Iowa City-Oakdale CRANDIC Corridor Right-of-Way Rails-to-Trails Conversion Study

Final Report

Metropolitan Planning Organization of Johnson County, Iowa, and Cedar Rapids & Iowa City Railway

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1 Background

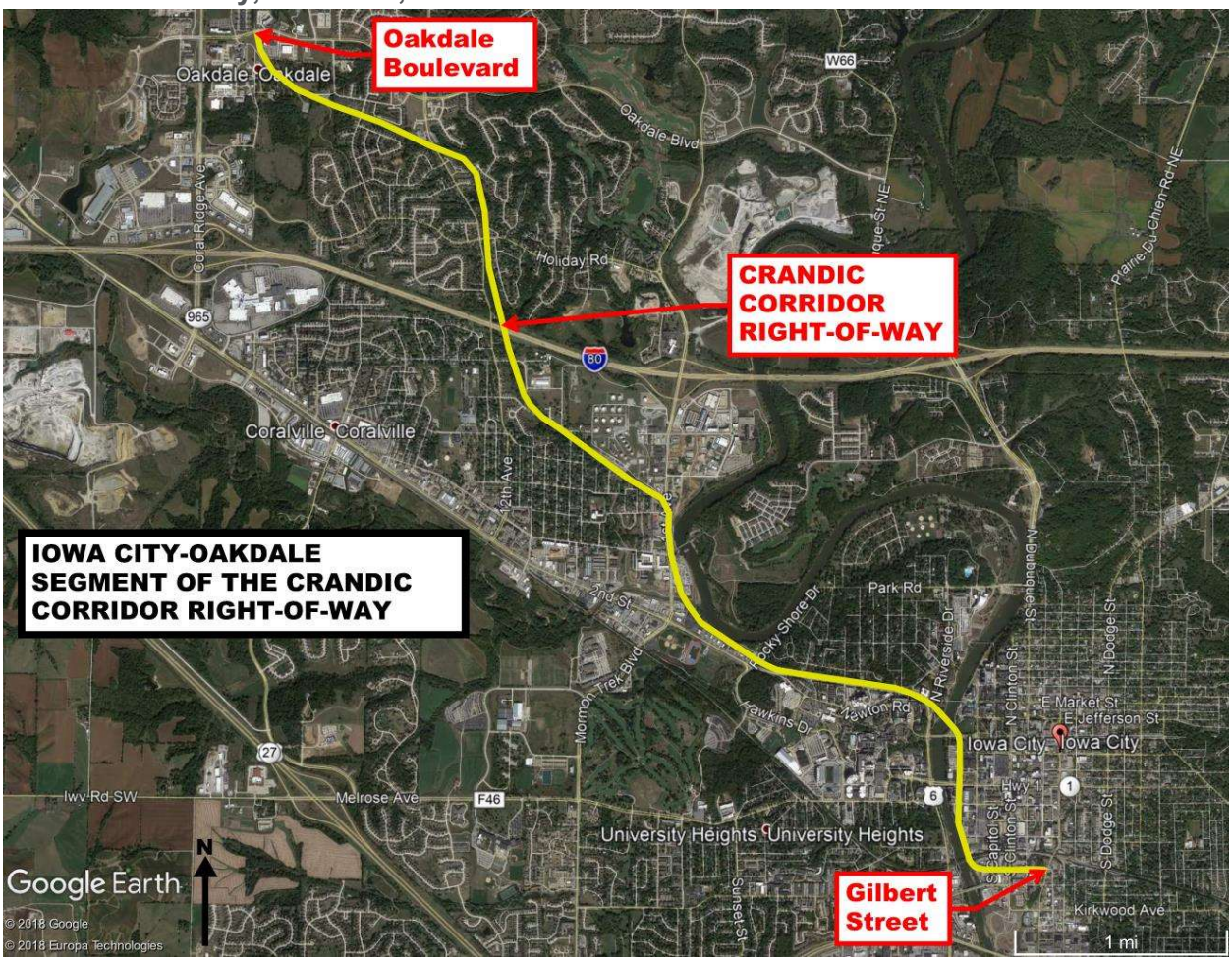
This *Iowa City-Oakdale CRANDIC Corridor Right-of-Way Rails-to-Trails Conversion Study* (the study) outlines the potential regulatory requirements, process, liabilities, opinion of probable conceptual cost for conversion, and functionality of a trail of using a segment of the 20.5-mile-long Cedar Rapids & Iowa City Railway (CRANDIC) Corridor right-of-way between Central Iowa City and the Eastern Iowa Airport at Cedar Rapids, Iowa.

CRANDIC is a subsidiary of Alliant Energy Transportation (AET). Preservation and potential conversion of some or all of the CRANDIC Corridor right-of-way for alternative transportation use has been the subject of feasibility studies and ongoing discussions by state and local stakeholders since 2015. These studies have also conceptually explored the potential for development of a passenger rail service within the CRANDIC Corridor right-of-way; a study for a first phase of commuter rail implementation between Gilbert Street in Iowa City and Penn Street in North Liberty, Iowa (9.3 miles) is under development during 2018-2019 by CRANDIC, the Metropolitan Planning Organization of Johnson County (MPOJC), the Iowa Department of Transportation (Iowa DOT), and other local stakeholders.

This *Iowa City-Oakdale CRANDIC Corridor Right-of-Way Rails-to-Trails Conversion Study*, developed as a separate effort by HDR for CRANDIC and MPOJC, explores the conceptual feasibility for potential development of a multi-use recreational rail trail within a 6.1-mile segment of the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City (CRANDIC Milepost 25.8) and Oakdale Boulevard in Oakdale, Iowa (CRANDIC Milepost 19.7). The Study Area inclusive of this 6.1-mile segment of the CRANDIC Corridor right-of-way is shown in Figure 1-1 below[1].

[1] Note that a separate Google Earth KMZ file identifying the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale and its regional context and intersection with the existing multimodal environment was developed as a separate deliverable for this study.

Figure 1-1: CRANDIC Corridor Right-of-Way Rails-to-Trails Conversion Study Area between Iowa City, Coralville, and Oakdale



Source: Google Earth and HDR

The purpose of this *Iowa City-Oakdale CRANDIC Corridor Right-of-Way Rails-to-Trails Conversion Study* is to:

- Describe in general the regulations and process of railroad abandonment, railbanking and interim use, federal preemption, permissible uses of railbanked corridors (including rails-to-trails conversion), and potential reactivation of a corridor for future passenger rail service.
- In respect to typical rail-trail characteristics, conceptually assess the feasibility of the CRANDIC Corridor right-of-way to accommodate a rails-to-trails conversion in which a trail is typically constructed on the railroad roadbed of a railbanked corridor after removal of railroad infrastructure. An alternative rails-with-trails approach in which a rail line is retained and a trail is constructed separately within the right-of-way will be considered.
- Describe the connectivity of a rail trail on the CRANDIC Corridor right-of-way with existing trails and connectors and known potential future trails. A rail trail from Iowa City to Oakdale could connect with the existing North Ridge Trail (situated parallel to the CRANDIC Corridor right-of-way) from Oakdale to North Liberty, and other existing and potential future multi-use recreational trails in Johnson County, Iowa, for example.

- Describe at a high level potential liability issues that railroads have typically considered when converting a railroad line from rail use to trail use, and related operations of a rail trail.
- Estimate an opinion of probable conceptual cost to develop trail infrastructure on the CRANDIC Corridor right-of-way and modify at-grade crossings of the trail with roadways that currently cross the CRANDIC Corridor right-of-way.

2 Existing CRANDIC Corridor Right-of-Way General Assessment

This section describes existing conditions of the 6.1-mile-long CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale (see Figure 1-1 above for a map of the Study Area), including the condition of the CRANDIC infrastructure, demographics and geographic characteristics of the service area, and other connecting transportation infrastructure and services. It includes a brief history of previous passenger rail transportation services in the broader CRANDIC Corridor right-of-way between Iowa City, Oakdale, North Liberty, and Cedar Rapids.

2.1 Corridor Service Area, Intersections, and Connectivity

The CRANDIC Corridor right-of-way connects Iowa City and Oakdale, in Johnson County, Iowa. According to U.S. Census data, the Iowa City Metropolitan Statistical Area, which includes Iowa City, Coralville, North Liberty, and outlying areas in Johnson and Washington counties, was estimated to have a population of 171,491 as of July 1, 2017[2]. The Iowa City Metropolitan Statistical Area (MSA) is one of the State of Iowa's fastest growing metropolitan areas. The nearby Cedar Rapids MSA adjoining the Iowa City MSA on the north, was estimated to have a population of 270,293 as of July 1, 2017.

The north-south CRANDIC Corridor, and the parallel Interstate Highway 380 Corridor, sit astride growing residential, commercial, and light industrial development – particularly in Iowa City, Coralville, and North Liberty (just north of Oakdale).

The Iowa City-Oakdale segment of the CRANDIC Corridor right-of-way intersects with:

- **Universities** – including the University of Iowa in Iowa City and the University of Iowa Research Park at Oakdale.
- **Employment** – including access to several major area employers.
- **Shopping Destinations** – including downtown Iowa City, the Iowa River Landing in Coralville, Coral Ridge Mall in Coralville, and other shopping centers in Coralville.
- **Recreation and Entertainment** – including University of Iowa sporting and cultural events, and access to parks and multi-use trails.
- **Hospitals** – including the University of Iowa Hospitals and Clinics, Iowa City Veterans Administration Hospital, and Mercy Hospital in the Iowa City Area.

[2] U.S. Census, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2017 – United States – Metropolitan Statistical Area; 2017 Population Estimates; U.S. Census website https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk); accessed September 20, 2018

The potential conversion of the CRANDIC Corridor right-of-way from an active freight railroad line to a multi-use trail is not likely to relieve vehicular congestion and improve traffic safety on nearby, parallel Interstate 380 between Iowa City, Oakdale, and North Liberty and on connecting Interstate 80 between Iowa City and Coralville. However, the potential rail-to-trail conversion will provide a transportation alternative to driving for students, workers, business and leisure travelers, retail shoppers, and the elderly, and provide a transportation alternative for current and potential future area commuters who drive to Iowa City and the University of Iowa facilities from North Liberty, Oakdale, and Coralville, and other outlying locations. Many of these commuters are presently transit dependent, as they drive to Iowa City and park their vehicles in parking lots and then continue their commute on local transit buses and other trails.

Public Transit – A rail trail in the CRANDIC Corridor right-of-way could potentially provide access to and enhance existing and future connecting public transit systems in the Iowa City-Oakdale Corridor. Potential connections could be made with Iowa City Transit buses at Iowa City; University of Iowa CAMBUS network at Iowa City; and Coralville Transit buses at Iowa City and Coralville[3]. Starting on October 1, 2018, 380 Express began providing express bus service from the Cedar Rapids Ground Transportation Center to the Iowa City Court Street Transportation Center, with intermediate stops at educational facilities and hospitals within the area[4].

Intercity Buses – Burlington Trailways serves the Court Street Transportation Center on Court Street in downtown Iowa City, which is located in close proximity to the CRANDIC Corridor right-of-way. Megabus serves the Coralville Transit Intermodal Facility on Quarry Road in Coralville, which is located in close proximity to the CRANDIC Corridor right-of-way.

Intercity Passenger Rail – Implementation of a twice-daily intercity passenger rail service between Chicago and Moline, Illinois (Quad Cities of Illinois and Iowa), and Iowa City is presently under study by Iowa DOT and the Illinois Department of Transportation (Illinois DOT)[5]. A potential intercity rail station for Iowa City could be located one block north of the CRANDIC Corridor right-of-way at Dubuque Street.

Trails and Connectors – The potential conversion of the CRANDIC Corridor right-of-way from an active freight railroad line to a trail would enhance connectivity to the area's recreational trail network for pedestrians and bicycles, including the Iowa River Trail, North Ridge Trail, North Liberty Trail, and other trails. Connectivity to neighborhood connectors would be likewise enhanced.

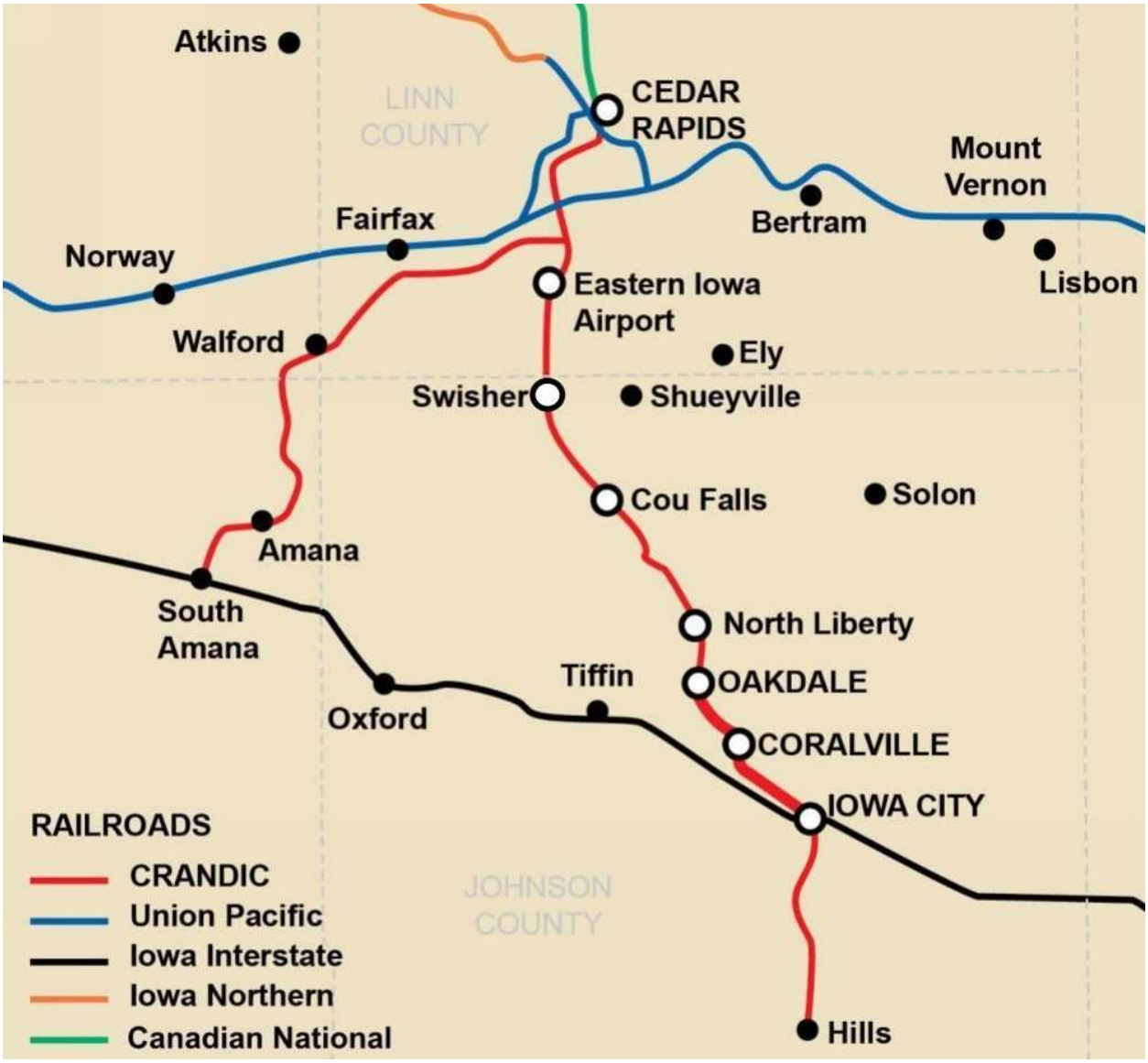
2.2 Corridor History

The Cedar Rapids & Iowa City Railway (CRANDIC) Corridor was constructed as a high-speed interurban rail line between its namesake cities by the Iowa Railway & Light Company during 1903 and 1904.[6] The railroad provided electrified passenger and freight rail service over the approximately 27 miles between Iowa City and Cedar Rapids via Coralville, Oakdale, North Liberty, and Swisher starting on August 13, 1904. In the map in Figure 2-1 below, the bold red line identifies the 6.1-mile

[3] Iowa Commuter Transportation Study; Iowa Department of Transportation, December 2014
[4] 380 Express, Flyer, https://www.380express.com/flyer.pdf. Accessed September 27, 2018.
[5] Also being studied by Iowa DOT, CRANDIC, and other stakeholders is the implementation of commuter rail service within the CRANDIC Corridor right-of-way between Iowa City, Coralville, Oakdale, and North Liberty, terminating at Dubuque Street in Iowa City, one block south of a potential Iowa City station for the intercity passenger rail service, which would provide a transfer point between the two services. The commuter rail Study Area coincides with the rail trail Study Area between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale.
[6] Cedar Rapids & Iowa City Railway (CRANDIC) website; www.crandic.com; July 27, 2016

segment of the CRANDIC Corridor right-of-way between Iowa City and Oakdale, and places it in the context of the local communities and the current rail transportation network in the region.

Figure 2-1: CRANDIC Corridor Right-of-Way between Iowa City and Oakdale in Regional Context



Source: HDR

The height of CRANDIC interurban operations began when the railroad upgraded its passenger car fleet in 1939, via the acquisition of second-hand high-speed electric interurban cars, and the initiation of faster and more efficient service[7]. By 1944, CRANDIC operated 17 interurbans each way daily, which provided almost hourly service between Cedar Rapids and Iowa City, from approximately 5 a.m. until midnight[8]. Figure 2-2 below shows a CRANDIC high-speed interurban car crossing the Iowa River at Iowa City.

[7] Cedar Rapids & Iowa City Railway (CRANDIC) website, www.crandic.com. Accessed July 27, 2016.
[8] Cedar Rapids & Iowa City Railway (CRANDIC) website, www.crandic.com. Accessed July 27, 2016.

Figure 2-2: High-Speed Interurban Car on the CRANDIC Corridor at Iowa City

Source: CRANDIC (William D. Middleton Photo)

Owing to the surging popularity of the automobile and the dominance of hard-surfaced roadways in the immediate post-World War II era, CRANDIC ridership declined markedly by the early 1950s and passenger rail service was discontinued altogether on May 30, 1953[9]. The full dieselization of the remaining freight railroad operations soon followed.

The CRANDIC's freight service and network grew considerably in the ensuing years, largely through the acquisition of two other railroad lines between Cedar Rapids and South Amana, Iowa, and between Iowa City and Hills, Iowa, in the 1980s. CRANDIC and its parent company Alliant Energy currently have offices in and manage the CRANDIC network from Cedar Rapids.

The CRANDIC's former Iowa City-Cedar Rapids interurban line (of which the Iowa City-Oakdale segment is a part) – today known as CRANDIC Division 2 – once served as a primary artery for considerable volumes of freight rail traffic originating in Cedar Rapids that was interchanged to the Iowa Interstate Railroad (IAIS) at Iowa City for furtherance to the Quad Cities of Iowa and Illinois; Chicago and Peoria, Illinois; and Council Bluffs, Iowa. The interchange of freight rail traffic between the carriers was shifted from Division 2 and Iowa City, west to South Amana, Iowa, and over another CRANDIC line in 2001.

Today, the CRANDIC's former interurban line is still used by CRANDIC to serve rail shippers in Iowa City and North Liberty and a considerable industrial base in Cedar Rapids. The CRANDIC Corridor right-of-way also has a non-transportation purpose, as it also hosts infrastructure for a fiber optic line and various utilities.

[9] Ibid.

More information about the history and context of the CRANDIC Corridor, corridor service area, and recent feasibility studies considering the potential conversion of some or all of the CRANDIC Corridor right-of-way for alternative transportation use can be found in the previous studies:

- *Iowa City-Cedar Rapids Passenger Rail Conceptual Feasibility Study* – developed by Iowa DOT, CRANDIC, and MPOJC in 2015[10]
- *Iowa City-North Liberty Passenger Rail Conceptual Feasibility Study* – developed by Iowa DOT, CRANDIC, and MPOJC in 2016[11]
- Interstate 380 Planning Study – *Impact of Alternative Modes on Interstate 380 Technical Memorandum* – developed by Iowa DOT in 2018[12]

2.3 Present General Corridor Characteristics

The segment of the CRANDIC Corridor right-of-way under consideration for potential conversion from a freight railroad line to a trail in this Study includes the segment of CRANDIC Division 2 between Gilbert Street in Central Iowa City (CRANDIC Milepost 25.8) and Oakdale Boulevard (CRANDIC Milepost 19.7) in Oakdale, for a total of 6.1 miles. This section contains a conceptual assessment of the present general characteristics and conditions of the CRANDIC Corridor right-of-way, as noted during desktop analysis of available Google Earth aerial imagery in October 2018 and a field observation conducted in September 2018 for the separate *Iowa City-North Liberty Commuter Rail Conceptual Feasibility Study* under development by Iowa DOT, CRANDIC, MPOJC, and other local stakeholders.

2.3.1 Railroad Timetable Stations

Railroad timetable stations on CRANDIC Division 2 and their railroad milepost location within the CRANDIC Corridor right-of-way are listed in Table 2-1 below. CRANDIC mileposts start at Milepost 0 at the north end of the rail line in Cedar Rapids and increase in number to Oakdale and Iowa City at the south end of the rail line.

Table 2-1: CRANDIC Division 2 Railroad Timetable Stations in the Iowa City-Oakdale CRANDIC Corridor

Railroad Timetable Station	CRANDIC Milepost
Iowa City	25.1
Coralville	22.9
Great Lakes	22.3
Oakdale	19.8

Source: CRANDIC

[10] *Iowa City-Cedar Rapids Passenger Rail Conceptual Feasibility Study Final Study;* Iowa DOT, https://www.iowadot.gov/iowarail/pdfs/Iowa-City-Cedar-Rapids-Passenger-Rail-Conceptual-Feasibility-Study.pdf

[11] *Iowa City-North Liberty Passenger Rail Conceptual Feasibility Study Final Study*; Iowa DOT, https://www.iowadot.gov/iowarail/pdfs/Iowa-City-North-Liberty-Passenger-Rail-Conceptual-Feasibility-Study.pdf

[12] *Impact of Alternative Modes on Interstate 380 Technical Memorandum*; Iowa DOT, https://iowadot.gov/i380planningstudy/pdfs/I380-TechMemos-Alternative-Modes.pdf

2.3.2 Track Configuration

The CRANDIC Corridor right-of-way between Iowa City and Oakdale currently hosts a single main track with sidings to accommodate meet-pass events between trains, switching of online freight customers, and to stage and store rail cars. Short sidings exist on the Corridor at Iowa City and Coralville.

CRANDIC does not maintain rail yards for classifying, staging, and meeting trains on the Corridor.

