors.



HARDSCAPE PLANTERS
Built planters located within hardscape plazas to incorporate vegetation into site features.

Parking Lot & Building Landscapes

Recommended List of Plantings:

CANOPY TREES

- London Plane (*Platanus acerifolia*)
- Shumard Oak (*Quercus x shumardii*)
- Willow Oak (*Quercus phellos*)
- Tulip Poplar (*Liriodendron tulipifera*)
- Japanese Zelkova (*Zelkova serrata*)
- Red Oak (*Quercus rubra*)

SHRUBS

- Loropetalum (*Loropetalum Chinensis*)
- Virginia Sweetspire (*Itea virginica*)
- Anise (*Illicium floridanum*)
- Hydrangeas (*Hydrangea var.*)
- Abelia Species (*Abelia var.*)
- Azalea Species (*Rhododendron var.*)

OTHER PLANTS

- Great Blue Lobelia (*Lobelia siphilitica*)
- Cardinal Flower (*Lobelia cardinalis*)
- Coneflower Species (*Echinacea var.*)
- Lantana Species (*Lantana var.*)
- Arborvitaes (*Thuja var.*)
- Holly Species (*Ilex var.*)

Design Guidelines

Site Furnishings

DESIGN ELEMENTS

PICNIC TABLES
Selection shall appear organic, constructed from natural wooden beams and steel, & may have an overhead covering to protect against the sun and rain.

SEATWALLS
Located along hardscape boundaries for rest, seats constructed from FSC hardwood and CorTen steel. Seatwalls may also be made from concrete or stone.

SITE BENCHES
Steel, wood, and stone formed benches dispersed for public rest. Variations presented with and without seat backs, while all shall be durable & modern in design.

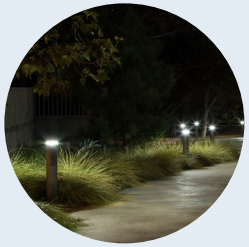
Site Furnishings

FORM
Site furnishings shall vary in form based on the specific design element. Seating structures shall be large in scale and spacious to accommodate multiple park travelers together. All site furnishings shall appear sleek and modern in form while relating to the surrounding environment. Materiality of furnishings shall favor an organic wooden appearance when available to accent the nature of the Greenway.

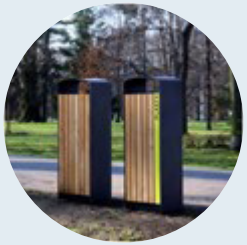
FUNCTION
The features to be included in the design of the Catawba Preserve assist in the appeal of the park but are essential in the usability of the site. Tables, benches, and seatwalls function as spaces for resting, viewing, shelter and public gathering. Incorporate solar lighting and charging locations into furnishings as necessary.

AESTHETIC
The appeal of modern furnishings drives the Greenway to become an overall futuristic landscape for years to come. Solar panel charging capabilities and sleek metal or steel elements mixed into natural wood elements shall amplify this theme. All site items shall relate to the greater ecosystem that it is within so that travelers receive a sense of place without feeling unbalanced from the surrounding natural environment with overly-contemporary furnishings.

DESIGN ELEMENTS



EXTERIOR LIGHTING
Modern, metal and wood finished lights located along primary walks and site plazas. Introduction of solar panels for green lighting.



TRASH RECEPTACLES
Metal trash collections to be located frequently along the Preserve. Variations available to deter wildlife from access.

BIKE RACKS
Formed metal circles for temporary bike storage will be most common. Unique and organic wood featured racks highlighted near forest trails.

Site Furnishings

FORM
Site exterior lighting to follow the form and flow of hardscape walkways and border the extents of plaza spaces. Exterior lighting shall be located along sidewalks as low-rising pillars and larger light poles shall be used between hardscape areas, parking lots, and around building exteriors. Trash receptacles shall be prevalent amongst picnic and gathering areas, but found throughout park to control debris. Bike racks are intended to be located near building hardscapes and forest trailways for temporary storage.

FUNCTION
Exterior lighting to be frequently spaced along walks to provide ample safety to afternoon travelers. Trash receptacles to be secured from wildlife and plentiful in quantity to keep the Greenway clean of debris. Receptacles to be also located within Upland Forest and Pine Forest to mimize potential litter. Bike racks to serve as short-term storage for park travelers with the addition of a lock system incorporated into furnishing design to prevent theft.

AESTHETIC
All of the exterior lighting shall be sleek and modern in design, but not out of place within the Preserve's natural environment. Light poles shall be constructed of wooden materials and metal forms to provide sense of relation to the surrounding area. Trash receptacles shall be approached in the same manner with modern and durable materials to beautify these site furnishings. Bike racks can be constructed as modern and simple metal forms or appear as a natural wooden trunk to further relate to the surrounding evironment.

Catawba Bend
PRESERVE

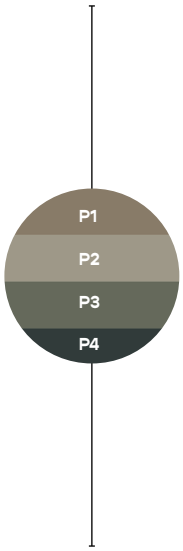
Appendix

Catawba Bend
PRESERVE

Exterior Materials

BBS Board & Batten Siding
Basis of Design: Haride Panel
Color: P-1, P-2, P-3, or P-4
Finish: 18"-24" Board Panel Width, 1x2 Batten

NS-1 Blended Regional Sandstone
Style: Drystack - no exposed grout
Size: Irregular, blended stone sizes
Finish: Natural Cleft / Tumbled Stone



P-1 (Exterior Paint)
Basis of Design: Sherwin Williams
Color: SW 2820 – Downing Earth
Finish: TBD

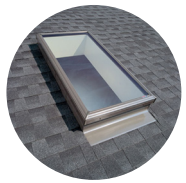
P-2 (Exterior Paint)
Basis of Design: Sherwin Williams
Color: SW 9126 – Honed Soapstone
Finish: TBD

P-3 (Exterior Paint)
Basis of Design: Sherwin Williams
Color: SW 6187 – Rosemary
Finish: TBD

P-4 (Exterior Paint)
Basis of Design: Sherwin Williams
Color: SW 2809 – Rookwood Shutter Green
Finish: TBD

SSR (Standing Seam Roof)
Basis of Design: McElroy Metal
Size: 12"-16" Panels with 1.5" tall Seams
Finish: Painted Finish, Slate Gray of Manufacturer Equivalent

TG-1 (Tongue & Groove Siding, Soffits and Exposed Decking)
Description: Natural Wood Product
Size: 4"-6" wide with "V" Edge Profile
Finish: Clear Finish



W-1 (Window Frame)
Descriptions: Aluminum Storefront or Aluminum Clad Wood
Finish: Dark Bronze Anodic or Painted P-4

http://scdhec.gov/sites/default/files/docs/Environment/docs/Appendix_D.pdf

https://www.dnr.sc.gov/invasiveweeds/program.html#:~:text=Some%20of%20the%20more%20common,primrose%2C%20phragmites%2C%20and%20alligatorweed.

https://www.se-eppc.org/southcarolina/scinvasives.pdf

https://www.ecoturfco.com/ShrubsLowestMaintenance.html