R.J. Corman - Versailles Line
Rail with Trail Corridor Study
Fayette County, Kentucky

Preliminary Final Draft - June, 2009
Introduction

The RJ Corman Versailles Line is a short-line track that begins near downtown Lexington and heads west toward Versailles, nearly 15 miles in length. This study examines the approximate 9.5 mile section from downtown Lexington to Pisgah Pike just inside Woodford County for the development of a rail-with-trail where the rail line remains active and the trail is adjacent to the tracks. In addition, an alternate option will be to develop the traditional rail-trail where the tracks are removed and the old rail bed is paved.

Lexington and the surrounding Bluegrass Region are home to a unique pastoral landscape and there is no better way to enjoy the picturesque scenery than by riding a bike or walking along trail that cuts right through the heart of the Horse Capital of the World. The Versailles Line provides that great opportunity. The trail corridor would be the longest in the state and would pass by some of the most prestigious horse farms; including Calumet, Keeneland Race Course and the ending in the Historic Village of Versailles. In addition, the trail also allows for connections to several parks within Lexington including, Valley Park, McConnell Springs, and Preston Springs Park.

Purpose

The purpose of the Feasibility Study is:

- Investigate the availability of right-of-way and potential access, especially through the industrial areas, neighborhoods, rail corridors, and state highways.
- Recommend methods to protect adjacent farmland, and allow access where the right-of-way cuts through a farm.
- Estimate the costs of design, construction, including preliminary design alternates with typical sections, alignments, profiles; utility investigations, locations of major structures, drainage areas, and right-of-way information.
- Provide color illustrations for assistance in interpreting the proposed conditions.
Approach

The Lexington-Fayette Urban County Government (LFUCG) with the corporation of the RJ Corman Rail Company have retained CDP Engineers, in associate with Alta Planning and Design, to complete a Feasibility Study to examine the possibility of developing a rail-with-trail along the Versailles Line. Funding for the study was provided by LFUCG. The study evaluates the goals set forth by LFUCG for the development of the rail-with-trail and the alternate option of rail-trail conversion. In addition, the study will provide guidelines for development, showcase alignment options, significant landmarks/locations throughout the corridor, access points to the trail and structures needed for implementation. The following sequence highlights the planning process used for the Feasibility Study:

- Kick-off meeting with LFUCG to refine the scope and outline the vision, goals and to request GIS data for the corridor.
- Meeting with representatives of RJ Corman Rail Company to gain their input into the planning process and request GIS data along the corridor.
- GIS data was received and base mapping was developed and reviewed.
- Analysis of the base mapping provided an inventory of features and locations to be examined in the field.
- The field study was via a Hi-Rail provided by the RJ Corman Rail Company. During the trip along the Versailles Line staff from CDP and Alta took notes, photos, and captured GPS data chronically the found field conditions.
- With the data collection complete and field verified a preliminary alignment was developed. Also, alternates were explored and noted.
- The preliminary findings were presented to LFUCG for their review and comments. Those comments and further refinements have been included into this Preliminary Final Draft version of the Feasibility Study.
Design Guidelines

Multi-use Trail

The design guidelines incorporated into this RJ Corman - Versailles Line Feasibility Study need to be flexible and guiding rather than prescriptive. However, these design guidelines also define considerations that will help to avoid exposing the users, owner, and operator of the railroad to risks that can reasonably be avoided.

A recent national study (Rails-with-Trails: Lessons Learned, USDOT, 2002) of existing trails within rail corridors determined that there is no national consensus on standards for trail setbacks and separation from active rail operations, therefore, the RJ Corman - Versailles Line design guidelines were developed specifically for the Versailles Line Rail corridor to reflect the operating characteristics of this railroad and relevant practices nationally.

There are apparent risks when designing a trail within the right of way of an active railroad. Planning a trail in a location that is in close proximity to a rail line requires prudent design that thoughtfully balances risk and mitigation. Each segment of the proposed trail will be reviewed on its own merit at implementation.

