Trail design: sample cross sections and trailheads
The national historic trails take many different forms across their lengths, based on the surrounding landscape type, land manager or road jurisdiction needs, local design standards, and many other considerations. Even within the Kansas City Metro area, different levels of urbanization, local conditions, and city or county governments create different requirements for trail width and user types. The cross sections included here show a variety of sample situations in which trail may exist in the Kansas City area, sometimes incorporating sidewalks and/or bike lanes instead of separated multi use trail. All of these conditions may be considered part of the national historic trail, although a complete segment of national historic trail must also include some type of identification using the trail logos, whether that is through ground plane applications, signage, or banners. See pages 168–176 for methods of marking a segment of trail as part of the national historic trail.

Cross sections shown are based on the 2002 MetroGreen plan update, Appendix D “Design Guidelines for MetroGreen.” The corridor types included here are subsets of MetroGreen Type 4: Multi-Use Paved Trail Development, and Type 5: Bicycle and Pedestrian Facilities within the Right of Way, and are intended to capture a sample of existing or planned trail conditions in the Kansas City Metro area that are likely to become part of the national historic trails as a result of this project. The illustration style of the original MetroGreen cross sections has been modified to highlight the elements of a given trail setting or streetscape that relate to the national historic trails, and the sections have been reorganized and given titles specific to this NHT project, but they are intended to fit within the scope of acceptable cross sections for MetroGreen and other regional planning efforts.

While not shown as separate cross section graphics in this document, several of the updated bikeway corridor type options outlined in the Greater Kansas City Regional Bikeway Plan (“The New MetroGreen Type 5”) would also be appropriate options along the national historic trails. Of particular note are the buffered bike lane and cycle track, which could be applicable in NHT settings where pedestrian and bicycle traffic are physically separated from one another.

1. Found online at http://www.marc.org/Environment/MetroGreen-Parks/The-Plan/Action-Plan
2. Found online at http://marc.org/Transportation/Plans-Studies/pdfs/KCRBP_Jan2015adoptedendid_web.aspx. Corridor types are described in the “Corridor Classification” section, page 38-39

Trailheads

Trailheads for the national historic trails in the Kansas City Metro serve the typical functions of trailheads everywhere: they are access points, places to park or get on or off public transit; find guidance about the trail ahead, including options, distances, and safety considerations; rest; use restrooms or get water. On the national historic trails, trailheads additionally serve as orientation points to both the trail as it can be accessed and used locally, and to the historic trail or trails as a whole. In addition to orientation, they may also provide an opportunity to convey, through their character and design, some aspects of the unique history and historic significance of the trail. Whether the orientation function is provided by a physical map, orientation exhibit, digital app, or tour guide, these are places that a visitor can learn at minimum the base facts about the trail, and begin their trip along the trail with confidence that they can find their way.

In development of the national historic trails in the context of pre-existing trails, trailheads, and parks across the Kansas City area, frequently a national historic trail trailhead will be located at an existing developed public place. This kind of development may only require the addition of a few NHT elements to create an NHT trailhead.
National historic trail design and identity must, by nature, be flexible to fit into the wide variety of climates, landscape characters, types of trail management, and local laws and regulations found across the lengths of the NHTs.

General guidelines to be considered for national historic trail development in the Kansas City Metro area:

USE THE NATIONAL HISTORIC TRAIL LOGOS TO IDENTIFY THE TRAIL
Various standard options for logo use, including logos on the ground plane, on signs or on banners, are included in this document, see marking section, pages 168–176. Ground plane logos (pages 168–171) are recommended as the base level of marking for the national historic trails in the Kansas City Metro area.

CONFORM TO LOCAL GUIDELINES AND STANDARDS AS APPLICABLE
Every community and jurisdiction along the trail has their own local standards and ordinances. NHT design elements do not override these factors, but should be considered for incorporation wherever consistent and compatible with local requirements. Where applicable, incorporation of aspects of NHT identity into local guidelines for NHT projects may assist with implementation.

