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Aesthetic Design Palette

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Summary

The intent of the Aesthetic Design Palette is to serve as a standard for aesthetics, architectural design and material selection through all phases of the Flood Damage Reduction/Recreation project on the Red River of the North in Grand Forks, North Dakota and East Grand Forks Minnesota. The primary focus of elements within the Greenway is to provide a consistent theme throughout the project that reflects the character of the two communities and their connection to the River. A vocabulary of words was developed to help give verbal definition to the character of project elements. Words such as: “safety, solidity, long-lasting, intensity, forcefulness, powerful, mighty, and strength.”

Representatives from the Army Corps of Engineers, City of Grand Forks, City of East Grand Forks, Grand Forks Park District, Minnesota Department of Natural Resources and various consultants have met numerous times to discuss the Aesthetic Design Palette in detail.

The first Aesthetic Design Palette meeting was held September 20th, 2000 in Grand Forks, North Dakota. Multiple options were discussed for each element. Each element was evaluated based on maintenance concerns, ADA compliance, aesthetics, functionality, flood tolerance and overall character. The second design palette meeting was held October 25 in St. Paul, Minnesota. Final selections were presented in more detail. Although both cities agreed on the majority off items, there will be unique situations that arise that will require deviation from the palette. The verbal definitions above will serve as a guide on these rare occasions.

The following pages describe each element and the reasoning for why it was selected, along with more specific information about the item.

Aesthetic Design Palette

Recycled Plastic Bench

Belson Outdoors - www.belson.com Model PB6-HER

**Replaces bench in original Greenway Design Palette. Approved at the April 18, 2017 Greenway Technical Committee staff meeting.

• Made with nine 2" x 4" recycled plastic resin wood slats and powder-coated, heavy duty cast aluminum frames

• The under structure is braced with length and width supports

• Powder-Coated cast aluminum frames

• Hardware is stainless steel

• Length: 72”

Aesthetic Design Palette

Recycled Plastic Benches

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- Powder-Coated cast aluminum frames
- Hardware is stainless steel
- Length: 72”

Recycled Plastic Picnic Table

RecycleDesign Park Series (9853) ADA Portable Picnic Table

This table was chosen for its sturdy durable design and use of recycled materials. This semi-portable table allows users the ability to configure space to best satisfy their needs. This table is intended to be used in park picnic shelters. Features include:

- ADA accessibility (extended length of table top without a bench)
- Galvanized finish for durability
- Dimensions: 84” long x 56.5” wide
- Table weight: 346 lbs.

Square Plastic Picnic Table

DuMor Recycled Plastic Pedestal Table 76

This bench was chosen for off-trail areas away from picnic shelters. Its solid time tested design reflects the overall theme of the greenway. Specific features include:

- Recycled plastic slats on bench and table top
- Polyester powder coated steel in forest green
- Direct embedded with concrete base for ease of maintenance
- Dimensions: 4’ square
- Weight: approx. 373 lbs.
- 3-bench style to be used to allow ADA accessibility

Recycled Trash Receptacle

DuMor Recycled Plastic Trash Receptacle 24-PL

This trash receptacle was chosen for its similar design to other greenway elements and its use of recycled materials. Trash receptacles are to be used in park areas. Recycling receptacles will be placed at all trailheads. Specific features include:

- Recycled HDPE slats in cedar color
- Polyester powder coated steel frame in forest green
- 31 gallon capacity
- Weight: approx. 214 lbs
- Frame will be anchored to concrete pad

Plastic Planters

Crafts Direct Plastic Planter #CMDB95

This plastic planter was chosen for its similar design to other greenway elements and its use of recycled materials. Specific features include:

- Matches existing East Grand Forks planters
- 37” diameter
- Sandstone color
- Portable, intended to be moved during high water
- Durable
- Tolerant of freeze/thaw cycles

Straight Ribbon Bike Rack

Timberline Cycloops

This bike rack was chosen for its classic design and time tested durability. It will be used at trail heads and in park areas. Specific features include:

- Durable galvanized finish
- Allows for a variety of lock types
- Direct bury mounting
- Vandal resistant
- Sizes can be customized for any number of bicycles

Cast Metal Tree Grate

Neenah Tree Grate R-8709 180° Square

Wood and Metal Chain Bollard

Rustic Wood and Chain Bollards (custom)

Custom design using sturdy wood posts and heavy chain evokes a sense of permanence. For use as a permanent barrier along areas of pedestrian and traffic conflict, such as at parking lots or near roadways. May also be used near hazardous slopes or sensitive areas along trail.