Typical Trail Cross Section

The recommended width for a shared use trail is 10 to 14 feet (AASHTO Guide for the Development of Bicycle Facilities, 1999, and KYTC Bicycle Facility Design Guidance) in areas expected to accommodate cyclists and pedestrians. Wider cross-sections and sometimes separation of users or directional traffic are recommended where higher user numbers and speeds are anticipated. Narrower widths, but no less than 8 feet, are acceptable where very small volumes are expected or extreme physical constraints are encountered. A two-foot graded shoulder should be provided, and a clear zone of three feet from the edge of pavement maintained to reduce hazards.

Horizontal alignment (curvature of the trail) and vertical alignment (slope) will be dictated in many areas by the railroad alignment and will fall well within the design guidelines for shared-use pathway design. In some areas however, the trail will diverge from the rail line and AASHTO guidance for horizontal and vertical alignment should be observed (AASHTO-1999).

The shoulders provide a setback or “shy distance” from fixed objects along the trail edge and also serves as a tactile warning device and recovery zone for anyone inadvertently straying off the trail. A suitable material for the trail shoulders is ¾-inch minus crushed aggregate. Vertical clearance along the trail should be a minimum of 10 feet. Note that the segments of the trail that may include equestrian users should have a wider shoulder on the side away from the railroad.

Versailles Line RWT Design Recommendations

<table>
<thead>
<tr>
<th></th>
<th>Width</th>
<th>10 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td></td>
<td>Porous Asphalt</td>
</tr>
<tr>
<td>Soft Shoulder</td>
<td>2 feet</td>
<td>3/4” minus crushed aggregate</td>
</tr>
<tr>
<td>Vertical Clearance</td>
<td>15 feet</td>
<td>(12 feet for equestrians)</td>
</tr>
<tr>
<td>Horizontal Clearance</td>
<td>3 feet from edge of pavement</td>
<td></td>
</tr>
<tr>
<td>Maximum Slope</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Cross Slope</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

Facing Page: An excursion train on the Oregon Pacific Railroad running parallel to the Springwater on the Willamette Trail in Portland, OR. Below: Though not a RWT, the Stafford Basin Multi-Use Trail in Lake Oswego, Oregon, is comparable in many ways to the Versailles Line corridor.
**Grades**

The recommended maximum trail gradient is five percent. Steeper grades (up to eight percent) can be tolerated for up to 500 feet. The corridor is nearly flat for most of the alignment and 5% is likely achievable for the entire alignment where the trail can be accommodated within the right-of-way.

**Structural Section and Surface**

Trail construction will be conducted in a manner similar to roadway construction. Sub-base thickness will be determined by soil conditions. Expansive soil types require special structural sections. Use of geotextiles should be encouraged (depending on subsurface soil type and drainage) to provide stability and aid drainage to subsurface soils. Required pavement and subbase thicknesses will be determined by a geotechnical engineer in the preliminary design phase of implementation. Four inches of porous pavement over four to six inches of porous foundation subbase is typical for similar installations.

The trail should have a cross-slope of two percent to direct water to subdrainage or swale for infiltration or pretreatment before discharge to surface waters.

Some trail sections may require retaining walls or more complex structural designs to accommodate grades adjacent to the corridor. In some areas boardwalks or bridges will be necessary to cross wetlands or streams. Equestrian users need to be considered in boardwalk and bridge design, signing and trail etiquette.

**Rails-with-Trails Principles**

This section explains the underlying railroad operating and engineering principles that influence the formulation of rail-with-trail guidelines. For safety reasons, and the convenience of the operators, the general public is typically excluded from rail rights-of-way through physical barriers, such as fencing, or legally through trespass laws and right-of-way signing. In rail-with-trail situations, public access to the right-of-way is allowed with the development of special design features and management and operational practices to maintain a safe operating environment. Each segment of these shared corridors must be planned and designed in detail to anticipate the specific operational and safety requirements of each situation encountered.