TRAIL WIDTH AND MATERIAL VARY ACROSS THE LENGTH OF THE TRAIL
This is dictated by many local factors including available right-of-way, modes used along the trail, drainage or maintenance needs, and cost. See cross sections on the following pages for a selection of possible trail conditions. Some paving materials can be more evocative of trail history and historic setting than others and are therefore preferred, where feasible. See pages 178–179 for paving types and preferences.

USE NATIVE PLANTS ALONG TRAIL FOR THEIR EVOCATIVE QUALITIES
Use of native species in close proximity to the trail both provides a visual/sensory connection to the landscapes of the historic trail period, and ideally offers some visual continuity and serves as a distinctive marker of a trail that varies widely in other qualities across its length. See pages 180–181 and Appendix C, page 210, for more information about planting along NHTs.

Landscape types defined by available right-of-way
This section uses three landscape types—I, II, and III, ranging from least to most available right-of-way adjacent to the trail—to provide an overview of the kinds of landscape design applicable in given situations along the trail. These types are referenced again in the planting section, pages 180–181.

Type I NHT Landscape
- Constrained space with which to work
- May include urban streetscapes, or narrow right-of-ways along streets or on neighborhood trails
- Limited area for planting, may include only street trees or structural use of grasses and shrubs, or no planting at all
- Paving likely limited to concrete or asphalt applications, color or patterns a possibility under some circumstances
- Historic trail encounters or interpretive exhibits limited to trailheads and/or areas of wider right-of-way

Type II conceptual landscape, based on existing trail in Overland Park, Kansas

Type II NHT Landscape
- Medium amount of space with which to work
- May include trails along streets with generous trail right-of-way (e.g. Trolley Track Trail) or many neighborhood trails
- Moderate space for planting, may include planting beds with native grasses, perennials and/or shrubs, as well as limited use of turf grass edges and trees
- Trail may be soft surface where maintenance practices allow, otherwise concrete or asphalt applications including colored or treated pavings for evocative qualities
- Historic trail encounters or interpretive exhibits possible, in certain widened areas

Type II conceptual landscape, based on existing trail in Olathe, Kansas

Type III NHT Landscape
- Large amount of space with which to work
- May include trails through parks, or along streams and greenways
- Wilder, massed plantings of prairie grasses and other native species possible
- Trail may be any surface depending on user types or maintenance, including mowed trails where applicable
- Historic trail encounters or interpretive exhibits encouraged, depending on local interest and relevant area trail stories or historic sites

Type III conceptual landscape, based on existing trail, Independence, MO
Sample national historic trail cross sections

Streamside Trail: Type III

Landscape aesthetics for the streamside trail will be less manicured and more natural in appearance. Trail design should use local best practices regarding distance from stream top of bank, minimization of hardscape to limit runoff into stream and/or impacts from periodic flooding, views, and relationship to adjacent land uses.

NHT ELEMENTS APPROPRIATE TO A STREAMSIDE TRAIL:
• Ground plane logos or, for soft surface trail or as desired, pedestrian signage (pages 168–172)
• Permeable or soil-like trail surface, where compatible (pages 178–181)
• Extensive use of native plants (see below)
• Historic trail encounter feature or wayside exhibit, as desired

VEGETATIVE COMPONENTS SHOULD:
• Focus on trees and shrubs; recommended tree species are listed in Appendix C, page 210
• Use surrounding riparian corridor vegetation as a guide for species selection and planting densities
• Avoid invasive exotic species (e.g., shrub honeysuckle) that are often present
• A mow strip of appropriate grass species may be used adjacent to the trail

Neighborhood Trail: Type I or II

Vegetative plantings should be open and provide visibility onto and from the trail. Maintenance could be jointly facilitated by Homeowner Association members or neighborhood groups with guidance by the responsible city or county.