- 8” x 8” timber post with a height of 36”

Recycled Directional Bollard

Timberform Recycled Directional Bollard

This bollard was chosen for its classic design and its flexibility to provide different information. This bollard will be used at trail head points and along the trail system. Specific features include:

- Removable mount available for trail heads
- Direct bury mount possible along trail
- Available with directional arrows and/or text
- Sturdy 6” x 6” recycled plastic to match other greenway elements

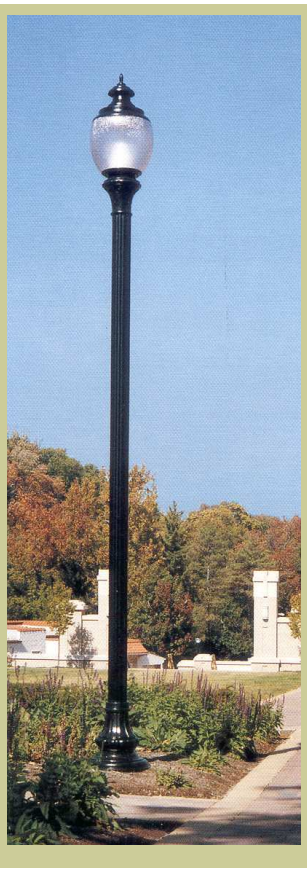
Cast Iron Bollard

Cast Iron Streetscape Bollard

This classic style bollard will be used to compliment the existing DeMers streetscape where a buffer is needed between pedestrian areas and vehicular traffic. Specific features include:

- Sturdy cast iron design
- 36” height

Acorn Street Light



Acorn Light Fixture

In areas near the town green, lighting will compliment the existing DeMers Avenue streetscape fixtures. An opaque top will be added to the existing acorn fixtures to limit light pollution, add architectural detail and provide a separate identity to the formal areas of the greenway.

- Overall height: 15 ft
- Equipped with banner arms for future banner use
- Amount of luminescence can be modified based on use

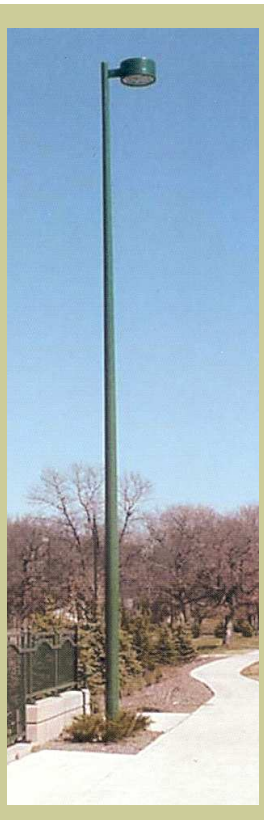
Colonial Street Light

Colonial Lantern Fixture

This fixture was chosen to compliment the existing residential street lighting. This light will be used at neighborhood access points to the greenway and at trail heads. Specific features include:

- 15’ overall height
- NSP approved

Parking Lot Light



Gaardco Round Arm Mounted Form 10 Fixture

Parking lot lighting was chosen to provide highly efficient light that maintains the pedestrian nature of the park but adequately lights the parking lot to ensure a safe environment. Specific features include:

- 25’ overall height
- Shoebox fixture minimizes light pollution
- Poles can be polyester powder coated to match other features
- NSP approved

Solar Powered Light Fixture

Solar Outdoor Lighting SL Series Light

Although trail lighting is not included in the initial phase of work, it may be desired in the future for security, aesthetic and safety reasons. This light was chosen for use in areas where electrical access is not financially feasible along the greenway. Extremely durable and resistant to wind forces, it will require minimal maintenance. Features include:

- Five day battery reserve
- 20 year solar panel warranty
- Rugged battery compartment

Banners

Custom Banners

Downtown light poles will be designed for future installation of banners. Banner will be rectangular and provide holes for wind to pass through. Specific features include:

- Custom design can reflect seasonal changes and unique community celebrations
- Polycotton, polysilk or nylon can be used for varying levels of durability