The profile of the Iowa City-Oakdale CRANDIC Corridor right-of-way is characteristic of the standard of construction employed to develop electrified interurban railroads in Iowa in the early 20th century. Main track grades up to 2.06 percent and curve sharpness (curvature) up to 14 degrees exist in the CRANDIC Corridor right-of-way. Segments of the CRANDIC Corridor right-of-way in Iowa City and Coralville closely parallel public roadways and waterways.
Figure 2-3 below demonstrates a typical interurban railroad profile on the CRANDIC Corridor right-of-way, with a 6.5 degree curve and 1 percent grade over the Iowa Avenue overpass in Iowa City (Milepost 24.7).

Figure 2-3: Curvature and Grade on the CRANDIC Corridor Right-of-Way at Iowa Avenue in Iowa City

Source: HDR

Figure 2-4 below demonstrates the proximity of the CRANDIC Corridor right-of-way to public roadways at First Avenue in Coralville (Milepost 23.1).

Figure 2-4: Proximity of the CRANDIC Corridor Right-of-Way to Public Roadways at First Avenue in Coralville

Source: HDR

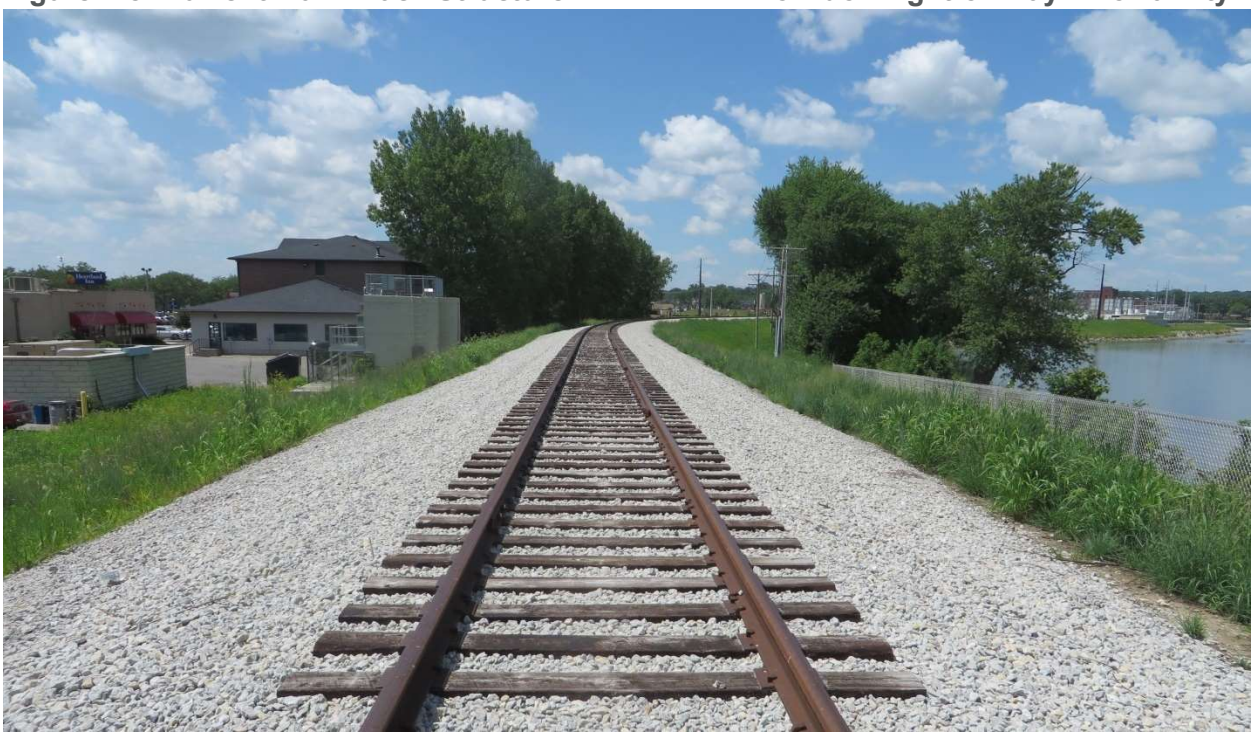
2.3.3 Existing Track Characteristics

The main track in the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City (Milepost 25.8) and Oakdale Boulevard in Oakdale (Milepost 19.7) consists primarily of 90 to 112 lb./yd. jointed rail. Rail in sidings is 100 lb./yd. rail or smaller. Timber ties and crushed rock ballast are used on main tracks and sidings[13].

A section of CRANDIC main track west of Rocky Shore Drive in Iowa City (Milepost 23.8) is shown in Figure 2-5 below.

[13] Cedar Rapids & Iowa City Railway (CRANDIC) Track Chart

Figure 2-5: Current Main Track Structure in CRANDIC Corridor Right-of-Way in Iowa City



Source: HDR

2.3.4 Bridges and Drainage Structures

There are 24 known bridges and drainage structures that have been identified in the CRANDIC Corridor right-of-way Study Area between Gilbert Street in Iowa City (Milepost 25.8) and Oakdale Boulevard in Oakdale (Milepost 19.7), including 6 bridges and approximately 17 culverts, as estimated by CRANDIC[14]. Bridge superstructure types vary and include through-plate girders (TPG), deck-plate girders (DPG), beam spans, and reinforced concrete spans. The majority of bridges have open decks. Track culverts vary in size and condition, but mostly act to convey local drainage through the railroad embankment. Track ditches are also present along the majority of the Corridor. A typical track ditch consists of a swale located near the ballast shoulder that matches the grade changes of the rails, effectively allowing ballast and subgrade drainage to occur. There are some areas along the Corridor where ditches are filled in and will require cleaning to improve local site drainage. There are no rail tunnels within the CRANDIC Corridor right-of-way; however, two reinforced concrete box culverts do act as pedestrian tunnels near the University of Iowa campus in Iowa City.

The most prominent bridge in the CRANDIC Corridor right-of-way is shown in Figure 2-6 below – the four-span deck plate girder Iowa River Bridge in Iowa City (Milepost 24.5).

[14] Cedar Rapids & Iowa City Railway (CRANDIC) Bridge and Structures Inventory, 2015-2016

Figure 2-6: CRANDIC Iowa River Bridge in Iowa City

Source: HDR

An inventory of existing bridges and known drainage structures in the CRANDIC Corridor right-of-way are identified and described by type in Appendix A.

2.3.5 At-Grade Roadway Crossings

At-grade roadway crossings with the existing rail line within the CRANDIC Corridor right-of-way include public roadways which are protected by active warning devices and private crossings which are protected by passive warning devices. A total of 21 at-grade crossings with roadways and trails have been identified in the CRANDIC Corridor right-of-way between, and including, Gilbert Street in Iowa City (Milepost 25.8) and Oakdale Boulevard in Oakdale (Milepost 19.7), as noted by CRANDIC[15].

Public crossings are typically protected by active warning devices, including crossbucks, flashing light signals, and bells. Pedestrian sidewalk protection is minimal in the Corridor.

Private crossings are protected by passive warning devices, including crossbucks only or crossbucks and stop signs.

Grade crossing surfaces are typically concrete pads or hot-mix asphalt (HMA) on public crossings and HMA, timber, or gravel on private crossings.

Figure 2-7 below shows the typical active warning devices and concrete grade crossing surface used on within the CRANDIC Corridor right-of-way. Pictured is the 12th Avenue grade crossing in Coralville (Milepost 20.7).

[15] Cedar Rapids & Iowa City Railway (CRANDIC) Grade Crossing Inventory, 2016

Figure 2-7: Typical CRANDIC Corridor Active Grade Crossing at 12th Avenue in Coralville

Source: HDR

Figure 2-8 below shows the typical passive warning devices and timber / HMA grade crossing surface used on the CRANDIC Corridor. Pictured is the Old Hospital Road grade crossing in Oakdale (Milepost 19.87).

Figure 2-8: Typical CRANDIC Corridor Passive Grade Crossing at Old Hospital Road in Oakdale

Source: HDR

An inventory of the existing location and type for each at-grade crossing between roadways and the rail line within the CRANDIC Corridor right-of-way is shown in Appendix B.

2.3.6 Railroad Wayside Signaling and Wayside Asset Protection Devices

The CRANDIC Corridor right-of-way is not equipped with any railroad wayside signal system or wayside asset protection devices.

2.3.7 Fiber and Utilities

A fiber optic line exists in the CRANDIC Corridor right-of-way for the length of the Corridor. Several utilities exist within, parallel to, or cross the Corridor, and likely includes pipelines for water, wastewater / sewerage, natural gas, and other products. The proximity of the fiber and electric utility infrastructure to the railroad is shown in the view of the CRANDIC Corridor right-of-way near Oakdale in Figure 2-9 below.

Figure 2-9: Fiber Optic and Utility Infrastructure in the CRANDIC Corridor Right-of-Way near Oakdale

Source: HDR

2.3.8 Right-of-Way

The CRANDIC right-of-way is a continuous linear corridor that generally varies from approximately 50 to 100 feet in width. Some sections in constrained urban areas are narrower, at approximately 40 feet. CRANDIC owns some additional adjacent property in Iowa City and other locations along the Corridor between Iowa City and Oakdale.

Right-of-way fencing through urban sections of the Corridor is currently incomplete. The CRANDIC Corridor right-of-way in urban areas is frequently crossed by pedestrians at locations other than roadway grade crossings.

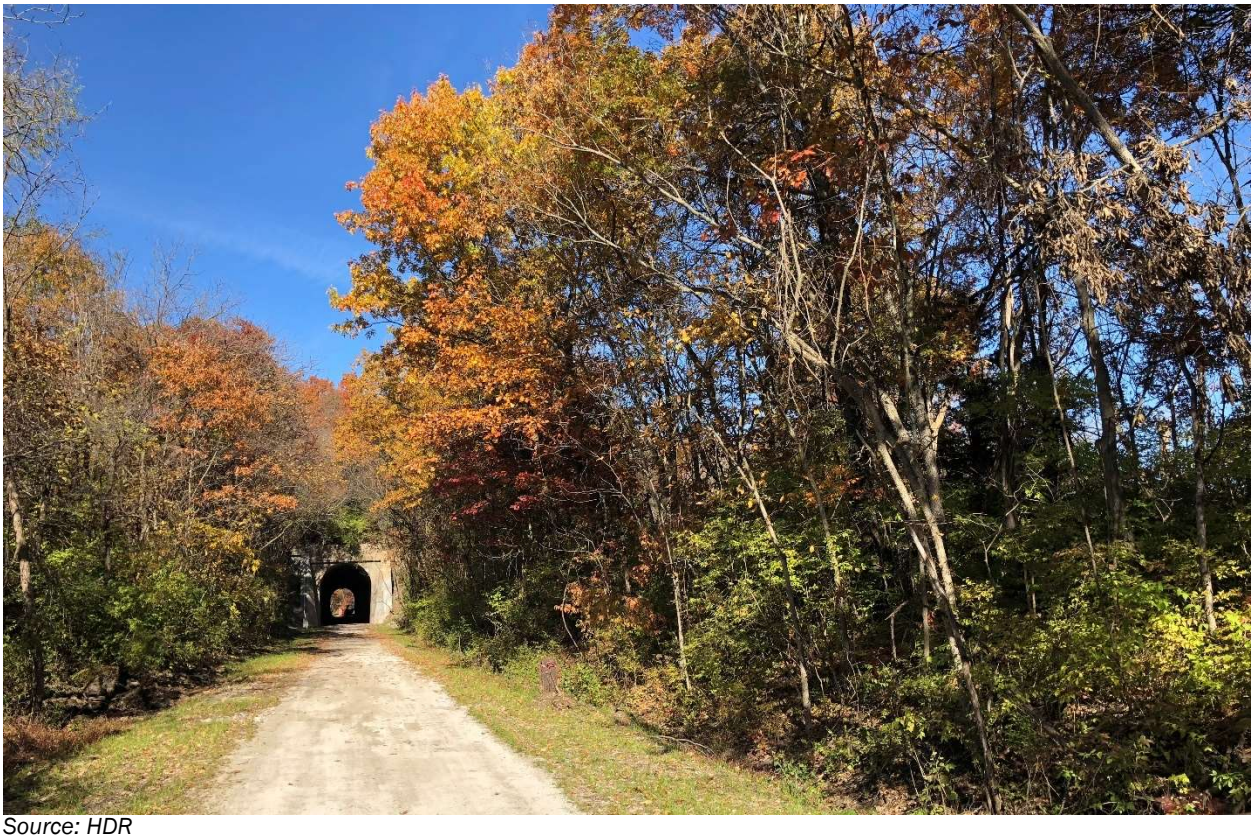
3 Federal Regulations and Processes and Related Challenges and Implications to Rail Corridor Preservation and Re-Use

This section describes and summarizes U.S. Surface Transportation Board (STB) regulations and processes, and related challenges and implications, regarding railroad abandonment, railbanking and interim use, federal preemption, permissible uses of railbanked corridors, and potential future reactivation of rail service on railbanked corridors. Scenarios involving rail-to-trail conversion on an existing railroad roadbed and rails-with-trails development in which tracks are retained and a trail is constructed parallel to the tracks within the right-of-way will be described. Figure 3-1 below shows the Rock Island Corridor Shared Use Path in Raytown, Missouri, which is a recent example of a rails-to-trails conversion of the roadbed within a railroad right-of-way. Figure 3-2 below shows an example of a rails-with-trails conversion in the Portland, Oregon, Area.

Publically available resources from the Rails-to-Trails Conservancy and various U.S. public agencies that have recently developed rail trails were consulted during development of this study. The discussion in this study will also identify and describe at a high-level potential general liability issues and related challenges for railroads with regard to a conversion of a corridor right-of-way to include a multi-use rail trail and the operation of a rail trail. ***The summary described in this study is not exhaustive and does not constitute legal advice for abandonment or preservation of or trail development within any segment of the CRANDIC Corridor right-of-way.***

Note that additional information related to federal regulations and processes can be found in *Rails-to-Trails Conversions: A Legal Review* and additional information related to potential liability and risks to trail development can be found in *Rail-Trails and Liability: A Primer on Trail-Related Liability Issues and Risk Management Techniques* issued by the Rails-to-Trails Conservancy in Appendix C.

Figure 3-1: Typical Rails-to-Trails Conversion Example – Rock Island Corridor Shared Use Path in Raytown, Missouri



Source: HDR

Figure 3-2: Typical Rails-with-Trails Conversion Example – Portland, Oregon, Area

Source: Portland Pedal Power; https://www.portlandpedalpower.com/blog/2014/02/changing-old-rails-into-new-trails/

3.1 Railroad Abandonment

Railroads can seek to abandon rail lines that are not profitable in terms of revenue potential or opportunity cost or over which there is no originating or terminating local traffic or through rail traffic. U.S. railroads providing common carrier freight service in interstate commerce are subject to federal regulation by the Surface Transportation Board (STB)[16], an agency of the U.S. Department of Transportation (USDOT), and must therefore pursue rail line abandonment approval through the STB.

In order to successfully abandon a rail line, a railroad must demonstrate that discontinuance of rail service over a given railroad line will not provide adverse impact to "public convenience and necessity[17]." Any parties that protest the abandonment of the rail line by the railroad must demonstrate how continued rail service is needed now and in the future[18]. The STB then renders a decision based on the merits identified by both parties. No railroad may discontinue rail service or abandon its real property interest in a railroad corridor until STB issues a certificate of public convenience and necessity authorizing "abandonment[19]."

Figure 3-3 below provides a concise presentation of the typical STB railroad abandonment process; note that changes to this process can occur at any time and the STB website should be consulted for the most current abandonment procedures.

[16] Note that the STB was created in 1991 and supplanted the role of the Interstate Commerce Commission (ICC) in the federal regulation of railroads.
[17] *Texas Rural Rail Transportation Districts: Informational Guidebook for Formation and Evaluation*; Texas DOT
[18] Ibid.
[19] *Rails-to-Trails Conversions: A Legal Review*; Andrea C. Ferster, Rails-to-Trails Conservancy

Figure 3-3: Steps in the STB Railroad Abandonment Process

Steps in the STB Railroad Abandonment Process

This is a tabular summary of the STB Publication, *OVERVIEW: Abandonments & Alternatives to Abandonments* available from the STB website: http://www.stb.dot.gov/pubdoc.htm. Refer to the STB for the most current procedures for abandonment.

Step	Action	Deadline / Date Taken	Description of Action Required
1	System Diagram Map or Narrative Description filed with STB	As desired	The abandoning railroad files a narrative description of its line with the Surface Transportation Board identifying the route or routes for which it plans to file for abandonment within the next three years. Such a filing cannot take place earlier than 60 days from the filing of the map/narrative description.
2	Notice of Intent to Abandon	Prior to filing for abandonment with STB	The railroad must publish this notice once a week for three consecutive weeks in general circulation newspapers in each county where the line is located, send it to each of its significant shippers on the line, send it to the state agency responsible for rail transportation planning, and post it at each agency station and terminal on the line. All these must be fulfilled 15-30 days before the abandonment application is filed at the STB.
3	Abandonment Application to STB (Official Filing)	No sooner than 60 days after filing map or narrative	The official abandonment application is filed with the STB. This application contains detailed information regarding the costs and revenues along the line to be abandoned and the overall financial condition of the carrier as a whole. This filing can occur at any time after the first 60 days during the three-year period following the railroad's filing of its map or narrative description putting the line in planned abandonment status.
4	Protests or Comments to the Proposed Abandonment and Requests for Public Use or Trail Requests	45 days after filing for written protests (10 days after filing for oral hearing requests)	Once the application is filed, protestants have only 45 days to submit written protests. An original and 10 copies of each comments or protest must be filed with the STB. ***Note: Oral hearing requests must be filed within 10 days of receipt of the application. The STB must act on those requests within 15 days of the filing of the application*** The same deadline applied to any request for future public use and any request for conversion of the right-of-way to trail usage.
5	Modified Procedure and Oral Hearings	Set by STB Decision must be issued within 110 days of filing of application	Modified procedure means that no oral hearing is held, and all evidence is filed in writing. This is more common than oral hearings because the reason for such as hearing is to cross-examine witnesses who have already filed verified statements in the proceeding. After receiving the protests and the carrier's reply to the protests, the STB must issue its decision within 110 days from the original filing of the abandonment application.
6	Appeals	No date specified, should be timely	Appeals of a Director's decision in certain stages of the proceeding may be appealed to the full STB. A party that is dissatisfied with the decision of the full Board may seek judicial review of the STB's decision by filing a petition for review in appropriate U.S. Court of Appeals.

Source: Texas Rural Rail Transportation Districts: Informational Guidebook for Formation and Evaluation (Texas DOT); Overview of Abandonments and Alternatives to Abandonments (Surface Transportation Board)

Exemptions from the normal STB railroad abandonment process – including class exemption of out of service rail lines which have gone at least two years without local rail traffic and individual exemptions – are identified and described in Figure 3-7 below. The Exempt approach is most often used in the railroad abandonment process in the U.S.

Figure 3-4: Exemptions from the Normal STB Railroad Abandonment Process

Exemptions From the Normal Abandonment Process Under 49 CFR 1152	
I. Class Exemption of Out of Service Lines (2 years without local traffic)	No notice of intent to abandon or system map/narrative notice to file for an exemption of the normal process in this case, however, 10 days before filing the exemption notice with the Board, the railroad must notify the state agency responsible for rail planning of its intention to do so. STB will publish the notice in the *Federal Register* within 20 days of the filing. Thirty days after that notice is printed, the railroad may abandon the line unless the STB stays the exemption. ***Stay of Exemption Requests*** 1. Stay request that raise transportation concerns must be filed within 10 days of the *Federal Register* notice. 2. Historic or environmental requests may be filed at any time, but sufficiently before the 30-day effective date for the STB to act on the petition. 3. Offers to subsidize continued operations must be filed within 30 days of the *Federal Register* notice. ***Request to Reject or Reconsider*** Petitions to reject a request for exemption or to reconsider the exemption must be filed within 20 days of the *Federal Register* notice. ***Revocation of an Exemption*** Once the exemption has taken effect, parties may ask the STB to revoke the exemption. ***The STB will disallow exemptions only in rate cases.***
II. Individual Exemptions	No notice of intent to abandon or system map/narrative notice is required. The only notice a railroad must give before filing an individual exemption request is an environmental notice to the state agency where the abandonment is proposed. The STB must publish notice of the proposed exemption within 20 days in the *Federal Register*. No further public notice is given even if the petition is denied. ***Opposition to Exemption Request*** 1. Persons opposing an exemption must file an opposition within 20 days after the *Federal Register* notice. 2. Offers to purchase or subsidize the line must be filed within 120 days after the filing of the petition for exemption or 10 days after the service of the STB's decision granting the exemption, whichever occurs sooner. ***Stay of Exemption Requests*** Petitions to stay the effective date of the exemption may be filed. The Courts have developed the following criteria for staying an administrative action: a. There is a strong likelihood that it will prevail on the merits; b. It will suffer irreparable harm in the absence of a stay; c. Other interested parties will not be substantially harmed by stay issuance; and d. The public interest supports granting of the stay. All four criteria must be met before the stay will be granted.

Source: Texas Rural Rail Transportation Districts: Informational Guidebook for Formation and Evaluation (Texas DOT); Overview of Abandonments and Alternatives to Abandonments (Surface Transportation Board)

It is important to note that before the STB can render a decision regarding abandonment of a rail line that an environmental review under the National Environmental Policy Act (NEPA) may be required to determine if the action could potentially impact the environment. Any public opposition to the

abandonment by the railroad may require that this process occur. Costs for this environmental review can be significant.

After consummation of an abandonment, as authorized by STB and acknowledged by the railroad to the STB, a railroad or a designated third party will conduct salvage operations to remove unnecessary railroad infrastructure from the corridor. Note that railroad bridges and structures and other infrastructure may be left intact in instances when such an agreement is made with a trail manager for a rails-to-trails conversion within a railbanked corridor, as these features may be repurposed for trail development (discussion about railbanking and interim use can be found in the next section).

Rail corridors may consist of different ownership types, and there are typically challenges to interpreting railroad title, which requires a thorough analysis of deeds and other documentation, coordination with multiple parties, and potentially litigation to confirm ownership. Railroads have typically assembled a linear corridor for development of a rail line through the following means[20]:

- "In fee" or "fee simple" to acquire an ownership interest in the land through purchase.
- Easements purchased from land owners (often adjacent land owners) to give the railroad a right to use the land.
- Land acquisition through federal grants.

Railroads have also acquired land for rail corridor development through adverse possession or condemnation[21].

After railroad salvage operations have been completed, the railroad will dispose of the underlying property in the corridor. Typically, the land will either revert back to adjacent landowners (in cases when a railroad was granted an easement when the line was constructed) or sold (in cases where the railroad owns property outright through 'in fee" or "fee simple" means). In cases when a corridor is railbanked and preserved (see in the next section for additional information about railbanking), ownership challenges are not an issue, as the underlying land (regardless of how it was acquired by the railroad) continues to exist as part of a single rail corridor under single ownership.