In 2002, Alta Planning + Design, produced a study for the Federal Highway Administration (FHWA) titled: “Rails-with-Trails: Lessons Learned.” The report found that the range of minimum setback between edge of trail and track centerline in RWTs varies from less than seven feet to as high as 100 feet. The average setback was almost 33 feet from the centerline of the nearest track to the edge of trail. A comparison of RWT setback distances to train speed and frequency reveals little correlation; over half (33 of 61) of the existing RWTs have 25 feet or less separation, even alongside high-speed trains. Many of the trails with little separation have been established for many years. The trail managers for these well-established trails report few problems. However, interviews with train engineers in several areas indicate that they observe trespassing in areas with little setback and no physical barrier.

There is no consensus on either appropriate setback requirements or a method of determining the requirement. Some trail planners consider it analogous use the AASHTO Bike Guide for Guidance: bicycle lanes are set back five to seven feet from the centerline of the outside travel lane of even the busiest roadway. Others use their state public utilities commission’s minimum setback standards (also known as ‘clearance standards’) for adjacent walkways (for railroad switchmen). Because of the lack of consensus on acceptable setback distances, the appro...
Setback

The minimum distance between the operating railroad and obstructions such as utility and signal poles, bridges, retaining wall structures and fences, is governed by the dynamic envelope of rail operations (Figure 3) and measured in feet from the centerline of the track. These dimensions are recognized nationally to provide consistent clearances and to facilitate safe operation of trains throughout the interconnected rail network. However, minimum obstruction setbacks do not provide for easy maintenance of the rail infrastructure and, while acceptable from a safety perspective, may increase maintenance costs or cause unacceptable delays or closures of the rail or the trail when maintenance activities are required.

Trails parallel to the rail mainlines, sidings, switches, curves, marshalling yards, roadway crossings, freight loading areas, bridges and cut or fill sections of the line will each have different considerations.

Separation

To provide separation and discourage trespassing and undesired informal paths from forming, trails within the right-of-way and less than 40 feet from the main or primary auxiliary track centerline may require fencing (the type and height of fencing will be approved by the owner and operator). A fence may not be required if the trail is below the railroad and a retaining structure of three feet or greater in height is provided between the trail and the track (Figure 8). Fencing along approaches to tunnels, overpasses, underpasses and other interfaces should be provided to prevent trespassing.

The desirable Versailles Line cross-section (Figure 4) shows the generally accepted practice for aligning trails within active rail corridors and includes accommodation for maintenance access and drainage of the right-of-way. Variance from the standard to accommodate narrow right-of-way or obstructions (Figures 5 and 6) will require the development of special designs and approval by the owner(s) and operator, and may require approval by regulatory agencies, and the Federal Railroad Administration (FRA)).

In Figure 4, the desirable cross-section:

• The near edge of trail tread is more than 22 feet from the centerline of the track.

• Trails will not be built so that the cut or fill slopes of the railroad are pushed outside of the existing right of way, unless real estate agreements with adjacent land owners can be reached.

• Trails will be built so that a standard railroad drainage section can be built and maintained.

• Trails should not be placed between tracks unless the track centers are 48 feet or greater.

• Track relocations to accommodate the trail can be considered with the approval of the track owner and operator. A complete assessment of fixed points (structures, etc), utilities and right of way must be included as part of a proposed design. A new alignment should include provisions for improvements to alignment, profile, materials, and drainage. The track should be designed in accordance with a minimum standard such as Burlington Northern Santa Fe (BNSF) Design Guidelines for Industrial Track Projects (BNSF DGFITP) and in accordance with current American Railway Engineering and Maintenance-of-Way Association (AREMA) standards.
**Crossing the Rail**

Railroads and rail authorities often strive to reduce the number of on-grade crossings to improve safety and operational efficiencies.

**Bridges**

Trails may cross under existing railroad structures if railroad and permitting authorities approve the proposed configuration. Rail bridges over a trail may require modifications to prevent ballast and debris from falling onto the trail. Trail bridges above tracks may be required to be entirely fenced over the railroad. Minimum vertical clearance of 22 feet 6 inches from top of rail to bottom of bridge structure.