Fences/Railings

Existing Sorlie Bridge Railing

Steel Fence and Railing

Steel fencing was chosen because of its existing use downtown and its historic character. Fencing and railings will be kept to a minimum and be used only where safety is an issue. Specific features include:

- Polyester powder coated finish available in a variety of colors
- Surface mounted for easy maintenance
- Design pattern can reflect existing historic details in city
- Railings should be mounted parallel to river flow whenever possible

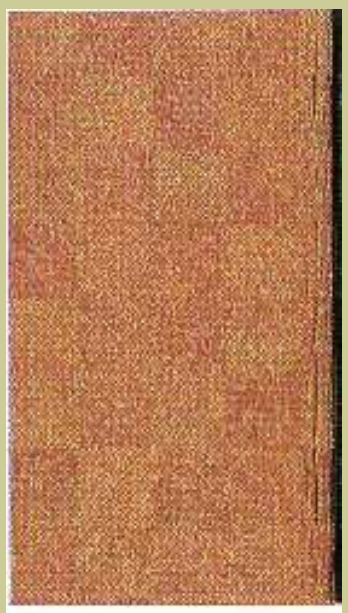
Steel Drinking Fountain

Most Dependable Fountains Jug Filler Fountain

This drinking fountain was chosen for its strong durable design and its mechanical simplicity. Fountains will be located at parks and trailheads. Specific features include:

- Jug filler
- ADA accessible
- Polyester powder coat finish to match other site elements
- Shut off water, drain down and blow out line to winterize

Material Options



"CEDAR"

FOREST GREEN

Cedar colored recycled plastic will be used to provide a consistent use of materials throughout the greenway.

All metal pieces will be powder coated with a forest green finish.

Telephones

Code Blue CB I-d Security Phone
Payphones

Payphones will be located in the parks and trailheads. Security phones may be located in more remote areas along the trails for emergency use only.

- Phone service available from Qwest
- Payphones to be purchased from independent vendor
- Option of cellular connection and solar power for security phones

Group Picnic Shelter

Litchfield Telluride Shelter

This picnic shelter was chosen for its classic time tested design and for its ability to be customized for each park. Steel posts can be covered with masonry to match other park structures. Specific features include:

- Pressure treated pine laminated rafters and fascia
- Vented roof
- 30’ x 50’ (elongated hexagonal shape)
- Each shelter accommodates approximately 25 picnic tables or 150 people

Small Picnic Shelter

Litchfield Square Steel Beam Series 7600

This picnic shelter was chosen to coordinate with the chosen large picnic shelters. Steel posts can be covered with masonry to match other park structures. Specific features include:

- Pressure treated pine fascia
- Ribbed metal roof
- 16'x 16' square
- Each shelter accommodates approximately 4 picnic tables or 24 people

Single Grill

Kay SF16 Grill

This small grill is intended for use along the trail where picnic shelters are not available. Its rugged design comes with a steel plate firebox and adjustable grill surface. Special features include:

- Direct bury mounted with a concrete pad to minimize maintenance and provide space for the user
- Vandal resistant
- Utility shelf provides setup space for users
- Approximately 286” square cooking area
- 41” height

Large Group Grill

DuMor Grill 24

This large grill will be used at picnic shelters and other large group sites. It is constructed of heat resistant black enamel plate steel. Features include:

- 884 sq. inch grill surface
- Dual adjustable shelves and stainless steel fittings
- Grills will be direct bury mounted and surrounded by a concrete pad for ease of maintenance

Trellis Structures

Wood and Stone Trellis Structures

Occasionally along the trail or in park areas, there may arise a need for more formal structures to provide greenway users a chance to rest in a shaded area. Trellis structures, if used, should reflect the architectural character already established by existing and planned greenway structures. Features include:

- Support columns of stone or masonry to match other greenway elements
- Wood shade structure
- Locations at focal points or scenic overlooks

Play/Exercise Equipment

Steel and Plastic Play and Exercise Equipment

Play and exercise equipment was chosen based on flood resistance and maximizing play features. Steel structural columns and plastic fixtures will provide a variety of colors and ease of clean up after inundation. Features include:

- Color palette to blend with natural surroundings
- ADA accessibility
- Play equipment for a minimum age range of 2-10 years
- Custom designs for each park

Interpretive Signage

Interpretive Signage (Custom Work)

Interpretive signage will be used to tell the history of Grand Forks, its people and the Red River. They will be located in prominent locations along the trail, at parks, and at historic sites. Special features include:

- Masonry or stone base to match other greenway features
- Variety of sizes possible depending on materials to be displayed
- Vandal resistant coating

Informational Kiosk

Informational Kiosk (Custom Work)

Information kiosks will be located at greenway access points. Kiosks are suitable for display of greenway maps, informational flyers, and advertising of community events. Kiosks downtown will take an urban character using similar details to other downtown elements, while kiosks along the greenway trails and in the parks will make use of other greenway materials and have a more residential scale and character.