More information about the abandonment process can be found in the STB's *Overview of Abandonments and Alternatives to Abandonments* in Appendix D.

3.2 Alternatives to Railroad Abandonment that Preserve Rail Service

Alternatives from the STB railroad abandonment process that preserve the railroad corridor and rail service through other responsible parties (including rail shippers and other railroads) – including forced sales and subsidies under the Offer of Financial Assistance (OFA) procedures and voluntary sales and operations – are identified in Figure 3-7 below.

[20] https://www.railstotrails.org/build-trails/trail-building-toolbox/acquisition/railbanking/
[21] Ibid.

Figure 3-5: Steps in the STB Railroad Abandonment Process

Alternatives to Abandonment	
I. Forced Sales and Subsidies	***Two Cases*** **1. Lines Approved for Abandonment** Under the Offer of Financial Assistance (OFA) procedures, any financially responsible party seeking to continue service on a line approved for abandonment (or exempted) may compel the railroad to sell or conduct subsidized operations over the line. Parties may request data on subsidy and acquisition costs from the railroad as soon as the Notice of Intent to Abandon is filed. In "class exemption" cases, the OFA must be made within 10 days of the *Federal Register* notice. The party interested in filing an OFA must first file a written expression of their intent to file an offer within 10 days of the *Federal Register* notice. Once that is received, an automatic stay of 40 days is granted and the offer itself is due 30 days after the notice. In "individual exemption" or under normal exemption procedures, the OFA must be filed within 10 days of the service date of the STB's order granting the exemption or abandonment application or within 120 days after the application or petition for exemption is filed, whichever is sooner. If the partied agree on a price, the STB must approve and will dismiss the abandonment application. If the parties cannot agree, they can ask the STB to set terms and conditions within 30 days of the offer filing. The offeror then has 10 days to accept. If the offeror accepts, the railroad must by law, comply with the terms and conditions set by the STB. Other STB rules outline procedures for situations in which the railroad may have received more than one OFA and regarding the minimum time the contract must be honored before transferred or sold. **2. Purchase of Lines Potentially Subject to Abandonment** This procedure applied to lines which have been identified for future abandonment, but for which the railroad has not yet filed an application to abandon to the board. A "financially responsible person" can compel the STB to require the railroad to sell it the line. The price can be agreed to by the parties or set by the STB as described above. The STB has 15 days to reject the application or 30 days to publish it in the *Federal Register*. During that 30 day period, any other interested party can file a competing application for all or a portion of the same line. The owner may respond to the board within 60 days of its filing on the offer(s). Within 80 days of the original filing, the offerors may file replies. The STB must then publish its decision in the Federal Register. Within 10 days of the service date of the decision, the offerors must file with the STB and the railroad accepting or rejecting the STB's terms. If more than one offeror accepts, the railroad has 5 more days to select the one with which it wants to conduct business.
II. Voluntary Sales and Operations	Parties interested in preserving rail service may negotiate the voluntary purchase or the rail line while the abandonment process is still underway. To encourage this, the STB has made such purchases exempt from regulation. Procedures for such exemption requests are found in 49 USC 10901, 10902, and 11323.

Source: Texas Rural Rail Transportation Districts: Informational Guidebook for Formation and Evaluation (Texas DOT); Overview of Abandonments and Alternatives to Abandonments (Surface Transportation Board)

3.3 Rail Corridor Preservation via Railbanking and Interim Use

Historically, the U.S. Congress relaxed restrictions on rail line in abandonment in 1980 to allow for the nation's burdened railroads to eliminate unprofitable or duplicative rail lines, which led to the railroads selling off or allowing adjacent landowners to claim underlying right-of-way and property[22]. These transactions resulted in a fractured network of remaining rail corridors and severely limited

[22] Ibid.

any potential for future reactivation or reuse of former contiguous rail corridors. And the new restrictions allowed for large-scale rail line abandonments at a time when there was no official national policy or program for preserving railroad corridors for future use. Railroad abandonment was particularly pervasive in the U.S. Midwest in general and in Iowa in particular during the late 1970s and early 1980s[23].

Concerned about the volume of rail line abandonments nationwide and limited efforts at contiguous rail corridor preservation for future public use through public agencies or private parties in the early 1980s, the U.S. Congress passed the National Trails System Act, Section 8(d) in 1983 to establish "the national policy to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use[24]."

This law allowed for an alternative to railroad abandonment called railbanking, which is a process permitting a railroad to divest itself of responsibility for an unneeded rail line by transferring it to a qualified public agency or private organization for interim use as a trail until such time as the corridor accommodating the rail line is needed again for rail service[25]. This transfer of the unwanted rail line over which STB has authority by a railroad owner is transacted "by sale, donation, or lease" through a voluntary agreement with a public or private entity (often called an "interim trail manager") willing to assume financial responsibility for the management of the railroad right-of-way[26].

A railbanking request must be made to the STB (and the abandoning railroad) by a qualified public agency or private organization at the time that a railroad files with the STB to abandon a rail line, to announce intent for negotiation of a railbanking agreement between the purchasing party (interim trail manager) and the railroad[27]. Many railbanked corridors in Iowa and across the U.S. have been preserved as interim trails in this manner, and through issuance of a Notice of Interim Trail Use (NITU) or Certificate of Interim Trail Use (CITU) from the STB. Note that a qualified public agency or private organization can also pursue a complimentary Public Use Condition (PUC) from the STB during the process, in which STB will establish a restriction on abandonment that prevents a railroad from selling or disposing railroad structures and property in the corridor for 180 days after the abandonment is authorized by STB – in order to negotiate with the railroad for acquisition of the corridor for public use through a voluntary agreement[28].

These alternative uses for railbanked railroad rights-of-way and general conditions are identified in Figure 3-6 below.

[23] *Iowa Railroad Abandonment Log*, Iowa DOT
[24] 16 U.S. Code 1247(d); *Rails-to-Trails Conversions: A Legal Review*; Andrea C. Ferster, Rails-to-Trails Conservancy
[25] *Rails-to-Trails Conversions: A Legal Review*; Andrea C. Ferster, Rails-to-Trails Conservancy
[26] Ibid.
[27] https://www.railstotrails.org/resourcehandler.ashx?id=4614
[28] Ibid.

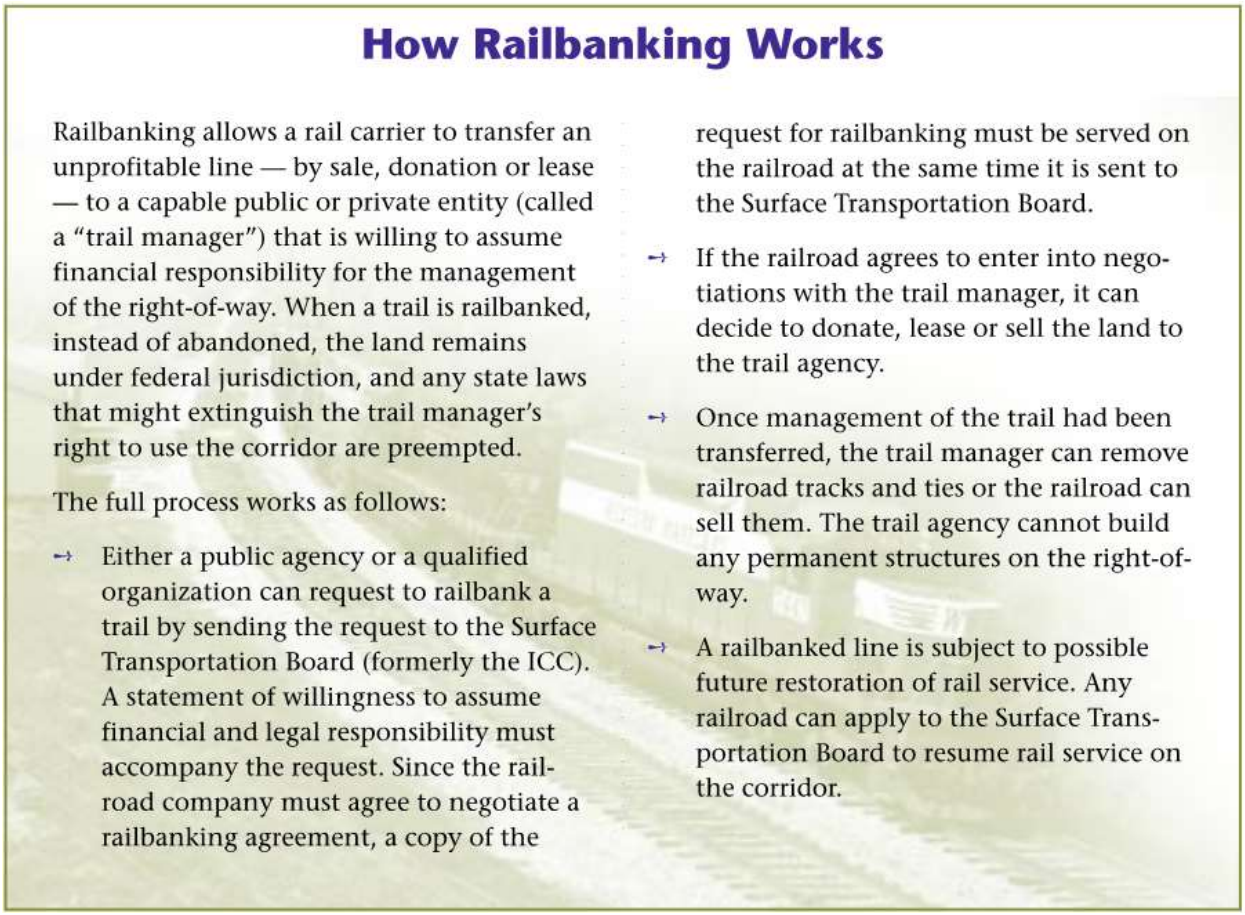
Figure 3-6: Alternative Uses for Railroad Rights-of-Way – Public and Trail Use Conditions

Alternative Uses for Rail Rights-of-Way – Public and Trail Use Conditions	
A. Public Use Conditions	Under the terms of the ICC Termination Act of 1995, when the STB approves or exempts an abandonment it must determine if the rail line is suitable for alternative public use, such as highways, other forms or mass transit, conservation, energy production or transmission, or recreation. If it is, the Board may prohibit the railroad from selling or otherwise disposing of the rail corridor for up to 180 days after the effective date of the decision or notice authorizing abandonment. During that time, interested parties may negotiate with the railroad to acquire the property for public use. The railroad's consent is not necessary for the imposition of this negotiating period. If not agreement is reached within the 180 day period, the STB must allow the railroad to fully abandon the line and dispose of its property. ***The STB will only impose a public use condition when it has received a request to do so. Requests must be filed within 45 days after the application is filed. Requirements of such requests are outlined in 49 CFR 1152.28.***
B. Trail Use Conditions	Requests for trail use must be filed within 45 days after the application is filed. Unlike the public use condition, the trail use condition will only be imposed if the railroad consents. The railroad has 15 days to reach a decision whether to and with whom it will negotiate. If the railroad agrees, a 180 day period for negotiation is set during which the rail carrier is prohibited from otherwise disposing of the corridor. In some cases, an extension has been granted to this period when both parties indicate they are near an agreement. ***In class exemption cases, a trail use request must be filed within 10 days of the appearance of the notice in the *Federal Register*. Note that this is 10 days earlier than a public use condition request is due.*** A request for trail use also requires the payment of a filing fee, while a request for public use does not.

Source: Texas Rural Rail Transportation Districts: Informational Guidebook for Formation and Evaluation (Texas DOT); Overview of Abandonments and Alternatives to Abandonments (Surface Transportation Board)

The railbanking process is administered by the STB, which has regulations (the Railbanking Act) governing the program and issues railbanking orders preserving rail corridors. The general process for railbanking a corridor for interim trail use includes the steps outlined in Figure 3-7 below. Additional discussion about permissible uses of railbanked corridors are identified later in this section.

Figure 3-7: Typical Railbanking Process



How Railbanking Works

Railbanking allows a rail carrier to transfer an unprofitable line — by sale, donation or lease — to a capable public or private entity (called a "trail manager") that is willing to assume financial responsibility for the management of the right-of-way. When a trail is railbanked, instead of abandoned, the land remains under federal jurisdiction, and any state laws that might extinguish the trail manager's right to use the corridor are preempted.

The full process works as follows:

- Either a public agency or a qualified organization can request to railbank a trail by sending the request to the Surface Transportation Board (formerly the ICC). A statement of willingness to assume financial and legal responsibility must accompany the request. Since the railroad company must agree to negotiate a railbanking agreement, a copy of the request for railbanking must be served on the railroad at the same time it is sent to the Surface Transportation Board.
- If the railroad agrees to enter into negotiations with the trail manager, it can decide to donate, lease or sell the land to the trail agency.
- Once management of the trail had been transferred, the trail manager can remove railroad tracks and ties or the railroad can sell them. The trail agency cannot build any permanent structures on the right-of-way.
- A railbanked line is subject to possible future restoration of rail service. Any railroad can apply to the Surface Transportation Board to resume rail service on the corridor.

Source: Railbanking and Rail Trails: A Legacy for the Future; Rails-to-Trails Conservancy

Once a line has been designated as railbanked by STB, the railroad or a designated third party can remove select railroad infrastructure (e.g., tracks, wayside signal infrastructure) and the development of a multi-use rail trail on the former railroad roadbed within the right-of-way can commence. Note that railroad bridges and structures and other infrastructure are to be left intact in instances when such an agreement is made with a trail manager for a rails-to-trails conversion within a railbanked corridor, as these features are often repurposed for trail development or repurposed if the line is ever reactivated for rail service. Note that railbanking status does not allow for the construction of permanent structures in the right-of-way.

It should also be noted that if an agreement cannot be reached between a qualified public agency or private organization and the railroad for transfer of the rail corridor, the abandonment approved by STB becomes final after satisfaction of any other conditions (including environmental, historic preservation, etc.) that may have been imposed on the railroad by the STB[29].

3.4 Railbanked Corridors and Permissible Uses

Railbanked rail corridors (including several located in Iowa) have been commonly redeveloped into multi-use trails for recreational purposes; however, "the STB has consistently taken the view that a

[29] *Rails-to-Trails Conversions: A Legal Review*; Andrea C. Ferster, Rails-to-Trails Conservancy

trail sponsor is not limited to trail use and may make other uses of a railbanked corridor provided that use is consistent with trail use[30]."

According to *Rails-to-Trails Conversions: A Legal Review* issued by the Rails-to-Trails Conservancy, the STB and the courts have in the past acknowledged the following additional uses for railbanked corridors in the U.S. that are considered consistent with trail use[31]:

- "Dual uses" of trails that include use of the railbanked right-of-way as a trail and a utility corridor[32].
- Transit and highway purposes in addition to (but not in place of) trail use[33].
- "Rights to use the corridor's surface, subsurface, and aerial space for utility or transit purposes" as part of the broader authority of an interim trail manager[34].

3.5 Federal Preemption

Federal preemption of any conflicting state laws with regard to the development and management of rail trails within railbanked rail corridors is a key component of the Railbanking Act[35]. "When a trail is railbanked, the statute expressly provides the interim trail use of railbanked corridors 'shall not be treated, for purposes of any law or rule of law, as an abandonment of the use of such rights-of-way for railroad purposes[36].'"

According to *Rails-to-Trails Conversions: A Legal Review* issued by the Rails-to-Trails Conservancy, federal preemption generally serves to[37]:

- Reject efforts by trail opponents to contest railbanking orders through challenges to a trail manager's ownership or use of a railbanked corridor[38].
- Bar efforts by local governments to use condemnation to acquire any portion of a rail corridor that has not been abandoned for any other use (including for trail development)[39].
- Not enforce state or local laws that interfere with a trail manager's ownership or right to use the railbanked corridor[40].
- Provide the basis for lawsuits brought by trail managers to eject or enjoin adjacent landowners from encroaching on or interfering with interim trail use of a railbanked corridor[41].
- Provide the basis for barring lawsuits seeking to prevent trail use based on allegations that railbanking works as a 'taking.' Note that legal challenges to ownership or use of railbanked trails are preempted by the Railbanking Act, yet landowners may seek remedy by filing a "takings" claim against the United States under the U.S. Constitution (Fifth Amendment),

[30] Ibid.
[31] Ibid.
[32] Ibid.
[33] Ibid.
[34] Ibid.
[35] Ibid.
[36] Ibid.
[37] Ibid.
[38] Ibid.
[39] Ibid.
[40] Ibid.
[41] Ibid.

which requires “just compensation” to be paid by the government if it “takes private property for a public use[42].”

The Railbanking Act “does not preempt the authority of state or local governments to enact reasonable regulations concerning the management of railbanked rail-trails[43].” These reasonable regulations – which have been interpreted by various courts differently – are often related to trail maintenance, compliance of railbanked rail trails with local zoning ordinances, and so on[44].

3.6 Potential Future Reactivation of Rail Service on Railbanked Corridors

The Railbanking Act allows railbanked rail corridors to remain under federal jurisdiction and to be reactivated for freight rail service without the full application process to construct a new railroad line[45]. In these instances, the STB will vacate a railbanking order to allow a railroad to reactivate service for cases in which public convenience and necessity is demonstrated. The abandoning railroad retains the right to reactivate rail service as part of its “residual common carrier obligation” and can also transfer its rights to reactivate service on a rail line to another carrier, if desired[46]. A third-party operator may also petition STB to vacate a railbanking order to allow for the reactivation of rail service[47]. The trail manager also has the right to petition the STB to acquire the abandoning railroad’s residual common carrier obligation[48].

STB approval for vacation of a railbanking order and reactivation of rail service on a previously railbanked corridor is a rare occurrence. Such activity has been generally limited to parties attempting to reopen short rail corridor segments to provide freight rail service to new shippers. In one occurrence, R.J. Corman Railroad Company / Pennsylvania Lines (RJCP) sought to build an approximately 20-mile rail line between Wallaceton and Gorton, Pennsylvania (including the reactivation of a 9.3-mile segment of a railbanked corridor) to serve a number of rail customers, including a new landfill, quarry, and industrial park; more about the reactivation of rail service for this effort can be found at https://www.stb.gov/FD35116Files/03_Executive_Summary.pdf[49].

Before STB can render a decision, an environmental review under the National Environmental Policy Act (NEPA) must be conducted to determine if reconstruction of the rail line could potentially impact the environment. Note that some parties seeking to reactivate rail service on railbanked corridors have faced potential opposition by adjacent landowners or find that a general lack of public support has existed.

[42] Ibid.
[43] Ibid.
[44] Ibid.
[45] Ibid.
[46] Ibid.
[47] Ibid.
[48] https://gelr.org/2016/05/02/primer-on-rails-to-trails-conversions-in-the-eastern-u-s/
[49] https://www.stb.gov/FD35116Files/03_Executive_Summary.pdf

3.7 Potential General Liability Issues and Challenges for a Rails to Trails Conversion

This section generally identifies typical potential liability issues that railroads (and designated trail manager, which could be a public agency) have typically considered when converting a railroad line from rail use to trail use and related operations of a rail trail.

Liability associated with public use of a railbanked corridor is often a primary consideration in the development of a rail trail. Trail managers should consider any liability related to the injury of a trail user on the trail and any liability related to a trail user that has entered upon adjacent private property (potentially through trespassing) and sustained injuries. In rails-with-trails conversions, liability associated with trail use has been a concern of the trail manager and the railroad owning and actively operating the corridor. While rails-with-trails have demonstrated an ability to operate safely and cooperatively with several railroads and public agencies, some U.S. trail managers have reported that these entities have become more apprehensive about trail implementation within active railroad right-of-way[50]. Trail managers developing a rails-with-trails application may be required to indemnify the railroad or owner the corridor, thus releasing them from liability[51]. Regarding general liability concepts, a landowner's liability is dependent upon the status of the injured individual – customer or client ("invitee"), invited guest ("licensee"), or trespasser – each of which is owed a different duty of care[52]. Federal and state laws (including Recreational Use Statutes, which are enacted in some format in all states) are in place to protect all parties from unwarranted lawsuits[53]. However, trail mangers (and railroads and public agencies) should consider the necessary level of insurance coverage required to mitigate these and other liability risks regarding trail use.

Development of rails-to-trails and rails-with-trails in the U.S. during the last several decades has demonstrated that trail-related liability is primarily a management issue. Risk management and trail design strategies that are considered best practices for minimizing liabilities and trail-user injuries on a rails-to-trails or rails-with-trails conversion include[54]:

- Design the trail for safety by avoiding potential hazards to trail users and in consideration of applicable laws and recognized trail development guidelines.
- Installation of prominent signage to warn users of potentially dangerous areas, to inform users of hours of operation and other trail rules and regulations; and to provide appropriate emergency contact information.
- Development of an operations and maintenance plan that includes regular trail inspections and correction of any potentially unsafe conditions.
- Development of procedures for handling medical emergencies and coordination with emergency response agencies.

[50] *America's Rails-with-Trails: A Resource for Planners, Agencies, and Advocates on Trails Along Active Railroad Corridors*; Rails-to-Trails Conservancy
[51] Ibid.
[52] Ibid.
[53] *Rail-Trails and Liability: A Primer on Trail-Related Liability Issues and Risk Management Techniques*; Rails-to-Trails Conservancy
[54] Ibid.

Note that rails-with-trails projects are supported by voluntary agreements between a railroad (or a public agency) and the designated trail manager[55]. Risk management and trail design strategies for minimizing liabilities and trail-user injuries on a rails-with-trails conversion should therefore consider safety, engineering, operations, and maintenance requirements and standards of the operating railroad or public agency.

Additional information regarding potential liabilities and mitigation strategies can be found in the Rails-to-Trails Conservancy's *Rail-Trails and Liability: A Primer on Trail-Related Liability Issues and Risk Management Techniques* presented in Appendix C.

Any rails-to-trails conversion should consider environmental liability. Railbanking of a railroad corridor itself does not trigger the National Environmental Policy Act (NEPA), as NEPA environmental review and compliance with the National Historical Preservation Act is conducted during a rail line abandonment proceeding that precedes pursuit of a railbanking order from STB[56].

Potential contamination in the railbanked corridor from legacy railroad use can potentially present environmental issues. If excess material is expected to be wasted and hauled away from the railroad property during clearing and grubbing or site grading to accommodate a rail trail conversion, such as railroad ballast or the underlying roadbed material, the material will need to be tested for contamination and disposed of according to local, state, and federal requirements and regulations[57].