Provide clearance of 25 feet horizontally from centerline of track to structural members of overpasses whenever possible. If less clearance is required, then the structure must provide “crash walls” in accordance with AREMA standards. Horizontal clearances must not be less that 15 feet at structural members. Horizontal clearance of 12.5 feet is acceptable on industrial spur tracks only. Accommodation for future track(s) may also be required at owner’s discretion.

Most rail bridges in the corridor were constructed from several decades ago to nearly a century ago. They were not designed to support a significant cantilevered structure, such as a pedestrian walkway, off to one side. An inherent danger exists in hanging pedestrian walkways off of rail bridges where adjacent trail bridge surfaces are placed at the same or lower elevation in relation to the track. Some railcar loads pose a risk to objects close to the track. Shifted loads, misplaced tonnage, and defective load securing materials (such as steel banding) are all potential risks. The more likely scenario would be to place a new trail span parallel to existing railroad bridges.

**Roadway Crossings**

The Versailles Line corridor crosses several roadways over the nine-mile length of the rail line. Most crossings are on-grade, many have warning lights and/or crossing arms.

Roadway crossings represent one of the key challenges to trail safety as motorists often do not expect to see bicyclists and pedestrians at rail crossings. Most of the roadway crossings have light to moderate traffic volumes, have good visibility on the approaches, both from the trail user’s and the motorist’s points of view. In addition, most of the trail/roadway intersections can be designed to allow the trail to cross at a 90 degree angle, minimizing crossing distances and making the appropriate design treatments simple to implement.

The crossing treatments recommended in this report are based on an evaluation of vehicular traffic patterns as well as trail user characteristics. This includes traffic speeds, street width, traffic volumes (average daily traffic), line of sight, and trail user profile (age distribution, destinations).

A traffic safety study should be completed for roadway crossings as part of the preliminary design phase for each segment as it moves toward implementation to determine the most appropriate design features. This will identify the most appropriate crossing options given current information, which must be verified and/or refined during the design and construction document stage of the process.

The proposed crossing treatments are based on established standards, preliminary evaluation of the available data, and experience on similar existing facilities. Trail crossing types fall into three basic categories, described below.
**Trail-Roadway Crossings**

**Type I - uncontrolled crossings** (unsignalized, but possibly with other traffic control devices) are recommended for streets where vehicles travel at speeds of less than 45 mph and are used by fewer than 10,000 vehicles per day. Other devices may include high visibility crosswalks, signing, curb extensions and pedestrian refuges.

**Type II - signalized crossings** are recommended for crossings more than 250 feet from an existing signalized intersection, where 85th percentile travel speeds are 40 mph and above and/or ADT exceeds 15,000 vehicles, and where it is recommended that trails receive a high level of crossing protection. Each crossing, regardless of traffic speed or volume, requires additional review by a registered engineer to identify sight lines, potential impacts on traffic progression, timing with adjacent signals, capacity, and safety.

Trail signals are normally activated by push buttons, but also may be triggered by motion or loop detectors. The maximum delay for activation of the signal should be two minutes, with minimum crossing times determined by the width of the street. The signals may rest in the off position or on flashing yellow or green for motorists when not activated, and should be supplemented by standard advanced warning signs.

**Type III - grade-separated crossings** (no new Type III crossings are anticipated in this plan) may be needed where ADT exceeds 25,000 vehicles, and 85th percentile speeds exceed 45 mph. Personal safety may be a concern with overcrossings and undercrossings when trail users may be temporarily out of sight from public view and may have poor visibility themselves.

Trail signals are normally activated by push buttons, but also may be triggered by motion or loop detectors. The maximum delay for activation of the signal should be two minutes, with minimum crossing times determined by the width of the street. The signals may rest in the off position or on flashing yellow or green for motorists when not activated, and should be supplemented by standard advanced warning signs.

**Trial-Roadway Crossing Recommendations**

Type I crossings are suitable for most of the roadway crossings on the Versailles Line not already served by a signalized intersection.