NHT ELEMENTS APPROPRIATE TO A NEIGHBORHOOD TRAIL:
• Ground plane logos or, for soft surface trail or as desired, pedestrian signage (pages 168–172)
• Permeable or soil-like trail surface, where compatible (pages 178–179)
• Limited/structural use of native plants
• Historic trail encounter feature or wayside exhibit may be possible in Type II situations

VEGETATIVE COMPONENTS SHOULD:
• Focus on a manicured, open appearance for safety
• Utilize trees to provide shade relief; recommended species are listed in Appendix C, page 210
• Use shrubs and semi-formal planting beds to provide additional aesthetics, native species preferred
Sample NHT cross sections

Park or Open Space Trail: Type I, II, or III

Landscape aesthetics should reflect the level of maintenance within the adjoining park/open space areas (trail type dictated by this factor), while visually distinguishing the NHT from other park trails. As with the neighborhood trail, visibility onto and from the trail is critical for the safety of trail users. Maintenance of the trail landscape should be coordinated with park maintenance.

NHT ELEMENTS APPROPRIATE TO A PARK OR OPEN SPACE TRAIL:
- Ground plane logos or pedestrian signage (pages 168–172)
- Mowed, permeable, or soil-like trail surface, if compatible with park maintenance (pages 178–179)
- Native plant use dictated by trail type
- Historic trail encounter feature or wayside exhibit may be possible in Type II or III situations

VEGETATIVE COMPONENTS DEPENDENT ON TYPE AND LEVEL OF MAINTENANCE WITHIN THE PARK:
- In urban settings, the focus will generally be on grass and trees, use of native species preferred where applicable
- In suburban and rural settings, greater opportunity exists to integrate more native grassland and woodland species; recommended species of trees and native grassland plants are listed in Appendix C, page 210
Widened Shoulders: Type I

Vegetation is confined to the outer edge of the road right-of-way. Winter road treatment may impact plant growth therefore, salt tolerant species may be more appropriate.

NHT ELEMENTS APPROPRIATE TO WIDENED SHOULDERS:
• Ground plane logos or banners, limited application of pedestrian signage if desired (pages 168–171, 175, 172)
• Colored concrete or asphalt may be a possibility (pages 178–179)
• Limited use of native plants in linear or structured arrangement
• Historic trail encounter feature or wayside exhibit only applicable in trailhead or other widened areas for safety

Trail with Vegetated Buffer: Type II

Vegetation between the road and trail can help buffer road noise. Plantings should include native grasses and vegetation where possible within maintenance requirements.

NHT ELEMENTS APPROPRIATE TO A TRAIL WITH VEGETATED BUFFER:
• Ground plane logos or banners, limited application of pedestrian signage if desired (pages 168–171, 175, 172)
• Colored concrete or asphalt may be a possibility (pages 178–179)
• Use of native plants in vegetative buffers
• Historic trail encounter feature or wayside exhibit are possible in some situations, but care must be taken in selecting a location for safety and visibility
Sample NHT cross sections

**Sidewalk with Bike Lanes and Vegetated Buffer: Type I or II**

In this condition, both the sidewalk and the bike lanes are considered part of the national historic trail. Vegetation between the road and trail can help buffer road noise and create a distinctive character for the NHT. Plantings should include native grasses and vegetation where possible within maintenance requirements.

NHT ELEMENTS APPROPRIATE TO A SIDEWALK WITH BIKE LANCES AND VEGETATED BUFFER TRAIL:
- Ground plane logos or banners, limited application of pedestrian signage if desired (pages 168–171, 175, 172)
- Colored concrete or asphalt may be a possibility (pages 178–179)
- Limited use of native plants in linear or structured arrangement
- Historic trail encounter feature or wayside exhibit only applicable in trailhead or other widened areas for safety

**Limited Right-of-way Sidewalk: Type I**

In this condition, due to limited right-of-way, the sidewalk is effectively the national historic trail. Plantings and other landscape elements will likely be outside of the trail right-of-way and at the discretion of the adjoining property owner. Collaboration with property owners may assist with providing a consistent and user-friendly trail corridor aesthetic.

NHT ELEMENTS APPROPRIATE TO A LIMITED ROW SIDEWALK:
- Ground plane logos and/or banners (pages 168–171, 175)
- Colored concrete or asphalt may be a possibility (pages 178–179)
- Native plant use only applicable through collaboration with adjacent landowners
- Historic trail encounter feature or wayside exhibit only applicable on adjacent properties where there is landowner interest
Sample national historic trail cross sections

Sidewalk with Bike Lanes: Type I

In this condition, both the sidewalk and the bike lanes are considered part of the national historic trail. Plantings and other landscape elements will likely be outside of the trail right-of-way and at the discretion of the adjoining property owner. Collaboration with property owners may assist with providing a consistent and user friendly trail corridor aesthetic.