Typically, this contamination can potentially come from[58]:

- Preservatives used in the treatment of railroad ties
- Coal ash and cinders that may have been used in the past as ballast for the roadbed, which may potentially contain lead and arsenic
- Spilled or leaked liquids, such as oil, gasoline, cleaning solvents, and other hazardous materials
- Herbicides from weed spraying operations
- Fossil fuel combustion products (including coal ash for railroad locomotives and polynuclear aromatic hydrocarbons [PAHs] from locomotive diesel exhaust)
- Asbestos
- Other heavy metals

Trail managers should protect themselves from any liability associated with legacy railroad use by becoming familiar with applicable federal and state regulations concerning liability and by conducting an appropriate environmental review of the railroad corridor right-of-way before acquiring and negotiating apportionment of any environmental cleanup costs or potential liability in a railbanking agreement with the railroad[59]. Trail mangers can also limit their liability by following best construction

[55] *America's Rails-with-Trails: A Resource for Planners, Agencies, and Advocates on Trails Along Active Railroad Corridors*; Rails-to-Trails Conservancy
[56] https://gelr.org/2016/05/02/primer-on-rails-to-trails-conversions-in-the-eastern-u-s/
[57] *Environmental Contaminants*, https://www.railstotrails.org/build-trails/trail-building-toolbox/acquisition/environmental-contaminants/; Rails-to-Trails Conservancy
[58] Ibid.
[59] *Understanding Environmental Contaminants: Lessons Learned and Guidance to Keep Your Rail-Trail Project on Track;* Rails-to-Trails Conservancy

practices with regard to prevention of soil runoff, whether or not contaminated materials are found in the rail corridor or not[60].

Additional information regarding potential environmental issues and related remediation strategies can be found in the Rails-to-Trails Conservancy's *Understanding Environmental Contaminants: Lessons Learned and Guidance to Keep Your Rail-Trail Project on Track* in Appendix E.

Trail managers should consider that most linear railroad corridors are multi-use corridors that include accommodation for utilities (e.g., electrical, water and sewer, natural gas and other pipelines, fiber optics, and various telecommunications infrastructure) within the right-of-way. These utilities were typically granted an easement or license by the railroad owning the rail corridor and provide for the ability of public and private entities to locate utility infrastructure (e.g., power lines, pipelines, fiber lines, and ducts) within or across railroad-owned property[61]. Any development of a rail trail within a railbanked corridor will need to take into consideration these easements and licenses previously granted by the railroad, and the development of the trail in the context of an ongoing multi-use corridor that continues to provide access to existing utility infrastructure and any potential for the development of additional utility infrastructure within the corridor in the future. Utility easements can be transferred to a trail group. Trail managers should also consider the process and cost implications for any relocation of utility infrastructure that could be required to accommodate a rails-to-trails or a rails-with-trails implementation within the railbanked multi-use corridor.

Rail corridors may consist of different ownership types, and there are typically challenges to interpreting railroad title, which requires a thorough analysis of deeds and other documentation, coordination with multiple parties, and potential litigation to confirm ownership. Disposition of a rail corridor through railbanking allows a railroad to transfer all forms of ownership, including easements, to a trail group[62]. Other benefits to the railroad include the ability to sell the entire corridor, rather than in pieces or parcels, which reduces real estate transaction costs and eliminates time-consuming inquiries and litigation to confirm land ownership[63]. Furthermore, the railroad is relieved from the time and expense of removing unwanted railroad bridges and structures from the railbanked corridor[64].

Rails-with-trails projects are typically supported by voluntary agreements between a railroad (or a public agency) and the designated trail manager[65]. These agreements often include an easement or license agreement with the railroad for development of a trail within the active railroad right-of-way, although trail corridor has also been purchased in fee or had fee ownership[66]. Federal preemption principles may bar government entities (public agencies) from using condemnation powers to acquire a segment of an active rail line regulated by the STB, over objections by the railroad, if trail development and use could interfere with railroad safety and operations[67]. Any attempt to rails-with-trails development in this manner, and without support from the railroad owning the rail corridor,

[60] https://gelr.org/2016/05/02/primer-on-rails-to-trails-conversions-in-the-eastern-u-s/
[61] *Pipes, Wires, and Bicycles: Rails-to-Trails, Utility Licenses, and the Shifting Scope of Railroad Easements from the Nineteenth to the Twenty-First Centuries*; Danaya C. Wright; University of Florida-Levin College of Law; https://scholarship.law.ufl.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1127&context=facultypub
[62] https://www.railstotrails.org/build-trails/trail-building-toolbox/acquisition/railbanking/
[63] Ibid.
[64] Ibid.
[65] *America's Rails-with-Trails: A Resource for Planners, Agencies, and Advocates on Trails Along Active Railroad Corridors*; Rails-to-Trails Conservancy
[66] Ibid.
[67] Ibid.

would require costly and time-consuming litigation and would likely be fraught with design and construction challenges.

Trail managers should be aware of the risk that a railbanked rail corridor can be reactivated for freight and/or passenger rail service at any time, regardless of any investment made to construct, operate, and maintain the trail. Reactivation of a railbanked corridor for rail service would displace any trail built upon the earlier railroad roadbed during a previous rails-to-trails conversion. In order to protect investments in the trail, a trail manager would need to consider any potential for contractual compensation rights, if the railbanked rail line is reactivated at any point in the future. There may also be the potential for development of a new trail alignment to replace the original trail alignment through the development of a rails-with-trails application, although this would be subject to coordination with the railroad and any other users of the corridors (e.g., utilities) and additional investment in trail construction.

Trail managers should also consider that challenges may exist in terms of potential opposition by adjacent landowners or that a lack of public support may exist.

Additional information can be found in *Rail-Trails and Liability: A Primer on Trail-Related Liability Issues and Risk Management Techniques* issued by the Rails-to-Trails Conservancy in Appendix C.

4 Typical Rail Trail Characteristics

This section summarizes the typical characteristics of rail trails in Iowa and the U.S.

4.1 Trail Characteristics

According to the Rails-To-Trails Conservancy (RTC) organization, “rail-trails are multi-purpose public paths created from former railroad corridors. They are most often flat or follow a gentle grade as they traverse urban, suburban, and rural communities in America[68].” Owing to this fact, multi-use trails can accommodate a variety of users, including pedestrians, bicyclists, inline skaters, and others.

Often the type of trail user and use of the trail dictate overall trail design. This usually occurs during the trail-planning phase of the project[69]. Once trail use and type of user are identified, the trail surface type and width can be selected. If more than trail user type is expected to occupy the trail, a multi-use trail design is used for design.

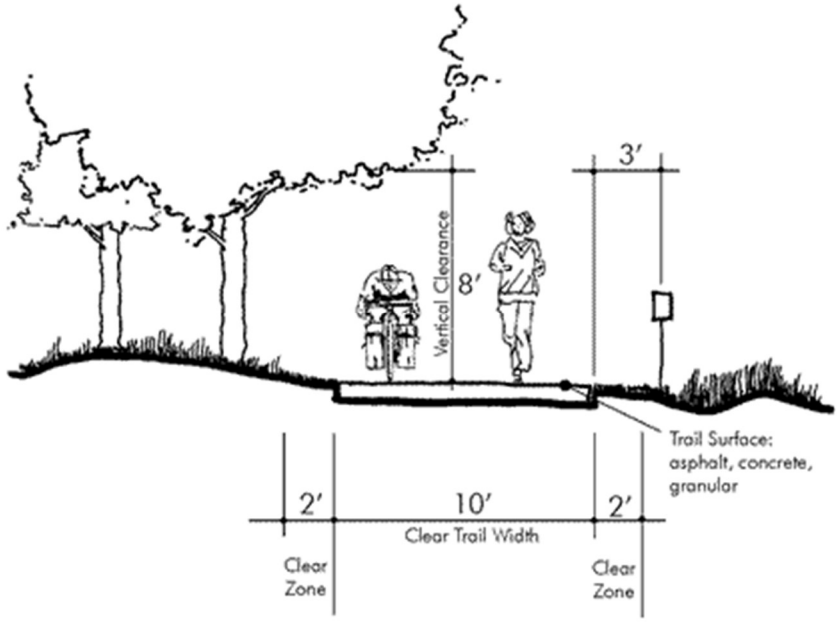
4.1.1 Trail Width and Setback

The American Association of State Highway and Transportation Officials (AASHTO) design guidelines are often used for the design of trails. It recommends a minimum width of 10 feet for multi-use trails; however, where heavy use is anticipated, a 12 to 14-foot width is recommended[70]. Single shoulders should be at least 5 feet wide, while dual shoulders (one on each side) should be between 2 and 2.5 feet wide[71].

[68] *Trail-Building Basics*, https://www.railstotrails.org/build-trails/trail-building-toolbox/basics/trail-building-basics/; Rails-to-Trails Conservancy
[69] Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/designing-for-user-type/.
[70] Ibid.
[71] Ibid.

An example of a typical section for a rails-to-trails conversion with a 10-foot trail width is shown in Figure 4-1 below. An example of a typical section for a rails-with-trails conversion with a 10-foot trail width and separation (setback) of the trail from the nearest railroad track is shown in Figure 4-2 below. There are not currently national standards or guidelines for the design and development of rails-with-trails, and planning for such trail development by local agencies is often supported by standards for shared use paths, railroad facilities, and highway-rail grade crossings and other railroad operations considerations[72]. Note that a rails-with-trails conversion typically requires a setback (the lateral distance between the centerline of the nearest track and the closest edge of the trail or the separation feature [e.g., barrier, wall, or fence]) as required by a railroad and is usually minimally 25 to 30 feet[73]. Some rails-with-trails conversions have been developed with a setback of slightly less than 25 feet, but these applications are often less desirable to railroads for reasons owing to potential safety hazards and other considerations.

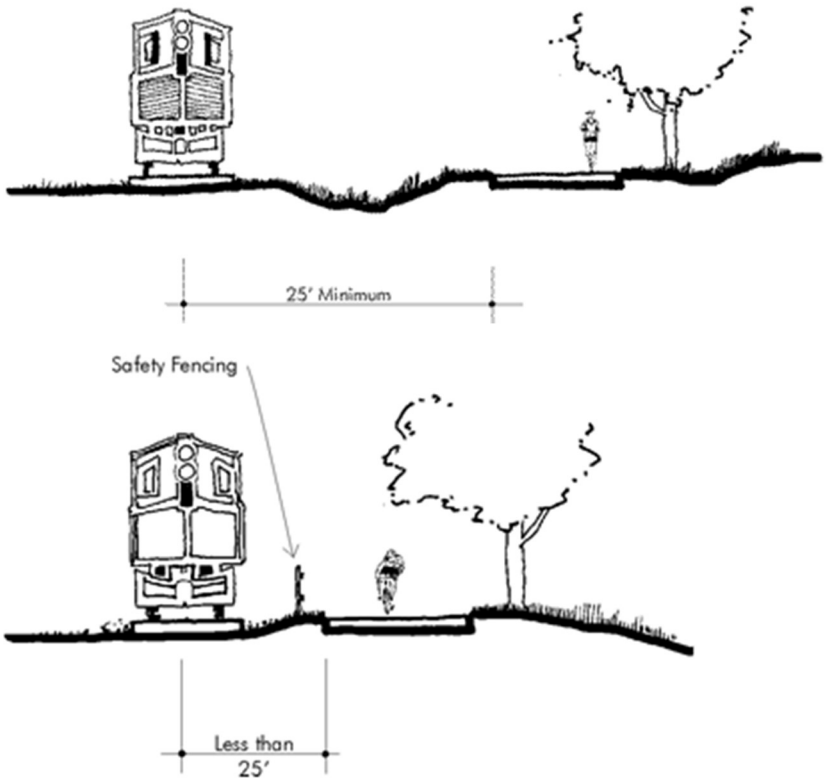
Figure 4-1: Rails-to-Trails Conversion Typical Section Example



Source: Iowa Trails 2000

[72] *America's Rails-with-Trails: A Resource for Planners, Agencies, and Advocates on Trails Along Active Railroad Corridors*; Rails-to-Trails Conservancy
[73] Ibid.

Figure 4-2: Rails-with-Trails Conversion Typical Section Example
Source: *Iowa Trails 2000*



4.1.2 Trail Surface

According to RTC, the following should be considered when selecting a trail surface[74]:

- User acceptance and satisfaction
- Accessibility
- Cost to purchase and install materials
- Cost of maintaining the surface
- Life expectancy
- Availability of material

Each type of trail surface has advantages and disadvantages. Hard trail surfaces, such as asphalt and concrete can accommodate more trail user types, and also require less maintenance. Hard trail surfaces tend to have a longer lifespan than soft trail surfaces. Soft trail surfaces, such as wood chips, compacted earth, and granular material (e.g., crushed stone), are less costly than hard trail surfaces, but are more susceptible to the effects of weather and heavy use than hard trail surfaces[75].

[74] *Surfaces*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/surfaces/.
[75] Ibid.

Often trail surfaces can be upgraded incrementally (from a soft to a hard surface) once additional funding in secured, or when the expected trail use or user types change.

4.1.3 Accessibility

According to RTC, trails are considered transportation and recreation facilities, therefore accessibility is mandated by the federal Americans with Disabilities Act of 1990 (ADA)[76]. The ADA regulation highlights the requirements and standards for compliance with the law. This law helps to ensure that all user groups can access public trails, including the young, elderly, and people with short- and long-term disabilities.

RTC also states that, "new trails and those undergoing rehabilitation must be in compliance with the 2010 ADA Standards for Accessible Design, which determine width, surface, slope and other factors. Federal and federally funded facilities must also be in conformance with the Uniform Federal Accessibility Standards[77]." Other resources are also available to trail builders to help ensure the design and construction of ADA-compliant trails and can be found the Federal Highway Administration website: https://www.fhwa.dot.gov/environment/recreational_trails/guidance/manuals.cfm.

4.1.4 Roadway Crossings

Roadway crossings are a potential hazard to trail users due to the high potential for conflicts between trail users and motor vehicles. Safety should be a critical element of roadway crossing design, as well as when the trail is developed in proximity to adjacent roadway corridors.

Physical separation (through a barrier or grade separation) can potentially be a solution to reducing the exposure of potential conflicts between trail users and motor vehicle operators; however, physical separation is not often the most practical or feasible solution at or near a roadway. These facilities can be costly to design, permit, and construct, or there may be spatial constraints present at the site that prevents the implementation of the proposed physical separation solution. Owing to these facts, at-grade roadway crossings are often the practical and cost-effective solution for trails interesting public and private roadways.

New at-grade roadway crossings are typically ADA-compliant, especially when public funding is being used for the trail improvement.

The American Association of State Highway and Transportation Officials (AASHTO) provides guidance on the type of pavement markings, signs, and other traffic control devices to be used with respect to trail user type and facility[78]. These traffic elements alert motor drivers of the potential for pedestrians and other trail users. In addition, traffic elements installed on the trail can alert pedestrians and trail users to the potential for on-coming traffic. In the case of a rails-with-trails conversion, it may potentially be necessary to make modifications to existing grade crossing protection equipment at these locations to accommodate the crossing of a new trail alignment and the local roadway network parallel to the existing railroad crossing and to accommodate any interface with roadways signals and signage, per federal, state, and local requirements.

[76] *Accessibility*, Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/accessibility/.
[77] Ibid.
[78] American Association of State Highway and Transportation Officials. "Guide for the Development of Bicycle Facilities" and "Guide for the Planning, Design, and Operation of Pedestrian Facilities".

A high number of at-grade roadway crossings can adversely affect trail usage. According to the RTC, "it is important that trail managers anticipate this issue and determine where trail crossings are appropriate and what mechanisms can be used to limit an excessive number[79]." City planning and trail planning must anticipate these future needs when planning a trail.

4.1.5 Structures

All trails cross waterways or roadways. Often a bridge, tunnel, or other drainage structure (like a culvert) can accommodate these needs. There are often many considerations to keep in mind when developing a new or reusing an existing structure.

Railroad or Pre-Existing Structure

If reusing a railroad bridge or other pre-existing structure, the structure will need to be evaluated for reuse by a structural engineer. The live load for the bridge during trail use will be significantly lower than during railroad use; however, other items must be reviewed to ensure the structure is in acceptable condition for its intended use. Also, a railroad bridge will more than likely need to be retrofitted to accommodate trail use in a rails-to-trails conversion (e.g., decking, handrail, utilities, etc.). A rails-with-trails conversion may require modification to an existing bridge or culvert to accommodate the new trail alignment parallel to the railroad roadbed, or the construction of a new bridge or culvert parallel to the existing structure supporting the railroad alignment. A structural engineer will be able to detail these modifications, and estimate the cost for the improvements.

The RTC also notes that when reusing a railroad bridge or other pre-existing structure, research should determine whether or not the structure has been identified as historic, making it eligible for the National Register of Historic Places[80]. The State Historic Preservation Office (SHPO) can help make this determination, and a local historian, architect, or engineer can assess its value. If the structure is designated as historic, there may be some additional requirements pertaining to maintenance.

Other Considerations

Optimal sight distance when approaching a structure for all trail user types, or warning devices to inform trail users to slow down or to anticipate other hazards[81].

Decking, or the bridge's surface, should avoid causing any adverse effects to trail users, such as being inherently slippery or made of a material that has the potential of catching wheels (e.g., bicycles, inline skates, scooters, and wheelchairs) in its grooves, like wood[82].

Structure width should match the width of the trail. To accommodate emergency vehicles, a 10-foot clear width is recommended for bridges[83].

Railings are important safety features that protect trail users from accidently falling off the structure. A tall, protective screening or fence should be implemented when crossing roadways, railroads, and waterways[84].

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[79] *Crossings*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/crossings/.
[80] *Bridges*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/bridges/.
[81] Ibid.
[82] Ibid.
[83] Ibid.
[84] Ibid.

4.1.6 Other Amenities

Signage

Signage is an important component of trails. Regulatory and warning signs convey information to trail users regarding hazards and should comply with FHWA's Manual on Uniform Traffic Control Devices (MUTCD) for size, placement, text size, retroreflectivity, and so on.[85] As mentioned in Section 4.14, the AASHTO's guides can provide additional assistance when designing a trail for both bicycle and pedestrian facilities.

Other signs can provide information regarding the location of trailheads, mile markers, areas of interest, and trail donor recognition.

Surface Markings

Surface markings, like striping, can also benefit potential trail users and should be used in conjunction with signage since surface marking can be hidden during adverse weather conditions. For example, striping can highlight upcoming hazards or channelize the flow of trail user traffic (e.g., bicycle-only lane on one side of the trail and other users on the other side). This is particularly useful if the trail has very high volume of both pedestrians and cyclists[86]. Also, soft surface trails cannot be striped or painted.

Lighting

Lighting can enhance trail use well into the evening hours; however, the cost of implementing lighting along the entire trail corridor can be prohibitive. Therefore, well-placed lighting can improve trail user visibility, while also improving safety and providing trail users a sense of security.

The AASHTO Guide for the "Development of Bicycle Facilities" includes a section on lighting along shared-use paths[87]. Lights on a trail may potentially be installed at the following locations[88]:

- Pedestrian Tunnels
- Overpasses
- Trailheads
- Bridge entrances and exits
- Public gathering places
- Along streets
- At crosswalks with roadways
- At trail and sidewalk intersections
- On signage

[85] *Signage and Surface Markings;* Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/signage-and-surface-markings/.
[86] Ibid.
[87] *Lighting*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/lighting/.
[88] Ibid.

Other Trail Amenities

Other amenities can be integrated into the design of a trail, including benches, bicycle repair stations, rest areas, drinking fountains, and parking. Private facilities located adjacent to a trail corridor can offer refreshments or other services, including bicycle repair or storage.

Some of these amenities may be shared with other publicly accessible areas that are located in proximity to a trail, such as parks, libraries, shopping centers, and so on.

Examples of typical trail amenities are shown in Figure 4-3 and Figure 4-4 below.

Figure 4-3: Trail Amenities Examples – Bike Repair Station

Source: Village of Rothschild, Wisconsin

Figure 4-4: Trail Amenities Examples – Benches and Map

Source: Bruce Freeman Rail Trail

5 Conceptual Assessment of Applicability of the CRANDIC Corridor Right-of-Way for Trail Development

During outreach conducted for this study, stakeholders noted that the CRANDIC Corridor right-of-way was an important asset that is in an ideal location within the heart of the community to connect existing and potential future development in Iowa City, Coralville, and Oakdale, and beyond to North Liberty. Stakeholders noted that while there is optimism that a commuter rail implementation option may be feasible for the CRANDIC Corridor right-of-way in the long-term horizon (as has been the subject of ongoing study by state and local stakeholders since 2015), that in order to preserve a valuable and powerful asset for future public use now, development of a rail trail in the short-term horizon might also be a potential option. The stakeholders mentioned that a rail trail could be a potential first step to retain and preserve the important CRANDIC Corridor right-of-way for future use as a commuter rail line, multi-use rail trail, or both.

This section conceptually assesses the potential for development and any associated challenges for implementation of a rail trail within the 6.1 miles of the existing CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale via a rails-to-trails conversion approach. For comparison purposes, an alternative rails-with-trails conversion approach and its potential applicability to implementation of a rail trail in the same segment of the CRANDIC Corridor right-of-way is also discussed. Note that photographs illustrating the current conditions on the CRANDIC Corridor right-of-way are presented in Section 5 (this section) and that additional photographs of current conditions can be found in Section 2.

5.1 Conceptual Assessment of the Trail

Location Considerations

The CRANDIC Corridor right-of-way connects Iowa City, Coralville, and Oakdale in an urban area within Johnson County, Iowa. Owing to its location, the existing CRANDIC Corridor right-of-way has potential for accommodating a rail trail based generally on the Corridor's existing characteristics and in terms of its proximity to existing and anticipated future land use, residential, commercial, and university development. Specifically, the CRANDIC Corridor right-of-way is situated near Downtown Iowa City, University of Iowa campuses in Iowa City and Oakdale, Central Coralville, the Iowa River Landing in Coralville, and residential and commercial development in Oakdale. The CRANDIC Corridor right-of-way intersects with the area's multimodal network, including several roadways and trails and transit services.

Right-of-Way Considerations

The existing CRANDIC Corridor right-of-way between Iowa City and Oakdale currently accommodates an active railroad line and utility infrastructure and typically ranges from 50 feet to 100 feet in width. The right-of-way can be narrower at approximately 40 feet in some constrained areas in the urban landscape in Iowa City and Coralville where the right-of-way abuts roadways and other features of the built environment. An example of a typical right-of-way width at 10th Street in Coralville is shown in Figure 5-1 below and an example of constrained right-of-way width at Dubuque Street in Iowa City is shown in Figure 5-2 below. Note that there is not currently any wayside railroad infrastructure located within the railroad right-of-way (e.g., wayside signal system,

buildings, and so on), exclusive of at-grade crossings, which include grade crossing signal infrastructure and signage.