Directional Signage

Directional Signage (Custom Work)

Directional signage will be used to orient greenway users to specific trail features, such as parks, bridges, interpretive areas and access points. Signs are made of heavy timber with removable signage, giving both cities flexibility as the greenway continues to evolve. Specific features include:

- 6” x 6” treated timber posts
- Custom signs allow for a variety of text and graphics
- Direct bury mounting

Regulatory Signage

Regulatory Signage

Regulatory signage will be used to notify users of greenway and park rules. Minnesota DNR standards will be followed.

Retaining Walls

Stone Retaining Walls

Generally, walls will be kept to a minimum. When walls are appropriate, limestone or textured concrete should be used to reflect materials already used along the greenway. Stone walls should be made of large slabs to reinforce the strength and timelessness of the design but also to minimize failure of the wall during flooding.

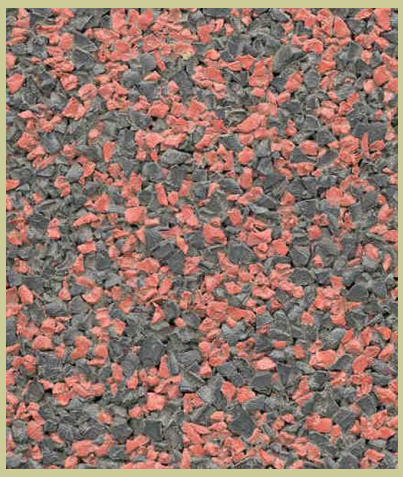
Concrete Pavers

Concrete Pavers

Concrete pavers may be used at key pedestrian access points to the greenway. Pavers will reflect the character of the DeMers Avenue streetscape. Features include:

- Ratings to 5000 PSI
- Various colors and patterns available
- Concrete base should be used on wet side to minimize flood damage

Resilient Surfacing



Playbound Poured in Place Surfacing

Playground areas will have resilient surfacing for safety. This surface was chosen for its use of recycled materials and ADA accessiblity. Features include:

- Can be used with concrete, asphalt or crushed stone base
- Rubber material with recycled content
- Durable, will not wash away with weather or flooding

Bituminous Paving

Bituminous paving

Recreational trails along the greenway corridor will be made of bituminous paving. Features include:

- Ease of maintenance and plowing
- More resilient than concrete, minimizes damage to knees and ankles
- Cost effective

Concrete Paving

Concrete Paving

Concrete paving will be employed in high use pedestrian areas such as parks and the town green. Concrete evokes a sense of permanence and longevity. Features include:

- Long lifespan
- Can be scored or stamped to create special interest

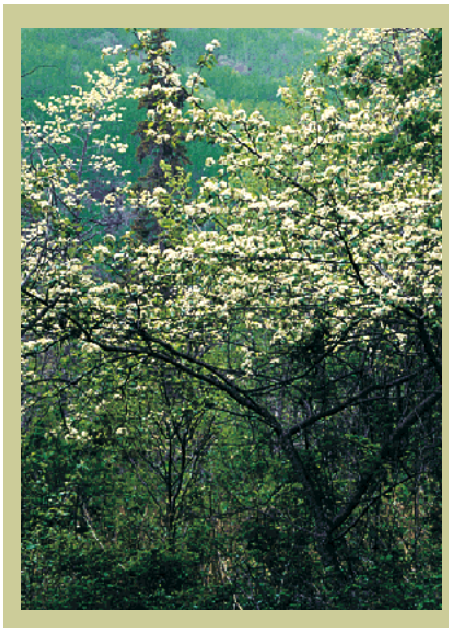
Wet Side of Levee: Trees

Wet Side of Levee: Trees

These trees have been chosen for their tolerance of both wet and dry conditions and their contribution to wildlife habitat. They are native to North Dakota and northern Minnesota. Species include:

- Green Ash (*Fraxinus pennsylvatica)*
- Jack Pine (*Pinus banksiana)*
- Elm (*Ulnus americana, Ulnus rubra)*
- Pin Cherry (*Prunus pennsylvanica)*
- American Larch (*Larix americana)*
- Red Maple (*Acer rubra)*
- Ironwood (*Ostrya virginia)*
- Northern Red Oak (*Quercus rubra)*
- Bur Oak (*Quercus macrocarpa)*
- Aspen (*Populus tremuloides)*
- Water Birch (*Betula occidentalis)*
- Eastern Cottonwood (*Populus deltoides)*
- Willow (*Salix alba 'Niobe')*
- Boxelder (*Acer negundo)*
- Serviceberry (*Amelanchier alnifolia)*
- Basswood (*Tilia americana)*
- Downy Hawthorn (*Craetaegus mollis)*
- Silver Maple (*Acer saccharinum)*

Dry Side of Levee: Trees



Dry Side of Levee: Trees

Trees on the dry side of the levee will be exposed to harsh conditions such as road salt and compaction. Trees appropriate for these areas include:

- Hackberry (*Celtis occidentalis)*
- Basswood (*Tilia americana)*
- Red Maple (*Acer rubra)*
- Rocky Mountain Juniper (*Juniperus scopulorum)*
- Pin cherry (*Prunus pennsylvanica)*
- Black Hills Spruce (*Picea glauca densata)*
- Austrian Pine (*Pinus nigra)*
- Colorado Spruce (*Picea pungens)*

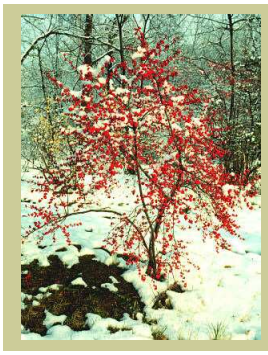
Coniferous Trees

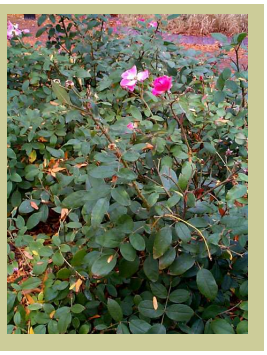
Coniferous Trees

Although many coniferous trees are not native to this area, they will provide year round beauty and screen views of the levee for residents. Most coniferous trees will be located on the dry side of the levee and include:

- Austrian Pine (*Pinus nigra)*
- Black Hills Spruce (*Picea glauca densata)*
- Colorado Spruce (*Picea pungens)*
- Red Pine (*Pinus resinosa)*
- Jack Pine (*Pinus banksiana)*
- White Spruce (*Picea glauca)*
- Balsam Fir (*Abies balsamica)*
- Eastern White Pine (*Pinus strobus)*
- Rocky Mountain Juniper (*Juniperus scopulorum)*
- Ponderosa Pine (*Pinus ponderosa)*

Wet Side of Levee: Shrubs





Wet Side of Levee: Shrubs

Wet side shrubs will provide year round interest and wildlife habitat along the greenway. They have been chosen for their tolerance of extremes and flood plan conditions, and include many native species, including:

- Chokecherry (*Prunus melanocarpa)*
- Serviceberry (*Amelanchier canadensis)*
- Willow (*Salix alba)*
- Witch Hazel (*Hamamellis mollis)*
- Red Osier Dogwood (*Cornus stolonifera)*
- Tamarisk (*Tamarix)*
- Wild Rose (*Rosa blanda)*
- Buttonbush (*Cephalanthus occidentalis)*
- Bearberry (*Arctostaphylos uva-ursi)*
- Wild Plum (*Prunus americana)*
- Black Raspberry (*Rubus occidentalis)*
- Black Chokeberry (*Aronia melanocarpa)*
- American Bittersweet (*Celastrus scandens)*
- Indian Currant (*Symphoricarpos orbiculatus)*
- Silky Dogwood (*Cornus sericea)*
- Snowberry (*Symphoricarpos albus)*
- Winterberry (*Ilex)*
- Pussy Willow (*Salix discolor)*
- Buffalo Currant (*Ribes odoratum)*
- Bush Cinquefoil (*Potentilla fruiticosa)*
- Silver Buffaloberry (*Shepherdia argentea)*
- Wolf Willow (*Elaeagnus commutata)*
- Smooth Sumac (*Rhus glabra)*
- Big Sagebrush (*Artemisia tridentata)*
- Gray Dogwood (*Cornus racemosa)*
- Red Berried Elder (*Sambucus racemosa)*
- Steeple Bush Spirea (*Spirea tomentosa)*
- Nannyberry Viburnum (*Viburnum lentago)*