**Trail Access**

The Versailles Line Trail in envisioned as a multi-use trail that will be used by pedestrians, bicyclists (both recreational and commuters), and in-line skaters. The trail will be accessible to people in wheelchairs and senior citizens with walking aids who require a smooth surface. Good access to the trail for all users is a key element to its future success. Simply put, if people cannot get to a trail easily, they will not use it.

Neighborhood access will be possible from all local streets crossing the trail. The trail should be identified at each street crossing and directional signs should be placed at street intersections, identifying destinations and distances along the trail and within the surrounding community.

**Trailheads**

Trailheads (formalized parking areas) serve all trail users. They provide information about the trail such as maps, points of interest, rules and etiquette, and may have trail user facilities like restrooms, trash receptacles, information kiosks, and benches. Trailhead locations should ideally be located every two to three miles along the trail.

Trailheads will be placed along the corridor for users’ transitions from their vehicles to the RWT. Because the trailhead will usually shape a user’s first impression of the trail, function and appearance will be key. The typical trailhead design will focus on:

- Maneuvering room for vehicles, pedestrians and cyclists.
- Parking stalls for automobiles.
- Information kiosks, signs, litter receptacles, fencing, restroom facilities, potable water and landscaping.
• Connector trails to the main RWT.
• Security fencing, lighting and barrier systems such as bollards to prevent motor vehicle access to the RWT.

Potential locations are found at:
(ADD LOCATIONS)

Each intersection with the street network provides an access point for users and convenient connections to other destinations.

Trail Amenities
In order for the Versailles Line to be a successful community destination and resource, the trail should appeal to a wide variety of users with trail amenities such as:

• Benches: Utilize wood seating surfaces with metal structure and detailing.
• Covered bench areas: Structures that evoke the organic forms of the corridor and the history of the area should be designed.
• Bike racks: Designs compatible with state and local recommendations.
• Mile post markers: Trail mileage marking should be incorporated into pavement markings, signing and fixed bollards. Mile posts are a longstanding railroad tradition used extensively in rail design and maintenance. Mile posts for trails greatly increase use by runners and cyclists looking for set workout distances, and improve emergency response. However, coordinating the rail mile posts with the trail mileage will be complicated by the out of right of way segments.
• Restrooms: Restrooms should be provided at new trailheads. Signing should be provided to indicate these facilities.
• Litter Receptacles: Litter is an often reported concern of neighbors to a proposed trail and a new maintenance responsibility of trail providers. The incidence of littering often declines in new trail corridors as they become popular with users that displace scofflaws. The trail should adopt the wildland ethic of “pack it in, pack it out” and encourage users and volunteers to adopt trail segments for litter removal. However, garbage cans may be provided at appropriate locations.
• Dog Waste Pickup Stations: Dog waste bag dispensers should be placed at trailheads and key neighborhood access points along the route. Signs should be placed along the trail notifying dog owners of the health and environmental benefits and local ordinances requiring dog owners to pick up after their dogs.
• Information Kiosks: In addition to orientation, destinations, events, etiquette and rules, trailhead information stations should provide trail users with information about the ecology and history of the corridor. Educating the public about the Versailles Line corridor and surrounding resources will help reduce dumping, littering, and other abuses. Involving school children, university students and civic organizations in the research, design, and construction of these kiosks would be an excellent community activity.

Materials used for amenities should receive approval from the future trail managing authority and the local jurisdictions.

Signing
As a general rule, caution should be exercised to not over-sign the trail. Incorporation of signs into planned trailside vertical elements such as bollards should be encouraged. This will avoid the visual clutter of too many signs along the trail and an excessive number of sign poles.

Shared-use pathway signing should follow standards established in this plan and supported by standards from the AASHTO Guide to Bicycle Facilities and the Manual on Uniform Traffic Control Devices (MUTCD).

Implementing a well-planned and attractive system of signing can greatly enhance bikeway facilities by signaling their presence and location to both motorists and existing and potential bicycle users. By leading people to community destinations they provide benefits to local residents and visitors.

In general, the sizes of signs used on bicycle paths are smaller than those used on roadways. Table 9B-1 of the MUTCD lists minimum sign sizes for both bicycle facilities. If the sign applies to drivers and bicyclists, then the larger size used for conventional roads shall apply.