Figure 5-1: Typical CRANDIC Corridor Right-of-Way Width – 10th Street in Coralville

Source: Google Earth

Figure 5-2: Constrained CRANDIC Corridor Right-of-Way Width in Urban Area – Dubuque Street in Iowa City

Source: HDR

While neither a real estate assessment nor an engineering assessment was conducted for this study, a conceptual analysis of the CRANDIC Corridor right-of-way using available Google Earth imagery and supported by coordination with CRANDIC revealed that the width of the existing CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale would likely be able to accommodate a rails-to-trails conversion including a 10-foot-wide multi-use trail (with shoulders), subsequent clear zones, and effective ditch drainage, if constructed on the footprint of the existing railroad roadbed.

The existing 2.9-mile-long segment of the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and First Avenue in Coralville (bottom half of the Study Area) is generally considered to be of insufficient width to accommodate a rails-with-trails conversion within the existing CRANDIC right-of-way. A rails-with-trails conversion typically requires a setback (the lateral distance between the centerline of the nearest track and the closest edge of the trail or the separation feature [e.g., barrier, wall, or fence]) as required by a railroad and is usually minimally 25 to 30 feet[89].

The existing 3.2-mile-long segment of the CRANDIC Corridor right-of-way between First Avenue in Coralville and Oakdale Boulevard in Oakdale (top half of the Study Area) may be of sufficient width in many locations to accommodate a rails-with-trails conversion within the existing CRANDIC Corridor right-of-way. In either case, such a conversion would retain the existing CRANDIC trackage and grade crossing warning devices and develop a multi-use trail of at least 10 feet in width (with shoulders), subsequent clear zones, a barrier or other feature separating it from CRANDIC trackage,

[89] *America's Rails-with-Trails: A Resource for Planners, Agencies, and Advocates on Trails Along Active Railroad Corridors*; Rails-to-Trails Conservancy

and effective ditch drainage. Additional modifications potentially required to accommodate a rails-with-trails conversion (versus development of a rails-to-trails conversion) are described throughout this section.

Vertical Grades and Earthwork Considerations

Within the CRANDIC Corridor right-of-way Study Area, there is a long stretch of steep grade (maximum of 1.80 percent approximately 1 mile in length) on the existing railroad roadbed north of Coralville that could affect some trail users. The steepest part of the existing CRANDIC Corridor right-of-way is near the University Hospital complex in Iowa City with a grade of 2.06 percent[90]. These existing grades are gentle enough to accommodate ADA requirements for running slopes without grade breaks or resting intervals[91]. However, ADA accessibility is required for trailhead locations, trail facilities, parking, signage, and other constructed features along the trail. For a rails-with-trails conversion, the new trail alignment would need to be developed such that grades meet ADA requirements and other design and safety considerations for trail development.

Any earthwork to accommodate a rails-to-trails conversion is anticipated to be minimal, and would mainly occur only to improve interfaces of the trail with bridges and at-grade roadway crossings. Comparatively, a rails-with-trails conversion would likely require significant earthwork to maintain acceptable grade for the multi-use trail alignment within the existing CRANDIC Corridor right-of-way. Additional parallel land acquisition may also be required to facilitate the earthwork and effective drainage. It is anticipated that this added work and any acquisition of additional land would increase the cost of new trail construction significantly for a rails-with-trails conversion.

Grading and Clearing Considerations

Grading and clearing and grubbing (for the preparation of a trail surface on the railroad roadbed) will require the removal of railroad assets and wayside infrastructure (other than bridges and drainage structures) within the limits of the proposed trail and potentially the removal of soil, ballast, and subballast materials for development of a rails-to-trails conversion. The potential for removal of soil, ballast, and subballast may also be required for development of a rails-with-trails conversion, and particularly in locations where the new trail alignment is constructed on the footprint of a former railroad track or in instances when earthwork is involved to construct the new trail alignment. Soil, ballast, and subballast may potentially contain substances that are harmful to people and environment – and, if so – would need to be disposed of according to any applicable local, state, and federal requirements and regulations.

At present, much of the existing railroad corridor right-of-way has adjacent tree growth, some of which may need to be cleared or cleaned up for a rails-to-trails conversion in order to prevent the potential for trees and branches falling onto the trail or trail users. A rails-with-trails conversion would additionally require significant clearing of trees and vegetation to accommodate a new alignment for a trail.

Bridges and Structures Considerations

There are currently seven bridges located within the Study Area, with bridge lengths ranging from 40 feet to 300 feet, spanning both waterways and roadways. Five of the seven bridges have open decks, meaning that there are open gaps between railroad bridge cross-ties on the bridge deck.

[90] Cedar Rapids and Iowa City Railway (CRANDIC) Track Chart

[91] *Accessibility Guidebook for Outdoor Recreation and Trails*; U.S. Department of Agriculture - Forest Service, https://www.fs.fed.us/recreation/programs/accessibility/pubs/pdfpubs/pdf12232806/pdf12232806Pdpi300.pdf. August 2012.

These gaps in the deck would need to be addressed if the open-deck bridges are to be used as part of a rails-to-trails conversion. The longest bridge in the Study Area is 300 feet long, spans the Iowa River near Downtown Iowa City, and is also an open-deck bridge. Fencing will also need to be added to these structures to accommodate a rails-to-trails conversion. A rails-with-trails conversion would require the modification of existing railroad bridges and drainage structures, if possible (or the construction of new bridges and drainage structures), barriers, and fencing to accommodate a multi-use trail properly separated from railroad tracks within the existing CRANDIC Corridor right-of-way. Additional parallel land acquisition may also be required to facilitate bridge modifications or construction and earthwork and effective drainage to accommodate the new trail alignment in a rails-with-trails conversion. It is anticipated that this additional work and the acquisition of additional land would increase the cost of new trail construction significantly for a rails-with-trails conversion.

Figure 5-3: Open-Deck Railroad Bridge in CRANDIC Corridor Right-of-Way at Iowa Avenue in Iowa City

Source: Google Earth

During outreach conducted for the development of this Study, stakeholders mentioned that the Iowa Avenue Bridge (Milepost 24.8), shown in Figure 5-3 above, has a low vertical clearance between the roadway surface and Iowa Avenue bridge superstructure. Local roadway signage marks the bridge clearance at 10 feet 5 inches for both eastbound and westbound traffic lanes[92]. The stakeholders have expressed an interest in increasing the vertical clearance of the Iowa Avenue railroad bridge to allow for higher clearance vehicles – like buses – to cross underneath the existing railroad bridge in the future. Other bridges were not identified as having vertical clearance issues. Future planning with the local roadway jurisdiction, transit agencies, and any trail authority (potentially including the Johnson County Trail Foundation, which currently owns or controls multi-use and rail trails in the region) would be essential, should a trail be developed on the CRANDIC Corridor right-of-way, in

[92] Google Earth. Accessed October 16, 2018.

order to inform engineering design of possible bridge rehabilitation or replacement projects related to this issue.

Drainage Considerations

Development of a rail trail within the CRANDIC Corridor right-of-way, either via a rails-to-trails or rails-with-trails conversion, may require local drainage improvements. When a trail is implemented on a former railroad corridor, the trail owner must assume the responsibility and liability of the railroad for that right-of-way, as provided by the Iowa Code, and should establish a working relationship with landowners along the corridor. In this case, the rail trail owner should assume responsibility for drainage of the trail, ensuring that water does not divert onto adjacent property[93]. Since a railroad corridor's surface is mostly permeable, paving the surface (with a hard surface like asphalt or concrete) will cause an increase in runoff. Higher and faster flows of surface runoff may cause erosion issues, culvert washouts, create localized ponding, or cause flooding. Adequate drainage of the trail is necessary to avoid waterborne illnesses and other pest problems, and the existing and future conditions to mitigate potential impacts to trail users and adjacent landowners. Any future drainage issues would need to be addressed by the rail trail owner. In instances where trails will be located on former railroad corridors, the trail owner should assume additional responsibilities previously held by the railroad, such as weed and litter control and fencing[94].

At-Grade Crossing Considerations

A rails-to-trails conversion would require the removal of existing rail, wood cross ties, grade crossing protection equipment (e.g., signal masts, signal bungalows, flashing light signals, gates), crossing panels (the gap between the panel and rail is large enough to catch bicycle tires and presents a potential safety hazard, if left in place), and signage at all 21 of the existing at-grade roadway crossings of the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale. A rails-with-trails conversion may potentially require modifications to existing grade crossing protection equipment at these locations to accommodate the crossing of a new trail alignment and the local roadway network parallel to the existing railroad crossing and to accommodate any interface with roadways signals and signage, per federal, state, and local requirements.

During outreach conducted for the development of this Study, stakeholders mentioned that critical attention should be made to the at-grade crossings of any proposed rail trail within the CRANDIC Corridor right-of-way and principal roadways. There are currently 21 at-grade roadway crossings that intersect the CRANDIC Corridor right-of-way. Some of the crossings involve complex roadways or cross high-volume traffic areas. Two particular at-grade roadway crossings noted by the stakeholders for high roadway traffic volumes include:

- *Burlington Street (also Iowa State Highway 1) in Downtown Iowa City* (shown in Figure 5-4 below) – The University of Iowa has considerable land holdings in the area, and while much of the campus is north of Burlington Street, the University anticipates additional development south of Burlington Street in the near-term future (including dormitories) and the development of an art museum adjacent to the crossing.

[93] *Iowa Trails 2000* (Chapter 4 Section 2); Iowa DOT, https://iowadot.gov/iowabikes/trails/chapter-four-design-guidelines/section-2-location-and-placement.
[94] Ibid.

- *First Avenue in Coralville* (shown in Figure 5-5 below) – There is considerable vehicle traffic on First Avenue and the CRANDIC Corridor right-of-way crosses the street at an acute angle and on a tight curve with potential sight and safety issues for bicyclists and pedestrians.

Figure 5-4: At-Grade Crossing of the CRANDIC Corridor Right-of-Way with Burlington Street in Iowa City (Looking West)

Source: Google Earth

Figure 5-5: At-Grade Crossing of the CRANDIC Corridor Right-of-Way with First Avenue in Coralville (Looking North)

Source: HDR

Grade separations for either a rails-to-trails or a rails-with-trails conversion could be considered at Burlington Street, First Avenue, or other at-grade crossings to minimize any potential safety hazards to trail users at roadway crossings, in future trail planning phases.

It is also important to note that the high crossing density (21 crossings in 6.1 miles) may minimize the appeal of a trail within the CRANDIC Corridor right-of-way for certain trail user groups, like bicyclists, due to frequent stops for crossing roadways while traveling on the trail.

Utilities Considerations

At present, existing fiber optic/telecommunications lines, overhead utility lines, natural gas pipelines, water lines, sanitary sewer lines, stormwater lines are present within the existing CRANDIC Corridor right-of-way. Improvements within the CRANDIC Corridor right-of-way and at-grade roadway crossings may impact existing utilities. Relocation and rehabilitation of any existing utility infrastructure may potentially be required for a rails-to-trails conversion, but would more likely be required to accommodate the new trail alignment in a rails-with-trails conversion. Any relocation and rehabilitation of existing utilities that would be required for trail implementation would increase trail costs.

Potential for Development of Trail Amenities Considerations

A conceptual desktop assessment of available aerial Google Earth imagery revealed limitations to the development of parking lots or other amenities within and adjacent to the CRANDIC Corridor right-of-way, owing to its location within a developed urban area. Development of a rails-with-trails

conversion may potentially provide constraints to the inclusion of trail amenities. The absence of sufficient parking facilities may negatively impact trail use in some areas.

Potential Regulatory and Liability Considerations and Related Challenges to Trail Implementation in the CRANDIC Corridor Right-of-Way between Iowa City and Oakdale

Based on the assessment conducted for the study, the following potential regulatory and liability considerations and related challenges for the development of a rails-to-trails or rails-with-trails conversion of any segment of the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale are identified and described in this section.

Any effort to preserve the 6.1-mile CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale for public use should, from a regulatory and practicality standpoint, consider the importance and benefit of preserving the linear corridor in total and under single ownership as a multi-use corridor with multiple potential options for future use. Any corridor railbanking effort should also include coordination with CRANDIC and other local stakeholders to consider the potential for incorporation of additional segments of the CRANDIC Corridor right-of-way for preservation in a single linear fashion, including the approximately 14.4-mile segment between Oakdale, North Liberty, Cou Falls, Swisher, and the Eastern Iowa Airport (Cedar Rapids) and/or the approximately 6.2-mile segment between Iowa City and Hills. The future uses of the railbanked corridor could potentially include passenger and freight railroad operations, a multi-use trail (via a rails-to-trails or rails-with-trails conversion), and other users (e.g., utilities), as desired.

While such incidents are not common, it should be noted that if CRANDIC attempts to abandon the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale, that the STB abandonment process allows for any financially responsible party (including rail shippers and other railroads, for example) to potentially compel the railroad to sell or conduct subsidized operations over the line through Offer of Financial Assistance (OFA) procedures.

Ownership of the corridor could potentially remain with CRANDIC (assuming that CRANDIC owns all of the underlying property in the corridor), or CRANDIC could abandon and railbank the corridor and transfer it to a public agency or designated trail manager through sale, lease, or donation. Disposition of the corridor through railbanking would allow CRANDIC to transfer all forms of ownership, including easements, to a public agency or trail group. Other benefits to the railroad include the ability to sell the entire corridor, rather than in pieces, which reduces transaction costs and eliminates time-consuming inquiries and litigation to confirm ownership. Furthermore, the railroad is spared the time and expense of removing unwanted railroad bridges and other structures. Existing Alliant Energy (and other utility) infrastructure would remain in the railbanked CRANDIC Corridor right-of-way, through an easement or license with the public agency or trail manager that takes ownership of the railbanked corridor.

Any development of a rail trail within the railbanked CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale should consider that if reactivation of passenger and/or freight rail service over any railbanked segment of the CRANDIC Corridor right-of-way is sought by CRANDIC or a third party in the future that there would be impacts to a trail. Reactivation of the corridor for rail service would displace any trail built upon the earlier railroad roadbed during the previous rails-to-trails conversion. The potential for development of a new trail on a new alignment within the railbanked rail corridor (rails-with-trails) could be considered, where ample right-of-way exists. A rails-with-trails conversion may also require the acquisition of additional right-of-way and property adjacent to the CRANDIC Corridor right-of-way to accommodate a new rails-with-trails alignment.

There is the potential that adjacent property would not exist (or be available) through the length of the corridor to accommodate a shifted rails-with-trails alignment.

Reactivation of the railbanked line by CRANDIC or a third party would require the completion of a comprehensive environmental assessment, public outreach, and other activities to obtain approval and vacation of the railbanking order from STB. The process to do so is anticipated to be time-consuming and costly. The potential for public opposition to the reactivation of the corridor for passenger and/or freight railroad operations should also be considered. Local stakeholders should also consider the benefits associated with maintaining the existing rail infrastructure in place for use in supporting the future development of commuter rail service between Iowa City and Oakdale and beyond to North Liberty and Cedar Rapids. That practice is consistent with recent local planning developed since 2015; Iowa DOT, MPOJC, CRANDIC, and other stakeholders are currently studying the potential for implementation of commuter rail service over the CRANDIC Corridor between Iowa City, Oakdale, and North Liberty. Reconstruction of the railroad alignment and all related infrastructure within the corridor (including the reinstallation of highway-rail grade crossing warning devices and surfaces and retrofitting of bridges and other structures, for example) and removal or realignment of the rails-to-trails or rails-with-trails alignment to accommodate a rail line reconstruction is anticipated to be time-consuming and costly.

Some other potential liabilities and considerations:

- Potential contamination in the CRANDIC Corridor right-of-way between Iowa City and Oakdale from legacy railroad use may be found during environmental permitting and material investigations and can potentially present environmental issues. Any remediation to accommodate a rails-to-trails or rails-with-trails implementation could be time-consuming and costly.
- Potential public opposition to the construction, operations, and maintenance of a rail trail in the corridor.
- Potential liability related to the injury of a trail user on the trail and any liability related to a trail user that has entered upon adjacent private property (potentially through trespassing) and sustained injuries. Particular consideration should also be made for trail user safety at roadway crossings in the corridor, some of which in Iowa City and Coralville sustain high vehicular traffic volumes, and potential mitigation measures that could be developed (e.g., traffic signals and crosswalks, effective signage and lighting at the crossing and related approaches, grade separations, public education campaigns, etc.).
- Maintenance of ample separation and a barrier between active and inactive CRANDIC tracks and a rails-with-trails alignment in locations where the existing CRANDIC Corridor right-of-way is wide enough to accommodate such an arrangement. Proper separation and trail design would be essential to maintain safe railroad and trail operations and to minimize any potential for trespassing on active and inactive CRANDIC tracks.
- Any impacts to existing and potential future utility infrastructure (and related easements and licenses) in the CRANDIC Corridor right-of-way attributed to a rails-to-trails or rails-with-trails conversion. A rails-with-trails conversion would likely require the relocation of some existing utilities infrastructure.
- Any impacts to adjacent property owners from a rails-to-trails or rails-with-trails conversion of the CRANDIC Corridor right-of-way (e.g., noise, trespassing, garbage dumping, drainage issues, etc.).

5.2 Future Trail Connectivity and Compatibility

Since the mid-1990s, trail development has been robust in the Iowa City Area[95]. Today, Iowa City Area trail users can access south Iowa City to North Liberty (via the Iowa River Corridor Trail, Clear Creek Trail, and North Ridge/North Liberty Trail) or to West Overlook Road and the Coralville Reservoir (via the Iowa River Corridor Trail), almost exclusively on multi-use trails. In general, Iowa City Area trails are paved, ADA-accessible, and marked with mile markers and warning signs (e.g., stop, curve ahead, and so on).

Existing multi-use trails that intersect or could potentially connect with the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale are:

- Iowa River Corridor Trail
- North Ridge/North Liberty Trail
- Iowa River Trail; Iowa City and Coralville
- Mormon Handcart Trail
- Clear Creek Trail

During outreach conducted for the development of this study, stakeholders mentioned that the North Ridge-North Liberty Trail at Oakdale Boulevard, the Iowa River Trail at Iowa City (south of Benton Street), and other various local trail networks within the University of Iowa campus and on both sides of the Iowa River in Iowa City are of importance when planning for future connectivity to a potential rail trail in the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale.

Also identified during outreach conducted for the development of this study, the MPOJC and the City of Iowa City stated the *Metropolitan Bicycling Plan* will be updated in 2019, and that additional neighborhood connections will be considered. Owing to this fact, this study identified at a high-level some potential neighborhood connections to the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale, as noted below:

- Gilbert Street (on road/shared shoulder)
- Ralston Creek (proposed off street path)
- Burlington Street (on road/shared shoulder)
- Iowa Avenue (currently grade separated)
- Capitol Street (on road/shared shoulder)
- Woolf Avenue (on road/shared shoulder)
- Ferson Avenue (on road/shared shoulder)
- Rocky Shore Drive (off street paved path)
- Mormon Trek Boulevard (off street paved path)
- Holiday Road (currently a bike lane; grade separated from CRANDIC Corridor right-of-way)

[95] *Metropolitan Bicycle Master Plan*; Johnson County Council of Governments, http://www.iowa-city.org/weblink/0/doc/1503522/Electronic.aspx, November 2009.

- 12th Avenue (bike lane)
- 5th Street (bike lane)
- Lynncrest Drive (off street paved path)

See Appendix F or a map of existing Iowa City Area trails and connectors and connectivity with a potential trail within the CRANDIC Corridor right-of-way.

Land Use

Although trails are popular, land acquisition and trail construction costs can pose challenges to the development of trails in developed areas[96]. The CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale is located within developed municipal areas[97]. Residential, commercial, and industrial developments are located adjacent to most of the Study Area. And some areas of the CRANDIC Corridor right-of-way in Iowa City and Coralville are located within a designated Federal Emergency Management Agency (FEMA) floodway, which may potentially affect future improvements to develop and maintain a rail trail in the CRANDIC Corridor right-of-way within the floodway[98]. Some examples of land use along the CRANDIC Corridor right-of-way are presented below, including the University of Iowa and the Iowa City central business district in Figure 5-6 (note the CRANDIC Corridor right-of-way is oriented top-to-bottom, crosses the Iowa River at upper left, and crosses Burlington Street at lower left); residential development adjacent to the CRANDIC Corridor at 12th Avenue in Coralville in Figure 5-7; and the VA Hospital and principal area roadway Second Street (U.S. Highway 6) adjacent to the CRANDIC Corridor in University Heights in Figure 5-8.

[96] Ibid.

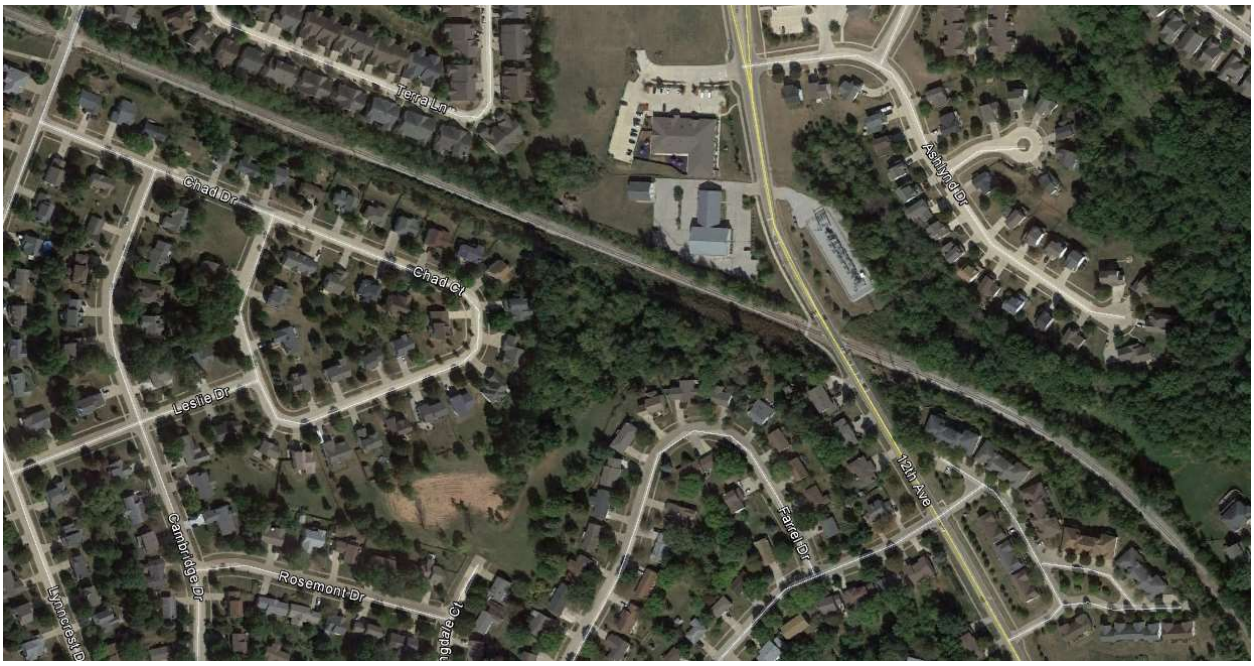
[97] *Johnson County 2018 Comprehensive Plan*; Johnson County (Iowa), http://www.johnson-county.com/WorkArea/DownloadAsset.aspx?id=24191. Future Land Use Map (2017) See p. 111 of Volume 1.