NHT ELEMENTS APPROPRIATE TO A LIMITED ROW SIDEWALK:
• Ground plane logos or banners, limited application of pedestrian signage if desired (pages 168–171, 175, 172)
• Colored concrete or asphalt may be a possibility (pages 168–179)
• Native plant use only applicable through collaboration with adjacent landowners
• Historic trail encounter feature or wayside exhibit only applicable on adjacent properties where there is landowner interest

Sidewalk with Bike Lanes and Parking: Type I

In this condition, both the sidewalk and the bike lanes are considered part of the national historic trail. In urban situations, streetscape plantings will likely be limited to trees, so other other plantings will be outside of the trail right-of-way and at the discretion of the adjoining property owner. Collaboration with property owners may assist with providing a consistent and user friendly trail corridor aesthetic.

NHT ELEMENTS APPROPRIATE TO A LIMITED ROW SIDEWALK:
• Ground plane logos and/or banners (pages 168–171, 175)
• Colored concrete or asphalt may be a possibility (pages 178–179)
• Native plant use only applicable through collaboration with adjacent landowners
• Historic trail encounter feature or wayside exhibit only applicable at trailheads or other widened areas in the streetscape; collaboration with private landowners on these projects is possible at landowner discretion
Sample national historic trail trailheads

Three levels of trailhead amenities

For the purposes of the national historic trail, trailheads may offer various levels of amenities depending on location, need, and expected user groups. Three levels of trailhead are shown here, ranging from the smallest and most limited in amenities, to the largest and most extensive.

A few basic elements must be available at a trailhead, park or other place for it to be considered a national historic trail head. These are:

1. a direct and/or marked connection to the national historic trail route
2. a national historic trail entrance sign or other use of the NHT logo(s) indicating the place's connection to the NHT
3. a wayfinding map or orientation exhibit indicating where and how to get on the national historic trail, and preferably providing some context on trail history and NHT sites and segments in the area

In the Kansas City Metro area, most NHT trailheads will be located at existing public parks or trailheads. An NHT trailhead may be created at these places by the addition of at least the above three elements.

To the extent practical, it is recommended that the design of new trailheads—or modification of existing facilities for NHT trailhead use—consider options to use elements from the NHT experience section of this document, such as material and/or plant use, to further evoke the historic trail setting (see pages 168–199).

The chart below and generic plan views on this page and the opposite page highlight the component parts of the three levels of trailhead.

<table>
<thead>
<tr>
<th>Amenity</th>
<th>Trailhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/marked connection to NHT</td>
<td>LEVEL I - SMALL</td>
</tr>
<tr>
<td>Entry signage</td>
<td>LEVEL II - MED.</td>
</tr>
<tr>
<td>Wayfinding map/orientation exhibit</td>
<td>LEVEL III - LARGER</td>
</tr>
<tr>
<td>Historical or interpretive element</td>
<td></td>
</tr>
<tr>
<td>Banners or road signage</td>
<td></td>
</tr>
<tr>
<td>Vehicular parking</td>
<td></td>
</tr>
<tr>
<td>Planting</td>
<td></td>
</tr>
<tr>
<td>Plaza (and some related elements)</td>
<td></td>
</tr>
<tr>
<td>Picnic area</td>
<td></td>
</tr>
<tr>
<td>Restroom/shelter</td>
<td></td>
</tr>
</tbody>
</table>

Amenities that must be present for a location to be an NHT trailhead
Amenities typically present at a trailhead of the level listed
Amenities that may be present at a trailhead of the level listed

1. DIRECT AND/OR MARKED CONNECTION TO THE NATIONAL HISTORIC TRAIL ROUTE
   A trailhead should be directly on the national historic trail route, or, if slightly off the route, include ground plane logos and/or pedestrian signage guiding the public to the route.

2. ENTRY SIGNAGE
   A site identification/entrance sign signals that one has arrived at a place associated with the national historic trail. See page 173 for details.