Trailhead Access Signing
Since trailheads will serve as access points for people that may not be as familiar with the trail, information signs should be provided that include a “You Are Here” map, distances to destinations along the trail, and trail rules and etiquette signs. These should be placed on an information kiosk, designed to be reflective of the corridor or adjacent surroundings. Kiosks must be ADA compliant.

Trail Etiquette Signing
The trail etiquette sign will clearly spell out proper rules and behavior for trail users, including rules related to equestrians, yielding right-of-way to more vulnerable trial users and safety around trains and equipment. Sign messages and design will
be based on national standards and locally accepted trail practices.

Directional Signs

Directional signs provide orientation to the trail user and emphasize the continuity of the trail. Street names, mile posts, and place names are key elements that should be called out along the trail. Street names should be called out at all trail intersections with roadways. Mileage markers should be placed at quarter-mile increments as bollards or pavement markings. Directional signs should be used to call out key destinations along the trail route and accessible from the trail via other non-motorized connections.

Interpretive Signing

Interpretive signs enrich the trail user experience, strengthen the identity of the local community, and provide educational opportunities. Key interpretive opportunities for the Versailles Line corridor include environmental education (stream ecology, water quality, conservation, native plants, and riparian corridors), and cultural resources (historic sites, the railroad, the many historic horse farms).

Public Art

Public art along a trail provides an opportunity to add interest to the trail experience and, depending on the scale and form, can become an “event” in itself and serve as a public draw. Public art can be aesthetic or functional, doubling as sitting or congregation areas. Local artists should be encouraged to produce artwork in a variety of materials for sites along the corridor.

Barriers

Bollards

Bollards are stout posts sometimes used at roadway/trail intersections and trail entrances to prevent motor vehicles from entering the trail. When bollards are placed within the trail surface they should be designed to be visible to bicyclists and other trail users, especially at night, with reflective materials and appropriate striping. Placement should not block trail travel lanes.

- Fixed bollards: Bollards should be metal or heavy timber structures located on the trail centerline or outside of the trail tread.
- Removable bollards: Install removable bollards on the trail centerline or outside of the trail tread at intersections where emergency and maintenance access is required. Removable bollards can be keyed and locked to allow maintenance and emergency service vehicle access to the trail.

Alternatives to bollards, such as a median in the trail approaching an intersection, should be considered where space allows.

Vegetative Buffers

When possible, landscaping is the first choice for creating separation between the trail and adjacent properties. Vegetative buffers have the dual purpose of creating a natural privacy screen, providing habitat and stabilizing erodible soils. Landscaping can also be an effective barrier to unwanted access where needed.

Fencing

As mentioned in a previous section (Rails-with-Trails Principles), fencing may be necessary, at the discretion of the owner and operator, to indicate separation between active rail operations and trail users when the edge of the trail is less than 40 feet from the center of the track, and to discourage informal access trails from developing across the tracks. Fencing in portions of the trail anticipated to include equestrian uses should consider visibility (Figure 11). Wildlife passage and safety for trail users are important additional factors. Detailed design of the rail-with-trail fence will be developed, in cooperation with the owner and operator, in the preliminary design phase as each trail segment progresses to construction.

As a general policy, fencing at the edge of the right-of-way should be the responsibility of the adjacent land owners. Although the public often perceives fencing as a means of providing safety by prevention of unwanted access, too much fencing can have the opposite effect by impairing informal trail surveillance. Inappropriate fencing can also degrade the experience of trail users, obscure views, and create a “tunnel” effect that makes users feel trapped. Fencing of four feet or less can provide a barrier sufficient to denote property boundaries or to deter most access.

Should adjacent property owners choose to build fences, a variety of fencing applications can be considered. Solid fencing that does not allow any visual access to the trail should be discouraged. Fencing that allows a balance between adjacent residents’ privacy and informal surveillance of the trail should be encouraged. If separation is desired purely for privacy reasons, vegetative buffers are recommended.
NATIONAL AND STATE GUIDELINES

The following is a list of references and sources utilized to develop design guidelines for the RJ Corman - Versailles Line. Many of these documents are available online and provide a wealth of information and resources to the public.