[98] *FEMA's National Flood Hazard Layer (NFHL) Viewer*, Federal Emergency Management Agency (FEMA), https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-91.58225183630583,41.68457717374456,-91.57705907965227,41.686580262447464. Accessed October 18, 2018.

Figure 5-6: University of Iowa and Iowa City Central Business District Bisected by CRANDIC Corridor Right-of-Way

Source: Google Earth

Figure 5-7: Residential Districts Adjacent to the CRANDIC Corridor Right-of-Way at 12th Street in Coralville



Source: Google Earth

Figure 5-8: VA Hospital and Major Roadway Adjacent to the CRANDIC Corridor Right-of-Way in University Heights

Source: HDR

5.3 Economic Development and Benefits of Trails

Recreational trails (including rail trails) go beyond providing an environment for exercise, leisure, and enhanced quality of life, and in many ways these trails can foster and shape economic development within the communities they intersect. The Iowa DOT *Implementing Trail-Based Economic Development Programs: A Handbook for Iowa Communities* lists the typical economic impacts for the development of trails[99]:

- Building new trails (engineering and construction activity only), representing a one-time economic event;
- Spending directly associated with trail users, representing ongoing economic activity; and,
- Additional spending induced by spending from trail users, also known as indirect economic impact (e.g., patronage of bike shops, restaurants, and other local businesses).

Trails continue to generate post-construction economic impacts by delivering additional spending to area businesses, allowing these businesses the opportunity to become more productive, which can create new jobs and generate additional tax revenues for the area[100]. This increase in business could be potentially from local trail users that frequent the area and need the services or goods offered by businesses, or from new trail users from other areas who are drawn to the trail through community marketing campaigns or for business reasons. Trails can also be used to expand, retain, and attract businesses since they provide a free or low-cost recreational amenity that has the potential to expose its users to businesses located adjacent to the trail[101].

Some people choose to live along a multi-use trail and use it as a means to commute for work or for other daily activities, including exercise and shopping. Some trail users, like cyclists, are tourists making their way from small town to small town, and use businesses located near trails to satisfy their need for lodging, food, and so on. Trails are important community facilities that attract people and revenue, and they reinforce the community's desirability as a place to live and work to current residents and employees[102]. Increased desirability of living near trails also increases property values and is also an instrument for neighborhood and economic revitalization and positive change within a community. The use of trails can bring health benefits to a community, as well, and can reduce trail users' dependence on oil from reductions in motor vehicle transportation[103].

Provided in Appendix G are public resources that list case studies that highlight economic development benefits of trails.

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[99] *Implementing Trail-Based Economic Development Programs: A Handbook for Iowa Communities*; Iowa DOT, https://iowadot.gov/iowabikes/trails/web-pdf/EconHandbook/HANDBOOK.pdf.

[100] Ibid.

[101] Ibid.

[102] *Johnson County Bicycling & Multi-Use Trails Plan*; Metropolitan Planning Organization of Johnson County (MPOJC), February 2012.

[103] *Investing in Trails: Cost-Effective Improvements—for Everyone*; Rails-to-Trails Conservancy, https://www.railstotrails.org/resourcehandler.ashx?name=investing-in-trails-cost-effective-improvements-for-everyone&id=3629&fileName=Economic%20Impacts%20of%20Trails.pdf

6 Opinion of Probable Conceptual Cost Estimate for a Rails-to-Trails Conversion of the CRANDIC Corridor Right-of-Way

An opinion of probable conceptual cost estimate was developed for the implementation of a 6.1-mile rail trail between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale within the CRANDIC Corridor right-of-way on the existing railroad roadbed using a typical rails-to-trails conversion approach used in other trail implementations in Iowa and the U.S. The assumptions used to develop this estimate are identified and described in the following sections.

Owing to significant feasibility challenges and uncertainty about local site conditions identified in the conceptual assessment developed for this study (that could impact the potential development of a new trail alignment within the existing CRANDIC Corridor right-of-way), an opinion of probable cost estimate for a rails-with-trails conversion of the existing CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale was not developed.

During analysis of recent past planning studies, it was noted that most off-road trails in the Iowa City Area are paved with either asphalt or concrete to accommodate all non-motorized use, such as biking, walking, jogging, inline skating, skateboarding, and scooting[104]. This opinion of probable conceptual cost estimate was developed to show the different surface costs for the construction of a rail trail during a rails-to-trails conversion. It is important to note that granular surfaces usually exclude most non-pedestrian users due to the rougher surface (e.g., bicycles, inline skating, scooting, and skateboarding). Concrete and asphalt surfaces can better accommodate these non-pedestrian users; however, asphalt tends to have more maintenance requirements and a shorter lifespan than concrete[105].

6.1 Trail Preparation

The opinion of probable conceptual cost estimate includes costs associated with the removal and disposal of unneeded railroad infrastructure from the CRANDIC Corridor right-of-way (e.g., rail, ties, and other track material [OTM] and ballast or subballast; grade crossing signals and surfaces; communications infrastructure; facilities; fencing; and signage) based on recent averages for similar work in the U.S. and in consultation with CRANDIC.

In order to prepare the existing railroad roadbed within the CRANDIC Corridor right-of-way to accommodate a rail trail, railroad assets and select railroad infrastructure must be removed and the trail must be physically separated from the rest of the existing active freight railroad network at Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale. This would require the removal of existing rail, rail turnouts (or switches), wood cross ties, grade crossing protection equipment (e.g., signal masts, signal bungalows, flashing light signals, gates), crossing panels (the gap between the panel and rail is large enough to catch bicycle tires and presents a potential safety hazard, if left in place), and signage. Most of this material will need to be disposed of by a contractor; however, the host railroad CRANDIC may potentially retain some of the railroad assets and infrastructure (e.g., turnouts, signal equipment) for reuse elsewhere on its active freight railroad network in Iowa.

[104] *Iowa City Metro Area Trails*; City of Iowa City, http://www.iowa-city.org/weblink/0/doc/1512414/Electronic.aspx
[105] *Surfaces*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/surfaces/.

It was assumed that all material removed from the CRANDIC Corridor right-of-way will be disposed of according to local, state, and federal requirements and regulations. Railroad ties may be recycled and reused as landscaping material if they meet certain criteria or a contaminant thresholds, otherwise used railroad ties will require hazardous material disposal[106]. This opinion of probable conceptual cost estimate also assumed that the removed rail and other track material (OTM) would be salvaged at a metal recycling facility by CRANDIC (or its contractors) at a rate of $12 per track-foot, totaling $448,512. However, this credit would be accrued to CRANDIC and not used toward the estimated cost of the trail construction. The probable credit for this salvage is provided in this study for background purposes only. CRANDIC could also choose to repurpose the rail and OTM for use on its existing railroad network as an alternative to scrapping all assets.

In addition to separating the existing CRANDIC Corridor right-of-way segment between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale from the CRANDIC's remaining active freight rail network, earthen bumpers will need to be constructed to stop railroad rolling stock and equipment from potentially entering the footprint of the rail trail at its endpoints. After the removal of railroad assets and infrastructure from the existing CRANDIC Corridor right-of-way, clearing and grubbing and site grading can occur to prepare the footprint for the multi-use trail on the existing railroad grade. The opinion of probable conceptual cost estimate assumed that a 10-foot wide multi-use trail will be constructed since it is typically wide enough to accommodate a bicyclist/pedestrian passing. If higher user volume or bicycle use is anticipated on the trail, than a wider trail path should be considered.

If excess material is expected to be wasted and hauled away from the railroad property during clearing and grubbing or site grading, such as railroad ballast or the underlying roadbed material, the material will need to be tested for contamination and disposed of according to local, state, and federal requirements and regulations[107]. Typically, this contamination can potentially come from[108]:

- Preservatives used in the treatment of railroad ties
- Coal ash and cinders that may have been used in the past as ballast for the roadbed, which may potentially contain lead and arsenic
- Spilled or leaked liquids, such as oil, gasoline, cleaning solvents, and other hazardous materials
- Herbicides from weed spraying operations
- Fossil fuel combustion products (including coal ash for railroad locomotives and polynuclear aromatic hydrocarbons [PAHs] from locomotive diesel exhaust)
- Asbestos
- Other heavy metals

No environmental assessment or opinion of the existing CRANDIC Corridor right-of-way was developed for this study.

A soil and subsurface investigation of the CRANDIC Corridor right-of-way accommodating the proposed rail trail corridor should be completed during the environmental assessment phase of the

[106] *Environmental Contaminants*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/acquisition/environmental-contaminants/.
[107] Ibid.
[108] Ibid.

project to inform stakeholders of potential contaminated soil areas. This opinion of probable conceptual cost estimate did not include costs for contaminated soil removal or treatment or any other environmental remediation.

6.2 Structures

6.2.1 Bridges

This opinion of probable conceptual cost estimate assumed that all existing railroad bridges and structures in the CRANDIC Corridor right-of-way can be adapted for a rails-to-trails conversion and that no new bridges and structures will be constructed, as is often the case in rails-to-trails conversions. No assessment of the condition of the existing bridges was made for this study.

Per the CRANDIC Bridge Inventory, five of the seven bridges located between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale have open decks, meaning that there are currently open gaps between the bridge ties that support the rail. A cost-effective solution to re-decking these five bridges for trail implementation would be to add bridge ties to close the gaps. Corrugated steel decking can be attached to the bridge ties and used to hold the concrete, asphalt, or granular surface material onto the bridge deck, allowing for a smooth transition at the bridge approaches to the trail interface. This is a low maintenance solution that would eliminate removing existing bridge ties and would avoid a more expensive decking solutions or require demolition and disposal. The potential solutions identified above were used to develop the opinion of probable conceptual cost estimate to repurpose bridges and structures for a rails-to-trails conversion.

Per the CRANDIC Bridge Inventory, the other two of seven have ballast decks, meaning the bridge superstructure does not have holes within the bridge deck and can accommodate a trail surface without extensive modification. The unit cost of the trail surface was assumed across these two ballast deck structures.

In addition, all of CRANDIC's existing bridges within the Corridor right-of-way cross waterways or roadways. It was assumed that all bridges would have fencing to prevent rail trail users from potentially falling off the bridge surface onto the waterway or roadway below. It was assumed that a chain link fence (approximately 6-feet high) would be used as a passive fall protection system in order to eliminate this potential hazard. The fencing assumed for this estimate would be coated with a vinyl application at a nominal fee to improve aesthetics.

As identified by project stakeholders during development of the study, there is a desire to raise the railroad bridge at Iowa Avenue in Iowa City to provide enhanced vertical clearance for motor vehicles, specifically buses, between the roadway surface and the low superstructure of the bridge. Modifications to this bridge's superstructure to accommodate increased vertical clearance would require consultation with a structural engineer, and were not included in this estimate. In addition, a significant change in grade at this structure's location may potentially affect ADA accommodations along the rail trail at this location.

Note that consideration could be made to grade separations for a rails-to-trails conversion at Burlington Street in Iowa City, First Avenue in Coralville, or other at-grade crossings in the CRANDIC Corridor to minimize any potential safety hazards to trail users at roadway crossings, in future trail planning phases. Costs for these grade separations (and related bridges) were not developed for this study.

6.2.2 Other Drainage Structures

To improve localized drainage within the CRANDIC Corridor right-of-way between Iowa City and Oakdale, the opinion of probable conceptual cost estimate assumed that three culverts will need to be removed and replaced (3-30" diameter or smaller corrugated metal pipes replacing 3-30" diameter or smaller reinforced concrete pipes) to accommodate a rails-to-trails conversion. An end treatment of Class I riprap was included for erosion and scour protection at the new culvert locations. No other drainage improvements were included in the estimate.

6.3 At-Grade Roadway Crossings

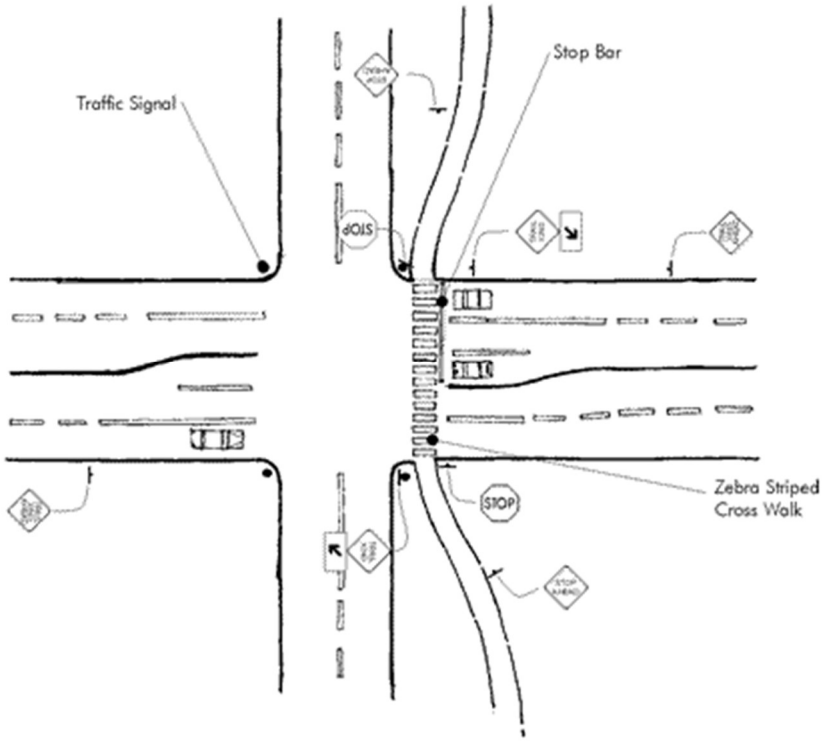
The opinion of probable conceptual cost estimate assumed that no new grade separations with roadways will be constructed for the rails-to-trails conversion. A total of 21 at-grade roadway or trail crossings are contained within the Study Area. Of the 21 crossings, 16 were classified as residential, two as collector, and three as arterial. A description of the typical crossing types is described below.

Arterial roads have a high traffic volume with high travel speeds[109]. This road type often has more than one lane in each direction. The following elements should be included in crossings of arterial roads (see Figure 6-1 for an example)[110]:

- Crossings at signals only
- Marked crosswalks
- Cautionary and regulatory signage on trail

[109] *Crossings*; Rails-to-Trails Conservancy, https://iowadot.gov/iowabikes/trails/chapter-four-design-guidelines/section-5-crossings.
[110] Ibid.

Figure 6-1: Typical Crossing Layout for Arterial Roads



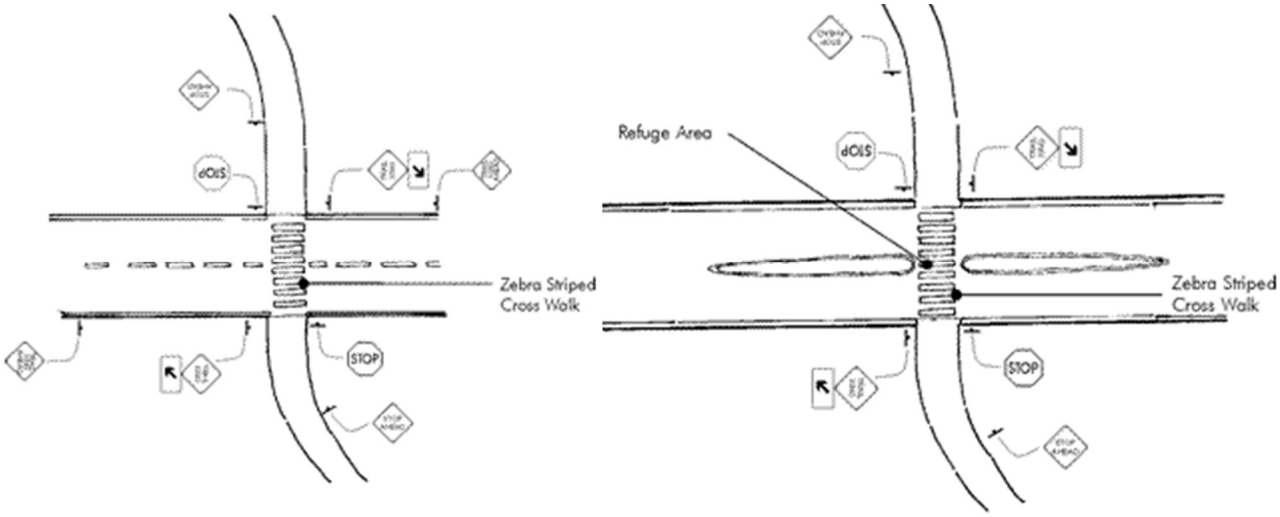
Source: Iowa Trails 2000

Collectors are moderately sized streets that serve as secondary connections within communities or as primary routes in rural parts of the state[111]. Collectors have lower traffic volumes, when compared to arterial roadways, and higher travel speeds than most roadways. These roadways often have only one lane in each direction, but may be wider in congested areas. The following elements should be included in crossings of collectors (see Figure 6-2 for an example)[112]:

- Crossings at signals, at controlled intersections, or mid-block with flashing lights
- Marked crosswalks
- Cautionary and regulatory signage on trail
- Cautionary signage on roadway

[111] Ibid.
[112] Ibid.

Figure 6-2: Typical Crossing Layout for Collector Streets

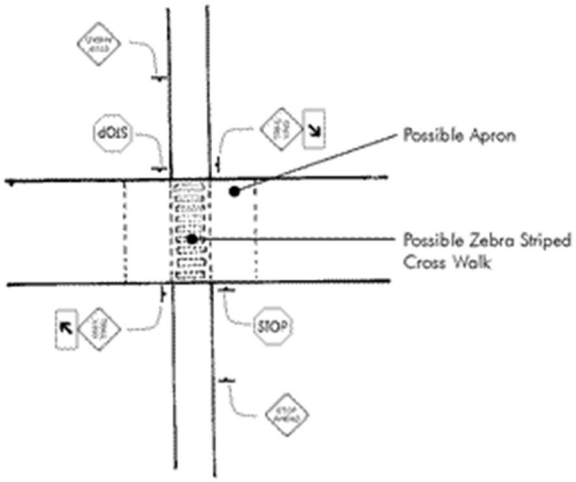


Source: Iowa Trails 2000

Residential streets are roadways with low traffic volumes and travel speeds[113]. They are found within communities and are designed to serve local residents[114]. The following elements should be included in crossings of residential streets (see Figure 6-3 for an example)[115]:

- Cautionary and regulatory signage on trail
- Cautionary signage on roadway
- Marked crosswalks if trail or roadway traffic volume is high, or if safety concerns exist

Figure 6-3: Typical Crossing Layout for Residential Streets



Source: Iowa Trails 2000

The conceptual estimate assumed at each category of crossing would have the elements listed above, at a minimum, and included two removable bollards per crossing (to restrict unauthorized

[113] Ibid.
[114] Ibid.
[115] Ibid.

motor vehicles from entering the trail). Overall at-grade roadway crossing costs were developed from typical industry costs for each category of crossing and applied to the corresponding number of crossings within the Study Area. Crossing diagnostics could occur in a later phase of study to further refine crossing costs and to include local jurisdictions in the trail planning.

6.4 Trail Construction Costs

The opinion of probable conceptual cost estimate to construct the rails-to-trails conversion was based on the methodologies and assumptions listed in the *Iowa Trails 2000* (Online Version)[116]. This resource document was designed to "assist all trail developers in achieving the vision of an interconnected, multi-modal, easily accessible statewide trails system" and represents typical cost methodology and assumptions for rails-to-trails development in Iowa. Unit costs listed in this resource were adjusted for inflation to 2018 dollars and used within the opinion of probable conceptual cost estimate[117].

This opinion of probable conceptual cost estimate included:

- Clearing and Grubbing[118]
    - Clearing and grubbing of trees and brush, including the width of the trail and associated clear zones
- Grading[119]
    - Grading costs assume moderately flat or partially prepared surfaces (e.g., railroad grades)
    - Does not account for adverse soil conditions (e.g., contaminated soil, wet soils, etc.)
- Granular Subbase[120]
    - Granular subbase extends one foot beyond the edge of the trail on each side
    - Iowa DOT – approved aggregate placed under a hard surface trail to a depth of 4 inches
- Surfacing[121]
    - Granular surfacing refers to crushed limestone paving (or similar) at a depth of 6 inches
    - Asphalt surfacing has a depth of 6 inches
    - Concrete surfacing has a depth of 6 inches
- Lighting[122]

[116] *Iowa Trails 2000*; Iowa DOT, https://iowadot.gov/iowabikes/trails/iowa-trails-2000-home.
[117] U.S. Bureau of Labor Statistics, *CPI Inflation Calculator*, https://data.bls.gov/cgi-bin/cpicalc.pl. Per this tool, $1 in January 2000 has the same buying power as $1.49 in August 2018. Accessed October 3, 2018.
[118] *Iowa Trails 2000*; Iowa DOT, https://iowadot.gov/iowabikes/trails/chapter-five-cost-analysis.
[119] Ibid.
[120] Ibid.
[121] Per communication with MPOJC on December 10, 2018, local specifications require 6-inch depths.
[122] https://www.co.washington.or.us/LUT/PlanningProjects/alohareedville/upload/2013-12-11_Aloha-Reedville-Trail-Improvements-Final-Report_web.pdf

- The AASHTO Guide for the "Development of Bicycle Facilities" includes a section on lighting along shared-use paths[123]. Based on its recommended locations, lighting was assumed for the following locations:
  - Overpasses (located at Interstate 380 and Holiday Drive)
  - Trailheads (assumed one at the endpoints of the trail – Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale)
  - Bridge entrances and exits (at each existing bridge location)
  - Along parallel streets (along 1st Avenue in Coralville, 2nd Street in Iowa City, Front Street/University Iowa Campus in Iowa City, and Lafayette Street in Iowa City)
  - At trail intersections (in Oakdale)
  - Lighting included power drops, 10-foot tall pole lights, junction boxes, and conduit for each location. For trail areas at overpasses and along parallel roadways, lighting poles were spaced at 100 feet.
- Note that bollard or light pole spacing is a function of lumens and height, and a photometric analysis should be conducted to inform fixture type and spacing during a future design phase of the trail study.
- Solar bollard lightings or solar light poles are alternatives to traditional underground hard wire lighting system, which can eliminate the need for power drops, trenching, backfill, and some future operating costs (e.g., electricity). This option could be evaluated further in the design phase of the trail study[124].