3. WAYFINDING MAP OR ORIENTATION EXHIBIT
   Orientation exhibits share some qualities with interpretive exhibits, but focus on guiding visitors to the NHT, helping them navigate the area, and providing basic background on trail history. Offering a map showing the parts of the national historic trail that can be accessed from a given trailhead is essential. This feature may be provided digitally once necessary web infrastructure is in place (pages 196–197).

4. BANNERS OR ROAD SIGNAGE
   Banners are suitable for streets with limited right-of-way or space for new road sign installations; road signs should be used in all other cases. For trailheads, road signs may direct into parking (pages 174–175).

5. HISTORICAL OR INTERPRETIVE ELEMENT (HISTORIC TRAIL ENCOUNTERS)
   Depending on the situation and local preferences, this may include interpretive wayside exhibits, silhouettes, historic imagery, or other features. See pages 182–187 for ideas about non-wayside options, and pages 189–197 for guidance on planning for and developing interpretation including wayside exhibits.

6. VEHICULAR PARKING
   A standard trailhead will usually include at least a small amount of vehicular parking. If co-located with an existing park or trailhead, this parking likely already exists. In some limited cases, neighborhood parks may have very little parking but still be considered a Level I-Small trailhead because they serve as access and orientation points for the trail. For new parking associated with an NHT trailhead, it is...
PLANTING
To the extent possible in current conditions, planting at NHT trailheads should follow the same general guidance as outlined for planting along the national historic trail in use of native species and cultivating a prairie-like appearance. See landscape guidance page 156, and planting guidance pages 180-181.

- Level I - Small: These are small areas with limited room for landscape. Typical landscape elements will include grass and trees or shrubs to buffer parking areas from the street, preferably native species.
- Level II - Medium: These are larger areas with more amenities present. Type I or II trail landscapes would be appropriate for this level of trailhead, with trees providing shade relief while alerting trail users to the presence of a trailhead.
- Level III - Large: These areas are large enough to provide a variety of amenities, including a shelter. The size is such that they can potentially be used as neighborhood or community gathering spaces. Trees and planting beds could be used to provide shade relief and accentuate amenities within the trailhead location. There may also be opportunity to include native plantings that recall the historic trail landscape, as well as providing pollinator habitat and functioning as stormwater best management practices (BMPs).

PLAZA
Plaza spaces may include both NHT and basic amenities. In a Level II or III trailhead they may be the appropriate location for an orientation or interpretive exhibit and/or historic trail encounter feature. Other amenities present may include the following:
- Benches
- Trash receptacle
- Drinking fountain
- Bike parking

PICNIC AREA
Picnic areas are likely to only be present in at a Level III trailhead, or a Level I or II trailhead if incorporated into a developed public park. These may include amenities such as tables, shade, and trash receptacles.

RESTROOMS/SHELTER
Restrooms are primarily available at large (Level III) trailheads, or adjacent to a Level I or II trailhead where incorporated into a developed public park.
Sample national historic trail transit trailheads

NHT trailheads may also be located in connection with transit systems, to encourage the use of transit to access the NHT, and the creation of loops using both trail and transit. The basic elements that must be present for a transit location to be considered an NHT trailhead are the same as for standard trailheads.

1. A direct and/or marked connection to the national historic trail route
2. A national historic trail entrance sign or other use of the NHT logo(s) indicating the place’s connection to the NHT
3. A wayfinding map or orientation exhibit indicating where and how to get on the national historic trail, and preferably providing some context on trail history and NHT sites and segments in the area

Sample bus stop trailhead

NHT trailheads may also be located in connection with transit systems, to encourage the use of transit to access the NHT, and the creation of loops using both trail and transit. The basic elements that must be present for a transit location to be considered an NHT trailhead are the same as for standard trailheads.