Dry Side of Levee: Shrubs

Dry Side of Levee: Shrubs

Dryside shrubs will be used to enhance neighborhood views of the levee and provide definition at greenway entry points. They have been chosen for their tolerance of urban conditions and include:

Wild Rose (*Rosa arkansana)*

Chokecherry (*Aronia melanocarpa)*

Serviceberry (*Amelanchier canadensis)*

Lilac (*Syringa)*

Forsythia (*Forsythia)*

Honeysuckle (*Lonicera kioica)*

Moist Condition Grasses

Moist Condition Grasses

Lowland areas will be seeded with a prairie meadow and streambank mix (MNDot 25A or similar) which includes many of the wetland plants and sedges which will thrive in these areas and provide vital wildlife habitat. Plant species include the following:

- Big Bluestem (*Andropogon gerardi)*
- Marsh Milkweed (*Asclepias incarnata)*
- Swamp Aster (*Aster puniceus)*
- Bluejoint Grass (*Calamagrotis canadensis)*
- Slender Wheat Grass (*Elymus trachycaulus)*
- Joe Pye Weed (*Eupatorium maculatum)*
- Early Sunflower (*Heliopsis helianthoides)*
- Meadow Blazing Star (*Liatris ligulistylis)*
- Great Blue Lobelia (*Lobelia siphilitica)*
- Switch Grass (*Panicum virgatum)*
- Black Eyed Susan (*Rudbeckia hirta)*
- Indian Grass (*Sorghastrum nutans)*
- Blue Vervain (*Verbena hastata)*
- Canada Anemone (*Anemone canadensis)*
- New England Aster (*Aster novae-angliae)*
- Fringed Brome (*Brome ciliata)*
- Showy Tic-trefoil (*Desmodium canadense)*
- Virginia Wild Rye (*Elymus virginicus)*
- Boneset (*Eupatorium perfoliatum)*
- Blue Flag Iris (*Iris virginica-shrevii)*
- Tall Blazing Star (*Liatris pycnostachya)*
- Annual Rye Grass (*Lolium italicum)*
- Fowl Bluegrass (*Poa palustris)*
- Green Bulrush (*Scirpus atrovirens)*
- Prairie Cordgrass (*Spartina pectinata)*
- Ironweed (*Veronia fasciculata)*

Upland Grasses

Upland Grasses

The upland areas will be planted with a native Urban Prairie (MNDot Mixture 30A or similar) mix. Such a mix includes not only grasses, but also wildflowers. The mature prairie will require minimal maintenance. Species include:

Sideoats Gramma (*Bouteloua curtipendula)*

Blue Gramma (*Bouteloua gracilis)*

Purple Prairie Clover (*Dalea purpureum)*

Canandian Wild Rye (*Elymus canadensis)*

Slender Wheat Grass (*Elymus trachycaulus)*

Annual Rye Grass (*Ilolium italicum*)

Canada Blue Grass (*Poa compressa)*

Alkali Grass (*Puccinella distans)*

Little Bluestem (*Schizachyrium scoparium)*

Sand Dropseed (*Sporobolus cryptandrus)*

Columnar Coneflower (*Ratibida columifera)*

Black-eyed Susan (*Rudbeckia hirta)*

Blue Vervain (*Verbena hastata)*

Golden Alexanders (*Zizia aurea)*

Prairie Onion (*Allium stellaturm)*

Heath Aster (*Aster ericoides)*

Smooth-Blue Aster (*Aster laevis)*

Canada Milkvetch (*Astragalus canadensis)*

White Prairie Clover (*Dalea candidum)*

Purple Prairie Clover (*Dalea purpureum)*

Showy Tick-trefoil (*Desmodium canadense)*

Rough Blazing Star (*Liatria aspera)*

Common Ox-eye (*Heliopsis helianthoides)*

Wild Bergamot (*Mondarda fistulosa)*

Showy Pentstamen (*Penstamen grandiflorum)*

Stiff Goldenrod (*Solidago rigida)*

Hoary Vervain (*Verbena stricta)*

Turf Grasses

Turf Grasses

A lower maintenance turf mix (MNDot 60A or sod) will be planted in the formal areas near the town green and in park areas. A diverse mix of turf plants will make the area more resistant to drought and disease. The grasses in the mix include the following:

- Canada Bluegrass *(Poa compressa)*
- Common Bluegrass *(Poa pratensis "98/85")*
- Kentucky Bluegrass *(Poa pratensis "Caliber")*
- White clover *(Trifolium repens)*
- Creeping Red Fescue *(Festuca rubra "Cindy")*
- Fowl Bluegrass *(Poa palustris)*
- Kentucky Bluegrass *(Poa pratensis "Park")*
- Alkali Grass *(Puccinella distans "Salty")*
- Perennial Rye Grass *(Lolium perene "Elf")*

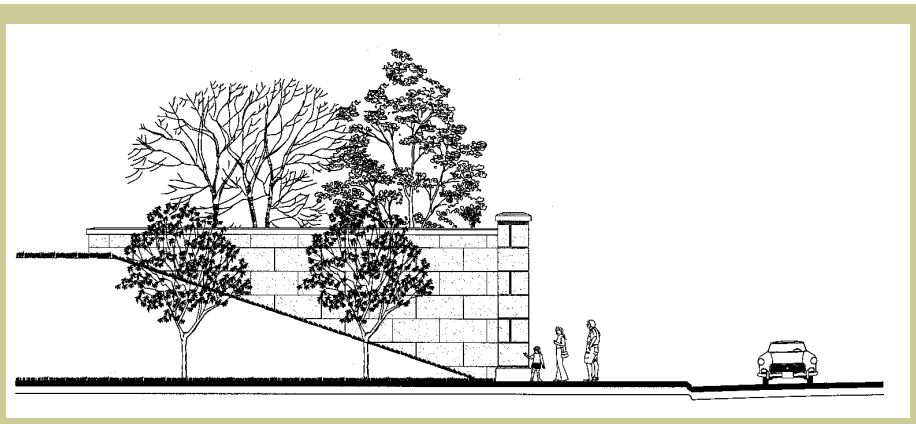
Perennials

Perennials

Many perennial plants, including various flowers and ferns, are native to the Grand Forks area. Selective planting on the wet side of the levee would add interest and increase habitat value. Native plantings include:

- Bittersweet (*Celastrus scandens)*
- Clematis (*Celmatis virginiana)*
- Purple Coneflower (*Echinacea purpea)*
- Wild Rose (*Rosa arkansana)*
- Wild Grape (*Vitus vulpina)*
- Tiger Lily (*Lilium landicfolium)*
- Sweet Woodruff (*Galium odoraturm)*
- Prairie Phlox (*Phlox pilosa)*
- Jack in the Pulpit (*Arisaema triphyllum)*
- Maidenhair Fern (*Adiantum pendatum)*
- Columbine (*Aquilegia canadensis)*
- White Wild Indigo (*Baptisia alba)*
- Blue Flag (*Iris virginica)*
- Virginia Creeper (*Parthenocissus quinquefolia)*
- Pasque Flower (*Pulsatilla nuttiana)*
- Wild Rose (*Rosa blanda)*
- Obedient Plant (*Physotegia virginiana)*
- Purple Milkplant (*Ascelpias purpurascens)*
- Lady Fern (*Athyrium filix-femina)*
- Michigan Lily (*Lilium michiganense)*

Downtown Closure



Block Limestone Closure Structure

Downtown closure structures should be made from large limestone blocks to reflect the many monumentally designed buildings of the downtown area. The use of limestone reflects a warm welcoming feel, while complimenting the character of the remaining pier of the railroad bridge.

Neighborhood Access

Residential/Pedestrian Access Point

- Floodwalls will define all entrances to the greenway. Two removable bollards allow pedestrians to flow through while also providing access for emergency vehicles and maintenance. Fllodwalls should be designed to reflect the neighborhood character while repeating materials already used on the greenway.

Neighborhood Closure

Neighborhood Closure Structure

- This vehicular closure structure is made from limestone to be consistent with other greenway structures. The modules are smaller than in the downtown structures and respect the neighborhood feel. Additional signage and details can help to reflect the unique attributes of each closure while reflecting the overall character of the green-way.