- Other Costs[125]
  - Other costs refer to typical drainage considerations, such as swales, culverts, or erosion control; and support services, including rest areas, signage, and pavement markings. These are based on a typical percentage of trail construction cost (10 percent).
- Professional Services[126]
  - Planning – 2 percent of trail construction cost
  - Preliminary Design – 2 percent of trail construction cost
  - Construction Documents – 5 percent of trail construction cost
  - Construction Services – 5 percent of trail construction cost
- Contingency[127]
  - 15 percent of trail construction cost
- Fencing

[123] *Lighting*; Rails-to-Trails Conservancy, https://www.railstotrails.org/build-trails/trail-building-toolbox/design/lighting/.
[124] https://www.co.washington.or.us/LUT/PlanningProjects/alohareedville/upload/2013-12-11_Aloha-Reedville-Trail-Improvements-Final-Report_web.pdf
[125] *Iowa Trails 2000*; Iowa DOT, https://iowadot.gov/iowabikes/trails/chapter-five-cost-analysis.
[126] Ibid.
[127] Ibid.

  - Not all of the corridor should be fenced; however, a 4-foot tall chain link fence was assumed (for safety reasons) at 5 percent of the total corridor length. The fence would be used to physically separate the trail from hazards, such as steep drop offs, adjacent private property, trespassing areas, and so on.
  - Ornamental fencing was not included in the estimate, but it may be potentially required to separate residential, commercial, and industrial areas from the rail trail corridor.
  - Fencing diagnostics could be completed in a later phase of the project to refine corridor fencing costs.
- Environmental Compliance and Permitting
  - The environmental estimate includes the conceptual costs associated with permitting and contaminated material investigations. Permitting for the project would involve federal, state, and local permits and associated studies (i.e., wetlands, cultural resources) required for infrastructure modifications for the rails-to-trails conversion, and documentation required (i.e., NEPA) to support federal grant funding. Contaminated materials could be present from the rail line and would require preparation of a Phase 1 and Phase 2 Environmental Site Assessment (ESA). While Phase 1 is largely a desktop study, Phase 2 would require subsurface investigations. Point samples at staggered depths in areas of visual concern and roughly every 820 feet (or 250 meters) along the length of the corridor would be anticipated, including labor hours, drill rig, and laboratory costs. The cost assumes that investigations would be: shallow (1-3 feet deep) and reflective of the minor modifications to infrastructure required; would not include groundwater sampling or monitoring well installation; and any contaminated soils would be buried or left in place and covered per federal and state requirements.

Below is a list of additional assumptions that were also used to support the opinion of probable conceptual cost estimate for the rails-to-trails conversion:

- A 10-foot wide, multi-use trail was assumed, consistent with other adjacent trails in the Iowa City Area based on analysis of available Google Earth imagery and analysis of past studies. Note that if higher user volume or bicycle use is anticipated, then a wider trail path should be considered.
- Costs for three trail surface types (e.g., granular, asphalt, and concrete) were estimated. Concrete would have the least maintenance, accommodate most trail user groups, and has the longest lifespan out of the three options.

6.5 Capital Cost Exclusions

The opinion of probable conceptual cost estimate for a rails-to-trails conversion of the 6.1-mile CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale developed for this study does not include the following items:

- It was assumed that a trail can be fully incorporated within the existing CRANDIC Corridor right-of-way and that no additional real estate will be required for that purpose for a rails-to-trails conversion; however, any cost to acquire the CRANDIC Corridor right-of-way and

adjacent property between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale for trail development is not included.

- A real estate assessment of the CRANDIC Corridor right-of-way was not conducted for this study, therefore ownership of the underlying property and the means and conditions through which it was acquired for development of a linear rail corridor in the early 20th century were not confirmed. Any costs for acquisition of fee title, easements, or licenses for use of or occupancy of the real property underlying the CRANDIC Corridor right-of-way and any adjacent real estate between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale are not included.
- Any administrative and legal costs for abandonment and railbanking of the rail corridor and subsequent development of a trail in the CRANDIC Corridor right-of-way are not included.
- Any costs associated with the removal or treatment of contaminated soils and materials or any other environmental remediation within the CRANDIC Corridor right-of-way are not included.
- Any utility relocation costs or utility accommodations that may need to be constructed for trail development are not included.
- It was assumed that no new grade separations with roadways would be constructed for the trail, so no such structures are included.
- Any costs for the development of adjacent trail parking facilities and any costs for public art are not included.
- Maintenance on trails typically includes trail surface maintenance, mowing, weed control, snow removal, garbage and debris removal, and maintenance associated with signs, any bike racks or lighting, and occasional vandalism. According to the Metropolitan Planning Organization of Johnson County's (MPOJC) *Johnson County Bicycling & Multi-Use Trails Plan* (2012), trail maintenance costs can be as high as $3,000 per mile annually (approximately $3,400 annually when adjusted for inflation in 2018), including labor and materials costs, but often vary widely depending on local and site-specific conditions[128]. This figure is provided for background purposes only. A field assessment of the CRANDIC Corridor right-of-way and potential site-specific conditions that could impact potential maintenance levels for a rail trail was not conducted for this study. Therefore, an opinion of probable annual operations and maintenance costs were not developed.

6.6 Opinion of Probable Conceptual Capital Cost Estimate Results for Rails-to-Trails Conversion

The opinion of probable conceptual cost estimate for the construction of a rails-to-trails conversion and development of interfaces with at-grade crossings of the existing area roadway network in the 6.1-mile-long CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale is shown below on a total and per-mile basis. These costs are based on recent similar capital projects in Iowa and typical industry costs to implement rails-to-trails conversions in the U.S. Table 6-1 below summarizes the costs in 2018 dollars.

[128] *Johnson County Bicycling & Multi-Use Trails Plan*; Metropolitan Planning Organization of Johnson County (MPOJC), http://www.iowa-city.org/weblink/0/doc/1506533/Electronic.aspx. Updated March 2012.

Table 6-1: Opinion of Probable Conceptual Capital Cost for Rails-to-Trails Conversion of CRANDIC Corridor Right-of-Way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale (2018 Dollars)

Cost Element	Surface Type (10-ft Wide Multi-Use Trail)		
	Granular	Asphalt	Concrete
Removal of Railroad Assets and Infrastructure *(e.g. remove turnouts; cross ties; and highway-rail grade crossing signals and crossing surfaces)*	$637,000	$637,000	$637,000
Structures *(e.g., conversion of open deck bridges to ballast deck bridges, installation of passive fall protection at bridges, replacement of three culverts, and installation of scour protection [end treatment])*	$134,000	$134,000	$134,000
Roadway Crossings *(e.g., traffic signage, pavement markings, security vehicle barriers, and pedestrian signals and callers – where applicable)*	$81,000	$81,000	$81,000
Construction of Trail and Related Features *(e.g., clearing/grubbing, grading, surfacing, seeding, fencing, lighting, signage, drainage, and support services)*	$1,708,000	$2,184,000	$3,176,000
Professional Services *(e.g., Planning, Preliminary Design, Construction Documents, Construction Services, and Environmental Compliance and Permitting)*	$487,000	$577,000	$766,000
Contingency (15%)	$457,000	$542,000	$719,000
Total Construction Cost	**$3,504,000**	**$4,155,000**	**$5,513,000**
Cost Per Mile (for the 6.1-mile Corridor)	***$574,000***	***$681,000***	***$903,000***

Note: All exclusions from this opinion of probable conceptual capital cost for rails-to-trails conversion of the CRANDIC Corridor right-of-way between Gilbert Street in Iowa City and Oakdale Boulevard in Oakdale (e.g., cost to acquire CRANDIC Corridor right-of-way, cost of potential environmental remediation, etc.) are identified in Section 6.5 of this report.

Appendix A. Inventory of Existing Bridges and Known Drainage Structures in the CRANDIC Corridor Right-of-Way between Iowa City and Oakdale

Bridges in the CRANDIC Corridor Right-of-Way

CRANDIC Milepost	Superstructure Description	Deck Type	Crossing Feature	Crossing Name
23.30	1-43' SBM, 4-50'-8" SBM, 1-31'-9" SBM	Ballast	Water	Clear Creek
23.80	1-35'-9" TPG	Open	Roadway	Rocky Shore Drive
24.60	1-22' SBM, 1-34'-6" SBM, 1-24'-6" SBM	Open	Roadway	Riverside Drive
24.70	4-74'-6" DPG	Open	Water	Iowa River
24.80	1-14' TPG, 1-24'-9" TPG, 1-20'-3" TPG, 1-24'-6" TPG, 1-17' TPG	Open	Roadway	Iowa Avenue
24.90	1-19'-6" RC, 1-20'-10" RC, 1-19'-6" RC	Ballast	Pedestrian	University Library Pedestrian Underpass
25.75	3-24'-8" SBM	Open	Water	Ralston Creek

Source: CRANDIC

Bridge Type Notes:

- DPG – Deck Plate Girder
- RC – Reinforced Concrete Span
- SBM – Steel Beam Span
- TPG – Through Plate Girder

Drainage Structures in the CRANDIC Corridor Right-of-Way

CRANDIC Milepost	Culvert Description	Crossing Type	Length (Feet)
19.50	1-3' CCP	Water	86
20.00	1-0.67' CCP	Water	72
20.50	1-1.5’ VCP	Water	50
21.35	1-2' SSP	Water	54
21.40	1-3' CCP	Water	40
21.41	1-1.5' CMP	Water	42
21.60	1-2' CCP	Water	94
21.75	1-6' CCP	Water	75
22.00	1-4' CMP	Water	67
22.30	1-2' CMP	Water	85
22.33	1-1.5’ SSP	Water	70
22.40	2-4' CCP	Water	81
24.45	1’- CCP (Unknown Diameter)	Water	71
24.69	1-8'x8' RCB	Pedestrian	50
24.71	1-5'x7' RCB	Pedestrian	27

Source: CRANDIC

Drainage Structures Notes:

- CCP – Circular Concrete Pipe
- CMP – Corrugated Metal Pipe
- SSP – Smooth Steel Pipe
- VCP – Vitrified Clay Pipe

Appendix B. Inventory of the Existing Location and Type of At-Grade Crossings between Roadways and the Rail Line within the CRANDIC Corridor Right-of-Way between Iowa City and Oakdale

Roadway	CRANDIC Milepost	FRA Grade Crossing Number	Type of Crossing
Gilbert Street (Iowa City)	25.78	607299C	Active (Public)
Lafayette Street Alley	25.70	Not Assigned	Passive (Private)
Dubuque Street	25.66	607300U	Passive (Public)
Clinton Street	25.59	840196P	Passive (Public)
Capitol Street	25.50	840192M	Passive (Public)
Court Street	25.15	840191F	Passive (Public)
Burlington Street	25.10	840190Y	Active (Public)
University Library Access	25.00	909194Y	Passive (Public)
Kings Material South Entrance	23.21	Not Assigned	Passive (Private)
Kings Material North Entrance	23.20	840182G	Passive (Private)
First Avenue (Iowa River Power House Entrance)	23.06	840181A	Active (Public)
Quarry Road	22.92	840180T	Passive (Private)
First Avenue	22.90	840179Y	Active (Public)
Seventh Avenue	22.30	909184T	Passive (Public)
Tenth Street	21.80	840177K	Active (Public)
Twelfth Avenue	20.70	840173H	Active (Public)
Lynncrest Drive	20.30	909032W	Passive (Public)
North Ridge Trail	20.15	840262A	Passive (Public)
Substation Tiffin-Tharp	19.95	Not Assigned	Passive (Private)
Postal Road	19.80	840261T	Passive (Public)
Oakdale Boulevard (Oakdale)	19.70	840260L	Active (Public)

Source: CRANDIC

Appendix C. Legal Resources for Rails-to-Trails

Rails-to-Trails Conversions: A Legal Review[1]

By Andrea C. Ferster, General Counsel, Rails-to-Trails Conservancy

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Introduction

The construction and development of our nation's system of rail lines was nothing short of a marvel. At its 1916 peak, more than 270,000 miles of track crisscrossed the United States, carrying freight and passengers and fueling the economy and growth of a nation. At the turn of the century, the country's labyrinth of rail lines hauled food to market, moved the coal that heated cities and took settlers into the Western frontier. The strength of our national rail system has also been critical to our national defense. Indeed, the trains that moved iron ore from the Mesabi Range to the steel mills of the Great Lakes helped win World War II.

Just as the miles of rail line peaked, however, other methods of increasingly popular transport—most notably the trucking industry—began eclipsing the rail industry's dominance, and a long period of decline began. Some railroad lines became underused and unprofitable. In the 1970s, several major railroads went bankrupt, and carriers began abandoning rail lines at an alarming rate (4,000 to 8,000 miles per year). Our nation's rail corridor system, "painstakingly created over several generations," was at risk of becoming irreparably fragmented.[2] Like Humpty Dumpty, once broken into hundreds of parcels of land, it would be virtually impossible to recreate our national rail corridor system due to the difficulties and costs of assembling land in a more populous, increasingly urbanized 21st century America.

The possibility of creating trails for recreation and non-motorized transportation on these unused railroad corridors became both the opportunity and the solution. With their gentle grades, often following rivers and traversing scenic landscapes, rail corridors made ideal trails, turning vacant, sometimes derelict properties into linear parks and filling an increasing public need for outdoor recreation areas. According to the database maintained by Rails-to-Trails Conservancy, as of April 2017, there were 2,032 open rail-trails totaling 22,760 miles in all 50 states and the District of Columbia, including such national gems as Massachusetts' Minuteman Bikeway, which roughly follows the route of Paul Revere's famous ride, and Missouri's 240-mile Katy Trail State Park.

Rail-trails are subject to a unique, and occasionally complex, mixture of federal and state law. Many rail-trail conversions are "railbanked" under Section 8(d) of the National Trails System Act, often called "the Railbanking Act" or the "Rails-to-Trails Act."[3] This important federal law, enacted by Congress in 1983 to preserve established railroad corridors for interim trail and future rail use, preempts state or local laws that are inconsistent with these goals.

Other rail-trail conversions take place after the corridors have been legally "abandoned" and are therefore subject to the vagaries of state law in resolving ownership disputes. And railroad corridors that were originally assembled through federal land grants or federal grants-in-aid of construction are subject to their own unique set of federal laws governing post-railroad use and disposition.

This article provides a summary of the legal issues that often arise in rails-to-trails conversions, as well as an overview of how some of those issues have been resolved. While citations to pertinent case law are provided, this article does not provide an exhaustive review of relevant legal authority.[4]

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[2] *Reed v. Meserve*, 487 F.2d 646, 649 (1st Cir. 1973).

[3] 16 U.S.C. § 1247(d).

[4] It is important to note that every rails-to-trails conversion is unique and may require different legal tools or applications of law. This article does not provide legal advice and is not a substitute for securing the assistance of experienced legal counsel.

Federal Regulation of Railroads and State Law Obstacles to Corridor Preservation

Railroads have been subject to federal regulation since 1887, first by the Interstate Commerce Commission (ICC) and since 1991 by the Surface Transportation Board (STB), an agency presently located within the U.S. Department of Transportation.[5] Railroads subject to STB's jurisdiction (basically, railroads operating freight service in interstate commerce) may neither discontinue rail service nor abandon its real property interest in the corridor until the STB issues a certificate of public convenience and necessity authorizing "abandonment."[6] The STB has the exclusive authority to determine whether a railroad has abandoned its line.[7]Any state or local law that interferes with the STB's authority to regulate railroads is preempted and therefore cannot be enforced.[8]

In 1980, Congress significantly loosened the restrictions on railroad abandonments in order to allow the then financially beleaguered railroad industry to shed duplicative or unprofitable lines.[9] Railroads that had been out of service for two or more years were permitted to abandon their lines through a much more abbreviated "notice" process.[10] As a result, the rate of rail abandonments by major carriers accelerated to between 4,000 to 8,000 miles a year.[11] By 1990, the 270,000-mile system had contracted to 141,000 miles.

As thousands of miles of rail lines each year were given abandonment authorization, the railroads then removed tracks and ties and either sold off the underlying property or allowed it to be claimed by adjacent landowners. Without a program for preserving these corridors, our nation's rail system was at risk of becoming irreparably fragmented.

The Emergence of Railbanking and Its Antecedents

The U.S. Congress attempted to address the alarming loss of our national rail corridor infrastructure as part of the Railroad Revitalization and Regulatory Reform Act of 1976 (4-R Act). This law authorized the ICC to impose a Public Use Condition as part of the abandonment authorization, which deferred the disposition of railroad rights-of-way for 180 days to allow for possible transfers for public use, including rails-to-trails conversions.

However, interested communities and potential trail managers who wanted to purchase unused railroad corridors for conversion into trails faced major obstacles under the set of rules in effect at that time. The biggest challenge came from nearby landowners, many of whom believed—rightly or wrongly—that they were entitled to take possession of the land upon abandonment of rail service.

The problem was that once the STB lost jurisdiction over the corridor, state law principles that might otherwise find that the railroad had "abandoned" its property interest were no longer preempted. As Congress recognized, "[t]he concept of attempting to establish trails only after the formal abandonment of a railroad right-of-way is self-defeating; once a right-of-way is abandoned for railroad purposes there may be nothing left for trail use."[12]

State law rarely had a clear answer to the question of who owns a railroad corridor and the effect of conversion into a trail. **[See Disputes Over Ownership of Rail-Trails, below.]** The possibility of costly and time-consuming "quiet title" litigation disputing a trail manager's ownership of a corridor was a significant disincentive to making the significant investment in a rails-to-trails conversion.

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[5]ICC Termination Act, 109 Stat. 803 (1995).

[6]*Chicago & N.W. Transp. Co. v. Kalo Brick & Tile*, 450 U.S. 311, 321 (1981).

[7]*Grantwood Village v. Missouri Pac. RR Co.*, 95 F.3d 654 (8th Cir. 1996), *cert. denied,* 519 U.S. 1149 (1997).

[8]*City of Auburn v. United States,* 154 F.3d 1025 (9th Cir. 1998) (state and local environmental and land use regulation preempted).

[9]The Staggers Rail Act, Pub. L. No. 96-448, 94 Stat. 1895 (1980).

[10]49 C.F.R. § 1152.50.

[11]Association of American Railroads, *Railroad Facts* (1992).

[12]H.R. Rep. No. 98-28, at 8-9 (1983), *U.S. Code Congressional & Administrative News* 1983, p. 119, 120.

In 1983, Congress devised a solution. Section 8(d) of the National Trails System Act established "the national policy to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use."[13] This law allowed a railroad to divest itself of responsibility for an unneeded rail line by transferring it to a qualified private or public agency for interim use as a trail until such time as the line is needed again for rail service. This process is called "railbanking."

How the Federal Railbanking Process Works

Railbanking allows a rail carrier to transfer an unprofitable or unwanted line "by sale, donation or lease" to a public or private entity (called an "interim trail manager") that is willing to assume financial responsibility for the management of the right-of-way. The process is administered by the STB, which has promulgated regulations governing the program.[14]

The opportunity to railbank a corridor for interim trail use begins when a railroad requests permission from the STB to abandon rail service on a line. The STB has the exclusive authority to permit a railroad to abandon or discontinue rail service on a regulated line, and will permit abandonments or discontinuances only upon a determination that the "present or future public convenience and necessity require or permit the abandonment."[15]

Abandonment proceedings can be either fully regulated or "exempt." A fully regulated abandonment proceeding applies to active rail lines not otherwise exempted from full regulation and allows more generous time frames and opportunities for public participation, protests, hearings and appeals.[16] Alternatively, the STB has the authority to "exempt" certain rail lines from the normal abandonment process.[17] Exempt abandonment procedures are generally available where a corridor has been out of service for more than two years.[18] The vast majority of rail abandonments now follow these exempt procedures.

In response to notice of both regulated and exempt abandonment proceedings, shippers or other carriers are given an opportunity to file an Offer of Financial Assistance (OFA) to continue or subsidize rail service.[19] If an OFA is accepted, the corridor will not be railbanked.

[13] 16 U.S.C. § 1247(d).
[14] 49 C.F.R. § 1152.29 for regular abandonments, and 49 C.F.R. § 1152.50 for "exempt" abandonments.
[15] 49 U.S.C. § 10903(d).
[16] 49 C.F.R. § 1152.
[17] 49 U.S.C. § 10502.
[18] 49 C.F.R. § 1152.50.
[19] 49 C.F.R. § 1152.27.

The railbanking process works as follows:[20]

- An interested trail manager can request a railbanking order within 30 days after the railroad files an application for an abandonment with the STB (or, in the case of "exempt abandonments," within 10 days of publication of a Notice of Exemption in the Federal Register).

- The STB will consider "late-filed" railbanking requests so long as it has jurisdiction to do so. The STB's authority to railbank the corridor is terminated only after abandonment authorization is issued and the railroad notifies the STB that it has taken steps to consummate the abandonment.

- Either a public agency or a qualified organization can submit a railbanking request to the STB. A statement of willingness to assume financial and legal responsibility must accompany the request, along with a map of the right-of-way and a filing fee set by the STB.[21] This fee is waived for federal government agencies and local or state government entities.[22] Since the railroad company must agree to negotiate a railbanking agreement, a copy of the request for railbanking must be served on the railroad at the same time it is sent to the STB.

- If the railroad agrees to enter into negotiations with the trail manager, and no Offer of Financial Assistance to allow for continued freight rail service is submitted or accepted, the STB issues a Notice or Certificate of Interim Trail Use in lieu of an order authorizing the railroad to fully abandon the line. This railbanking order gives the railroad and a qualified agency or group 180 days (which may be extended) to negotiate a voluntary agreement for the transfer (by sale, lease or donation) of the corridor for interim trail use. During that period, the railroad may remove tracks, ties and any other property from the corridor so long as any such removal is consistent with interim trail use.

- If an agreement is reached for transfer of the corridor to the trail manager during the negotiating period, the corridor is added to the national "railbank" for so long as the trail use continues or until the corridor is need for future restoration of rail service. If no agreement is reached, the abandonment becomes final upon the satisfaction of any other conditions that may have been imposed by the STB (e.g., environmental, historic preservation).

[20]This information can also be found on RTC's website: https://www.railstotrails.org/build-trails/trail-building-toolbox/railbanking/.

[21]A sample Statement of Willingness can be found on RTC's website: https://www.railstotrails.org/resourcehandler.ashx?id=4614.

[22]49 C.F.R. § 1002.2.