1. A direct and/or marked connection to the national historic trail route
2. A national historic trail entrance sign or other use of the NHT logo(s) indicating the place’s connection to the NHT
3. A wayfinding map or orientation exhibit indicating where and how to get on the national historic trail, and preferably providing some context on trail history and NHT sites and segments in the area

<table>
<thead>
<tr>
<th>Amenity</th>
<th>Transit Trailhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct/marked connection to NHT</td>
<td>BUS STOP</td>
</tr>
<tr>
<td>Entry signage</td>
<td>TRANSIT CENTER</td>
</tr>
<tr>
<td>Wayfinding map/orientation exhibit</td>
<td></td>
</tr>
<tr>
<td>Historical or interpretive element</td>
<td></td>
</tr>
<tr>
<td>Banners or road signage</td>
<td></td>
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<tr>
<td>Vehicular parking</td>
<td></td>
</tr>
<tr>
<td>Planting</td>
<td></td>
</tr>
<tr>
<td>Plaza (and some related elements)</td>
<td></td>
</tr>
<tr>
<td>Bus stop shelter</td>
<td></td>
</tr>
<tr>
<td>Restrooms/shelter</td>
<td></td>
</tr>
</tbody>
</table>

Amenities that must be present for a location to be an NHT trailhead
Amenities typically present at a trailhead of the level listed
Amenities that may be present at a trailhead of the level listed

1. DIRECT AND/OR MARKED CONNECTION TO THE NATIONAL HISTORIC TRAIL ROUTE
A trailhead should be directly on the national historic trail route, or, if slightly off the route, include ground plane logos and/or pedestrian signage indicating how to reach the route.

2. ENTRY SIGNAGE
A site identification/entrance sign signals that one has arrived at a place associated with the national historic trail. See page 173 for details. At bus stop trailheads, an entry/site identification sign may need to be made in a smaller than standard size.

3. WAYFINDING MAP OR ORIENTATION EXHIBIT
Orientation exhibits share some qualities with interpretive exhibits, but focus on guiding visitors to the resource, helping them navigate the area, and providing basic background on trail history. Offering a map showing the parts of the national historic trail that can be accessed from a given trailhead is essential. This feature may be provided digitally once necessary web infrastructure is in place (pages 196-197).

4. BANNERS OR ROAD SIGNAGE
Banners are suitable for streets with limited right-of-way or space for new road sign installations; road signs should be used in all other cases. Where applicable, road signs direct into parking (pages 174-175).

5. HISTORICAL OR INTERPRETIVE ELEMENT (HISTORIC TRAIL ENCOUNTERS)
Depending on the situation and local preferences, this may include interpretive wayside exhibits, silhouettes, historic imagery, or other features. See pages 182-187 for ideas about non-wayside options, and pages 189-199 for guidance on developing interpretation including wayside exhibits.
1. BUS STOP SHELTER
Aside from providing transit users protection from the elements, bus stop shelters may be appropriate places to display NHT wayfinding maps or trail information.

2. RESTROOMS/SHELTER
Restrooms are sometimes, but not always, present at transit center trailheads. They are beyond the scope of most bus stop trailheads, although restrooms may be available at other public facilities nearby.

3. PLAZA
Plaza spaces may include both NHT and basic amenities. At a transit center trailhead they may be the appropriate location for an orientation or interpretive exhibit and/or historic trail encounter feature. Other amenities present may include the following:
   - Benches
   - Trash receptacle
   - Drinking fountain
   - Bike parking

4. VEHICULAR PARKING
A transit center trailhead will usually include some vehicular parking. Bus stop trailheads will rarely offer parking as part of the bus stop itself, but limited parking may be available on the street, or at another public facility nearby.

5. PLANTING
   - Bus Stop: These are small areas with limited room for landscape. Typical landscape elements will include grass and trees or shrubs to buffer parking areas from the street, preferably native species.
   - Transit Center: These areas are large enough to provide a variety of amenities including a shelter. The size is such that they can potentially be used as neighborhood or community gathering spaces. With this in mind, trees and planting beds could be used to provide shade relief and accentuate amenities within the trailhead location. There may also be opportunity to include native plantings that recall the historic trail landscape, provide pollinator habitat, and/or function as stormwater best management practices (BMPs).

6. BUS STOP SHETING
Aside from providing transit users protection from the elements, bus stop shelters may be appropriate places to display NHT wayfinding maps or trail information.