AASHTO Guide

American Association of State Highway and Transportation Officials, Washington, DC.
www.transportation.org

MUTCD

Federal Highway Administration, Washington, DC.
http://mutcd.fhwa.dot.gov

PBIC / APBP

Bicycle Facility Selection: A Comparison of Approaches
Michael King, for the Pedestrian and Bicycle Information Center
Highway Safety Research Center, University of North Carolina

Kentucky Transportation Cabinet Highway Design Manual
http://www.transportation.ky.gov/highways

The majority of funding for trail implementation is acquired through state, local and federal transportation and recreation funding. Additional sources may include contributions from citizens and corporations.
<table>
<thead>
<tr>
<th>Trail Segment</th>
<th>Length</th>
<th>Unit Cost for RT</th>
<th>Cost</th>
<th>Unit Cost for RR</th>
<th>Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillery District</td>
<td>2622</td>
<td>$ 94</td>
<td>$ 241,568</td>
<td>$ 45</td>
<td>$ 117,990</td>
<td>Trail on right side of trail adjacent to Town Branch. A spur crossing will be required. If the trail were on the left side then trail would have to be into Manchester before key Mechanical Building STA 7500.</td>
</tr>
<tr>
<td>Dox Hollow to Future</td>
<td>2756</td>
<td>$ 94</td>
<td>$ 262,618</td>
<td>$ 45</td>
<td>$ 125,730</td>
<td>Trail on right side of trail adjacent to Town Branch. A spur crossing will be required. If the trail were on the left side then trail would have to be into Manchester before key Mechanical Building STA 7500.</td>
</tr>
<tr>
<td>Elkchester to McCollum</td>
<td>1542</td>
<td>$ 94</td>
<td>$ 288,270</td>
<td>$ 45</td>
<td>$ 87,980</td>
<td>Trail on right side of trail adjacent to Town Branch. A spur crossing will be required. If the trail were on the left side then trail would have to be into Manchester before key Mechanical Building STA 7500.</td>
</tr>
<tr>
<td>Old Pond to Route 20</td>
<td>34</td>
<td>$ 94</td>
<td>$ 3,164</td>
<td>$ 45</td>
<td>$ 1,380</td>
<td>Trail will be on right side of tracks in ROW median adjacent to Elkchester Road.</td>
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<td>Central Valley</td>
<td>3629</td>
<td>$ 94</td>
<td>$ 349,658</td>
<td>$ 45</td>
<td>$ 160,830</td>
<td>Trail will be on right side of trail crossing in Preston Springs Park.</td>
</tr>
<tr>
<td>Alexandria to Van Meter</td>
<td>9549</td>
<td>$ 94</td>
<td>$ 1,252,618</td>
<td>$ 45</td>
<td>$ 493,720</td>
<td></td>
</tr>
<tr>
<td>Miss Alleged to Van Meter</td>
<td>3087</td>
<td>$ 94</td>
<td>$ 367,054</td>
<td>$ 45</td>
<td>$ 165,230</td>
<td>Trail will be on right side of tracks. Where transmission easement from STA. 340+00 to 353+00 then build RR ROW line to Van Meter Road. Cut is required from STA. 340+00 to 353+00.</td>
</tr>
<tr>
<td>Van Meter to Distillery</td>
<td>4620</td>
<td>$ 94</td>
<td>$ 554,070</td>
<td>$ 45</td>
<td>$ 206,230</td>
<td>Trail will be on right side of tracks. Use adjacent property around STA. 216+00 and STA. 218+16 to 223+05.</td>
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<tr>
<td>Distillery to Alexandria</td>
<td>1650</td>
<td>$ 94</td>
<td>$ 195,160</td>
<td>$ 45</td>
<td>$ 99,800</td>
<td>Trail will be on left side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
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<tr>
<td>Mulberry Creek</td>
<td>2508</td>
<td>$ 94</td>
<td>$ 242,554</td>
<td>$ 45</td>
<td>$ 127,590</td>
<td>Trail will be on left side of tracks and use the adjacent property around STA. 318+30. Cut is required from STA. 324+00 to 330+00 and STA. 330+00 to 338+00.</td>
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<tr>
<td>Whitewater Crossing</td>
<td>69</td>
<td>$ 94</td>
<td>$ 67,609</td>
<td>$ 45</td>
<td>$ 31,200</td>
<td>Trail will stay on right side of tracks and use the adjacent property around STA. 183+50 and will connect at Enterprise Ct.</td>
</tr>
<tr>
<td>Distillery to Alexandria</td>
<td>2705</td>
<td>$ 94</td>
<td>$ 249,254</td>
<td>$ 45</td>
<td>$ 129,290</td>
<td>Trail will be on right side of tracks. Use adjacent property around STA. 216+00 and STA. 218+16 to 223+05.</td>
</tr>
<tr>
<td>Alexandria - Private Drive</td>
<td>4230</td>
<td>$ 94</td>
<td>$ 454,070</td>
<td>$ 45</td>
<td>$ 182,230</td>
<td>Trail will be on right side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
</tr>
<tr>
<td>Van Meter to Alexandria</td>
<td>3380</td>
<td>$ 94</td>
<td>$ 361,850</td>
<td>$ 45</td>
<td>$ 155,230</td>
<td>Trail will be on right side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
</tr>
<tr>
<td>Alexandria - Private Drive</td>
<td>5060</td>
<td>$ 94</td>
<td>$ 554,070</td>
<td>$ 45</td>
<td>$ 206,230</td>
<td>Trail will be on right side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
</tr>
<tr>
<td>Alexandria to Private Drive</td>
<td>1224</td>
<td>$ 94</td>
<td>$ 179,702</td>
<td>$ 45</td>
<td>$ 29,990</td>
<td>Cross to McConnells Location to Mow Point. Trail will be on right side of tracks in ROW median.</td>
</tr>
<tr>
<td>Miss Alleged to Van Meter</td>
<td>9549</td>
<td>$ 94</td>
<td>$ 1,252,618</td>
<td>$ 45</td>
<td>$ 493,720</td>
<td>Trail will be on right side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
</tr>
<tr>
<td>Alexandria to Private Drive</td>
<td>4230</td>
<td>$ 94</td>
<td>$ 454,070</td>
<td>$ 45</td>
<td>$ 182,230</td>
<td>Trail will be on right side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
</tr>
<tr>
<td>Alexandria to Private Drive</td>
<td>4230</td>
<td>$ 94</td>
<td>$ 454,070</td>
<td>$ 45</td>
<td>$ 182,230</td>
<td>Trail will be on right side of tracks and use the adjacent property around STA. 285+00 to 293+00.</td>
</tr>
</tbody>
</table>
Two 15" pipes under tracks

Drainage way along right side of tracks (looking backwards)

Wide shoulder on right side of tracks
FUTURE LOFT HOUSING
(existing Recycling Center)

MANCHESTER IMPROVEMENTS
(on-street parking & sidewalks
where feasible)

McCONNELL HOUSE
& PLAZA

DISTILLERY PLAZA
(drop off area;
steps down to Town Branch Creek)

WATER TOWER PLAZA
(outdoor dining;
steps down to Town Branch Creek)

PEDESTRIAN BRIDGE
(connects Pepper Storage Building to
Bourbon Trail Greenway)

TOWN BRANCH GREENWAY
(SPLITS - follows north side of
Manchester and north side of
Town Branch Creek)

SCULPTURE ART PARKS
(straddling Manchester at
intersection with railroad)

BOURBON TRAIL
(re-routed around development site;
connects to Water Tower Plaza)

Distillery District Conceptual Plans - Provided by Urban Collage

Rev. September 3, 2008
Right side of tracks (looking back)

Parking area adjacent to tracks at Harrod Concrete

Parking area adjacent to tracks at Harrod Concrete