Scope of the STB's Railbanking Authority

The Railbanking Act has engendered a body of judge-made law, resolving issues ranging from the constitutionality of the law to challenges to regulations implementing the program.[23]

One of the most important cases is *Preseault v. ICC*, in which the U.S. Supreme Court unanimously upheld the constitutionality of the Railbanking Act as a valid exercise of Congress' power under the Commerce Clause. In upholding the constitutionality of the law, the Court stated: "Congress apparently believed that every line is a potentially valuable national asset that merits preservation even if no future rail use for it is currently foreseeable."[24] The Court also held that any claim that the Railbanking Act "takes" private property without the just compensation required by the Fifth Amendment to the U.S. Constitution can be addressed by filing a claim for compensation under the Tucker Act. [**See Railbanking and "Takings", below.]**

The STB views its authority under the Railbanking Act as both limited and ministerial; the STB will not issue a railbanking order where the railroad is not willing to negotiate.[25] However, if the railroad is willing to negotiate, the STB will issue a railbanking order, even where the request is not timely made, so long as it has jurisdiction to do so.[26] The ICC has long stated that its policy is to apply Section 8(d) liberally in light of strong congressional intent favoring trail use/railbanking.[27]

The STB's continued jurisdiction over a line that has been authorized for abandonment depends on whether the railroad has "consummated" the abandonment authorization. If the railroad consummates its abandonment authority prior to the request for a Notice of Interim Trail Use (NITU), then the STB loses its jurisdiction over the corridor.[28]

For railroads that have received abandonment authorization prior to 1997, there is no time limit on when a railroad is required to consummate abandonment authorization. Instead, whether abandonment authority has been "consummated" is based on "a spectrum of facts varying as appropriate from case to case."[29] If these factors are satisfied, the STB loses jurisdiction over the line, notwithstanding the existence of an extant post-abandonment condition that has not been discharged.[30]

In 1997, the STB changed its rules to provide greater clarity regarding when a railroad has "consummated" abandonment authorization. For abandonments authorized after Jan. 23, 1997, a railroad must provide notice to the STB that it has consummated abandonment authorization and fully abandoned the line (e.g., discontinued operations, salvaged the track, canceled tariffs and intends that the property be removed from the interstate rail network). If no notice is filed within one year of the abandonment authorization (and there are no outstanding conditions, including trail use conditions), authority to abandon will automatically expire, and the corridor will remain under the STB's jurisdiction. The railroad may, with good cause, file a request in advance of the expiration date seeking an extension of time to file the notice of consummation.[31]

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[23] *See, e.g., National Wildlife Federation v. ICC,* 850 F.2d 695 (D.C. Cir. 1988) (upholding the ICC's interpretation of the Trails Act as authorizing only voluntary transactions between railroads and trails groups).

[24] *Preseault v. ICC,* 494 U.S. 1 (1990).

[25] *National Wildlife Federation v. ICC*, 850 F.2d 694, 699-702 (D.C. Cir. 1988).

[26] *See Rail Abandonments: Supplemental Trails Act Procedures*, 4 ICC2d 152, 157-58 (1987); *Illinois Commerce Comm'n v. ICC,* 848 F.2d 1246, 1261 (D.C. Cir. 1988), *cert. denied,* 488 U.S. 1004 (1989).

[27] *Missouri Pacific R.R.—Abandonment In Okmulgee, OK*, No. AB-3 (Sub-No. 63), 1990 ICC Lexis 414 (ICC Dec. 19, 1990).

[28] *Fritsch v. ICC,* 59 F.3d 248 (D.C. Cir. 1995), *cert. denied, sub. nom CSX Transportation v. Fritsch,* 516 U.S. 1171 (1996) (holding that ICC lacked jurisdiction to issue railbanking order notwithstanding timely issuance of a Public Use Condition); *Becker v. STB*, 132 F.3d 60 (D.C. Cir. 1997) (STB lacks jurisdiction to railbank once abandonment has been consummated.).

[29] *Black v. ICC*, 762 F.2d 106, 113 n.15 (D.C. Cir. 1985).

[30] *Birt v. STB,* 90 F.3d 580 (D.C. Cir. 1996).

[31] 49 C.F.R. § 1152.29(e)(2).

If the STB has jurisdiction over the corridor and the railroad consents to railbanking, the STB will not refuse to issue a railbanking order based on third-party objections about the desirability or appropriateness of trail use.[32] The STB has authority to revoke a trail condition only if it is shown that the statutory requirements are not being met *(*i.e., the trail user is not meeting its financial obligations for the property and its use as a trail).[33]

The courts have rejected efforts by trail opponents to add burdensome procedural requirements, such as personal notification to adjacent landowners, to the railbanking process.[34] The STB's responsibilities under the federal environmental and historic preservation laws, such as the National Environmental Policy Act (NEPA)[35] and Section 106 of the National Historic Preservation Act (NHPA)[36], have also been clarified through litigation.[37] \Other actions taken by a railroad post-abandonment authorization can cause the STB to lose jurisdiction over a corridor. For example, the STB will not issue a railbanking order if the railroad has sold full-width sections of a corridor for non-transportation uses[38] or if the corridor has become severed from the national rail system.[39]

Private Railbanking

The STB has ruled that protective features of the Railbanking Act apply even where a corridor is not subject to STB jurisdiction, so long as the corridor has not been fully "abandoned" under applicable state law.[40] This is called "private railbanking."

The Pennsylvania Supreme Court upheld the validity of private railbanking where the relevant instruments of transfer and/or the recorded deed include provisions that the railroad retains the right to reactivate rail service on the corridor.[41] Private railbanking has been upheld even where the railroad declines to consent or participate in the railbanking agreement.[42]

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[32]*Citizens Against Rails-to-Trails v. STB*, 267 F.3d 1144 (D.C. Cir. 2001).

[33]*Jost v. STB*, 194 F.3d at 88-89 (upholding STB's issuance of NITU based on rebuttable presumption that a trail manager is qualified).

[34]*National Ass'n of Reversionary Property Owners v. ICC,* C.A. No. 94-1581 (D.C. Cir., Nov. 3, 1995) (STB need not provide notice to persons who may have a property interest in the rail corridor prior to issuing a railbanking order.).

[35]42 U.S.C. § 4321, *et seq*.

[36]54 U.S.C. § 306108.

[37]*Goos v. ICC,* 911 F.2d 1283 (8th Cir. 1990) (STB need not undertake any environmental review prior to issuing railbanking orders; NEPA compliance occurs in connection with STB consideration of the application for abandonment authorization.); *Friends of Atglen-Susquehanna Trail, Inc. v. STB,* 252 F.3d 246 (3d Cir. 2001) (STB has ongoing responsibility to comply with NHPA in connection with abandonment decision.).

[38]*Jost v. STB*, 194 F.3d 79, 87 (D.C. Cir. 1999) (full-width sales of sections of the corridor is material evidence for the STB to consider in deciding whether the railroad abandoned the line prior to the issuance of the railbanking order.)

[39]*RLTD Railway Corp. v. STB,* 166 F.3d 808 (6th Cir. 1999) (upholding STB decision that it lacks jurisdiction to railbank corridor that was severed from the interstate rail system).

[40]*Southern Pacific Transportation Co., Exemption,* 1991 WL 108272 (I.C.C. 1991).

[41]*Buffalo Township v. Jones*, 813 A.2d 659 (Pa. 2002), *cert. denied,* 540 U.S. 821 (2003).

[42]*Moody v. Allegheny Valley Land Trust,* 976 A.2d 484 (Pa. 2009), *cert. denied*, 559 U.S. 537 (2010).

Federal Preemption

A key feature of the Railbanking Act is its preemption of conflicting state law.[43] When a trail is railbanked, the statute expressly provides that interim trail use of railbanked corridors "shall not be treated, for purposes of any law or rule of law, as an abandonment of the use of such rights-of-way for railroad purposes."[44]

Relying on the principle of federal preemption, the courts have uniformly rejected efforts by trail opponents to attack railbanking orders indirectly through challenges to an interim trail manager's ownership or use of a railbanked corridor.[45] Principles of federal preemption also bar efforts by local governments to acquire by condemnation any portion of corridor that has not be abandoned for any other use, including trail use.[46]

Nor will the courts enforce state or local laws that might operate to interfere with the trail manager's ownership or right to use the corridor.[47] State court actions brought by adjacent landowners seeking "quiet title" to a railbanked corridor can be removed to federal court and then dismissed for lack of jurisdiction.[48] Federal preemption is the basis for lawsuits brought by trail managers to eject or enjoin adjacent landowners from encroaching on or interfering with interim trail use of a railbanked corridor.[49]

Lawsuits seeking to prevent trail use based on allegations that railbanking works as a "taking" are also barred.[50] (Lawsuits seeking compensation from the United States based on such "takings" allegations may be brought, but only under the federal Tucker Act; **see Railbanking and "Takings", below**).

However, the Railbanking Act does not preempt the authority of state or local governments to enact reasonable regulations concerning the management of railbanked rail-trails.[51] Different courts have reached different conclusions about what constitutes a reasonable regulation. For example, one court found that a local ordinance enacted to protect wetlands that requires the manager of a rail-trail to explore alternatives to constructing a trail on the rail bed is preempted.[52] A court has also held that railbanked rail-trails need not comply with local zoning ordinances.[53] On the other hand, the Kansas Supreme Court held that a state law imposing management responsibilities on the managers of railbanked trails—including providing trash receptacles and cleanup of trash and litter, providing law enforcement along the trail, and maintaining and installing fencing between the trail and adjoining property—was not preempted.[54]

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[43] 49 U.S.C. § 10501(b).

[44] 16 U.S.C. § 1247(d).

[45] *See, e.g., Dave v. Rails to Trails Conservancy,* 863 F. Supp. 1285 (E.D. Wash. 1994), *aff'd,* 79 F.3d 940 (9th Cir. 1996).

[46] *City of Lincoln v. Surface Transportation Board,* 414 F.3d 858 (8th Cir. 2005).

[47] *Friends of the East Lake Sammamish Trail v. City of Sammamish*, 361 F. Supp.2d 1260 (W.D. Wash. 2005) (city law requiring consideration of alternatives to trail held preempted by railbanking law).

[48] *Grantwood Village v. Missouri Pacific Railroad Co.*, 95 F.3d 654 (8th Cir. 1996), *cert. denied*, 519 U.S. 1149 (1997); *Victor Oolitic Stone Co. v. CSX Transp., Inc.*, 852 F. Supp. 721 (S. D. Ind. 1994); *Schneider v. Union Pacific R. Co.*, 864 F. Supp. 12 (D. Neb. 1994).

[49] *Palmetto Conservation Foundation v. Smith*, 642 F.Supp.2d 518 (D.S.C. 2009).

[50] *See, e.g., Louisiana Pacific Corp. v. Texas Dep't of Transp*., 43 F. Supp.2d 708 (E.D. Tex. 1999); *Good v. Skagit County*, 17 P.3d 1216 (Wash. App. Div. 1, 2001).

[51] *Bd. of Comm'rs v. Kanza Rail-Trails Conservancy, Inc*., 255 P.3d 1186, 1198-99 (Kan. 2011).

[52] *Friends of the East Lake Sam. v. City of Sammamish*, 361 F.Supp.2d 1260 (W.D. Wash. 2005).

[53] *Township of Bingham v. RLTD Railroad Corp.*, 576 N.W.2d 731 (Mich. App. 1998).

[54] *Miami County Bd. of Commissioners v. Kanza Rail–trails Conservancy Inc.,* 292 Kan. 285, 255 P.3d 1186 (Kan. 2011).

Permissible Uses of Railbanked Corridors

The STB has consistently taken the view that a trail sponsor is not limited to trail use but may make any use of a railbanked corridor that is consistent with trail use.[55] For example, the STB has specifically acknowledged the appropriateness of using a railbanked corridor for highway and transit purposes in addition to (but not instead of) trail uses.[56] The STB has also allowed other "dual uses of trails," including uses "of the right-of-way as both a trail and a utility corridor ... "[57]

The courts have also recognized that the interim trail manager has broad authority to manage trail use of a railbanked corridor. This includes the right to limit access to the trail by adjacent landowners,[58] the right to exclusive use of portions of the right-of-way beyond the width of the trail,[59] and rights to use the corridor's surface, subsurface and aerial space for utility or transit purposes.[60]

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[55] *Rail Abandonments—Use of Rights-of-Way As Trails—Supplemental Trails Act Procedures*, Ex Parte No. 274 (Sub-No. 13), 1989 WL 238631 at *5 n.10 (decided May 18, 1989) ("If the rail carrier's interest allows different uses (such as underground cable) we see no reason why a trail operator should not be able to do the same. The reversionary property owner's position has not changed.").

[56] *The Baltimore and Ohio R. Co.—Abandonment and Discont. Of Ser.—in Montgomery County, MD and the Dist. of Columbia*, ICC Docket No. AB-19 (Sub-No. 112), 1990 WL 287371, *2 (Service Date March 2, 1990).

[57] *Kansas Eastern RR, Inc.—Abandonment Exemption—in Butler and Greenwood Counties, KS*, STB Docket No. AB-563 (Sub-No. 1X), 2006 WL 1516602, *3 (Service Date June 1, 2006); *T and P Railway—Abandonment Exemption—In Shawnee, Jefferson and Atchison Counties, KS*, STB Docket No. AB-381 (Sub-No. 1X), 1997 WL 68211, *5, *7 n.16 (Service Date Feb. 20, 1997), *rev'd on other grounds*, *Becker v. Surface Transp. Bd.*, 132 F.3d 60 (1997).

[58] *Trevarton v. State of South Dakota,* 817 F.3d 1081 (8th Cir. 2016).

[59] *Hornish v. King County,* --- F.Supp.3d ----, 2016 WL 1588346 (E.D. Wash. 2016), *appeal pending,* Case No. 16-35486 (9th Cir., filed June 9, 2016).

[60] *Kaseburg v. King County,* --- F.Supp.3d ----, 2016 WL 4440959 (W.D. Wash. 2016), *appeal pending,* Case No. 16-35768 (9th Cir., filed Sept. 23, 2016).

Reactivation of Rail Service

The fundamental premise of the Railbanking Act was that once a rail corridor is placed in railbanking status, the railroad is entitled to reinstitute freight rail service on the line without the necessity of a full-blown application to construct a new railroad. As such, the STB will vacate the railbanking order at the request of a railroad.[61]

The terms and conditions under which any rail property is returned to the railroad is generally governed by state law.[62] For that reason, many trail managers address the terms and conditions under which the railroad will compensate the interim trail manager in the event of rail service reactivation in their interim trail use/railbanking agreements.

The STB has made clear that the abandoning railroad retains the right to reactivate freight rail service as part of its "residual common carrier obligation."[63] The abandoning carrier may transfer its reactivation rights to another carrier.[64] In addition, any third-party railroad operator may petition the STB to vacate a railbanking order so as to reactivate freight rail service on the line. However, a reactivation request may be denied if the STB determines that the railroad is not a "bona fide" petitioner because it lacks sufficient financing and fails to demonstrate sufficient shipper demand to warrant the proposed reactivation.[65]

Railbanking and "Takings"

While legal challenges to the ownership or use of railbanked trails are preempted by the railbanking law, aggrieved landowners are not left without a remedy; they may still file a "takings" claim against the United States under the Fifth Amendment to the U.S. Constitution, which requires the government to pay "just compensation" if it "takes" private property for a public use.[66]

Compensation claims arising from the Railbanking Act are filed pursuant to the Tucker Act, which designates a specialized federal court—the U.S. Court of Federal Claims—to resolve "takings" claims against the United States.[67] In addition, under the "Little Tucker Act," claimants seeking compensation less than $10,000 from the federal government can be heard by the federal district court.[68]

The initial difficulties of the judiciary in resolving whether the Railbanking Act "takes" private property were exemplified by the *Preseault* case, noted above, which unsuccessfully challenged the Railbanking Act on its face as a "taking" of their ownership interest in a Vermont railroad corridor. The efforts of the Preseaults to secure compensation have resulted in no less than eight reported court decisions in the state and federal courts. The U.S. Court of Appeals for the Second Circuit, as well as the Claims Court and a three-judge panel of the U.S. Court of Appeals for the Federal Circuit, all initially ruled that the Railbanking Law did not result in a taking of any property interest.[69] These decisions, however, were subsequently reversed by the full Federal Circuit, sitting *en banc*, and a new decision

[61] 49 C.F.R. §§ 1152.29(c)(3), 1152.29(d)(3).

[62] *Georgia Great Southern Division, South Carolina Central Railroad Co., Inc.—Abandonment and Discontinuance Exemption—Between Albany and Dawson, In Terrell, Lee and Dougherty Counties, GA*, No. AB-389 (Sub-No. 1X), 2003 WL 21132515 (STB May 9, 2003).

[63] *Norfolk & W. Ry.—Aban. Between St Marys and Minster in Auglaize Cnty., Ohio*, 9 I.C.C. 2d 1015 (1993).

[64] *See, e.g., RJ Corman Railroad Co./Pennsylvania Lines, Construction and Operation Exemption—Line of Norfolk Southern Railway, in Clearfield County, PA*, FD No. 35143 STB served June 5, 2008).

[65] *See, Ballard Terminal Railroad Co. L.L.C., Acquisition and Operation Exemption—Woodinville Subdvision, in King County, WA,* FD No. 35731 (STB served Dec. 30, 2014).

[66] *See Preseault v. ICC,* 494 U.S. at 11-12.

[67] 28 U.S.C. § 1491(a)(1).

[68] 28 U.S.C. § 1346(a)(2).

[69] *Preseault v. ICC,* 853 F.2d 145, 151 (2d Cir. 1988), *aff'd on other grounds*, 494 U.S. 1 (1990); *Preseault v. U.S,*, 27 Fed. Cl. 69 (1992), *aff'd*, 66 F.3d 1190 (Fed. Cir. 1995), *vacated*, 100 F.3d 1525 (1996).

was issued by a plurality of the court, along with a concurring and a dissenting opinion.[70]

The plurality decision in the *Preseault* case held that the application of the Railbanking Law under the facts of that case resulted in a physical occupation of the underlying property, which is a category of government action that constitutes a *per se* taking. As a result, the only issue in the case was whether, under Vermont state property law, the railroad held an easement interest that had been abandoned—a question answered in the affirmative by the Court. The decision, however, made clear that the federal government, and not the trail manager, was solely responsible for the payment of any compensation owed. Moreover, the sole remedy available to the claimant is payment of just compensation; trail use cannot be halted or disrupted.

As a plurality rather than a majority decision, the Federal Circuit's decision in *Preseault* has no precedential value and is in conflict with the analysis of the Second Circuit. Moreover, the analysis of the plurality decision has come under substantial scholarly criticism.[71] However, because the Federal Circuit is the only federal appellate court designated to hear appeals involving "takings" claims against the federal government, absent review by the U.S. Supreme Court, the analysis of the Federal Circuit's plurality decision in *Preseault* establishes the applicable jurisprudence for judicial review of takings cases involving the Railbanking Act.

As the Supreme Court explained in the 1990 *Preseault* case, "under any view of takings law, only some rail-to-trail conversions will amount to takings ... Others are held as easements that do not even as a matter of state law revert upon interim use as nature trails."[72] Subsequent "takings" cases therefore focus on whether claimants can establish, under the applicable state law, a property interest in the railroad corridor that would have become possessory but for the application of the Railbanking Act.

There are now a number of "takings" cases pending in courts around the country and in the U.S. Court of Federal Claims. Many of the cases have been certified as class actions on behalf of all persons claiming a compensable interest in the railbanked corridor. One case has been certified as a statewide class action.[73] The U.S. Court of Appeals for the Federal Circuit has resolved appeals in several of these cases.[74] The Federal Circuit has also clarified that the six-year statute of limitations for filing takings claims begins to run when the first railbanking order is issued by the STB rather than when a railbanking/interim trail use agreement is reached.[75]

The liability of the United States in these cases was significantly expanded in 2010, when a panel of the Federal Circuit held that mere issuance of the NITU was a *per se* taking by way of a physical occupation of Plaintiffs' property, even though no interim trail use agreement was reached, no trail use occurred, and therefore no physical occupation of Plaintiffs' property occurred.[76] The panel expressed the view that it was bound by the Circuit's analysis in the prior decision establishing the issuance of the NITU as the date that the six-year statute of limitations for filing a "takings" claim begins to run. The United States has recently

[70] *Preseault v. U.S.,* 100 F.3d 1525 (Fed. Cir. 1996).

[71] Allen, R. A. (2003). Does the Rails-to-Trails Act Effect a Taking of Property? *Transportation Law Journal, 31*(1), 35-68.; Wright, D. C. (2001). Eminent Domain, Exactions, and Railbanking: Can Recreational Trails Survive the Court's Fifth Amendment Takings Jurisprudence. *Columbia Journal of Environmental Law, 26*(2), 399-481.

[72] *Preseault v. ICC*, 40 U.S. at 924.

[73] *Schneider v. United States,* No 8:99CV315 et al. (D. Neb. Aug. 29, 2003).

[74] *See, e.g., Chevy Chase Land Co.. v. United States*, 158 F.3d 574 (Fed. Cir. 1998), *cert. denied,* 531 U.S. 957 (2000) (finding no taking under applicable principles of Maryland Law); *Toews v. U.S.A.,* 376 F.3d 1371 (Fed. Cir. 2004) (finding liability based on California law).

[75] *Caldwell v. U.S.A.*, 391 F.3d 1226 (Fed. Cir., 2004) *cert. denied,* 126 S.Ct. 366 (2005); *Barclay v. United States,* 443 F.3d 1368 (Fed. Cir. April 11, 2006).

[76] *Ladd v. United States*, 630 F.3d 1015, 1019 (Fed. Cir. 2010), *reh'g and reh'g en banc denied*, 646 F.3d 910 (2011).

asked the full Federal Circuit to revisit this ruling.[77]

The current state of the law in the "takings" cases has incentivized the filing of "takings" claims involving the railbanking law, resulting in substantial payments by the United States to the claimants and to their attorneys.[78] However, a judgment in favor of the landowners in a "takings" case does not overturn the STB's railbanking order that facilitates the rails-to-trails conversion, nor does it affect the trail managers' continued ability to use the corridor for trail purposes. The sole remedy available to these claimants is compensation for the "fair market value" of the land occupied by the railbanked rail corridor.

Disputes Over Ownership of Rail-Trails

Unlike railbanked corridors, managers of rail-trails that have not been railbanked remain vulnerable to being dispossessed by "quiet title" lawsuits. Quiet-title litigation refers to an action brought under state law to secure a judicial declaration that permanently resolves adverse claims of ownership interest and rights in property.

Determining the nature of the ownership interest acquired by a railroad often requires a parcel-by-parcel inquiry, under which the language of the railroad deeds is examined and viewed against the applicable common and statutory law, including both current law and the laws in place at the time of the original acquisition. Each state applies its own rules of construction.[79]

Resolution of questions over the ownership of a rail-trail typically involves the following legal issues:[80]

- **What is the nature of the interest acquired by the railroad?** A railroad might acquire one of at least seven common property interests: fee simple absolute, fee simple determinable, fee simple subject to condition subsequent, a general easement, a limited easement, a lease or a license.

- **What state laws apply?** In the case of conditional fees (called defeasible fees) that may be subject to divestment or reversion upon the occurrence of a specified event, such as cessation of rail service, state law may extinguish any possibilities of reverters or other conditions on a base fee that are not formally recorded through "marketable title" laws.

- **What are the applicable principles of deed construction?** In many cases, railroad deeds do not clearly denominate the interest as either a "fee simple" or an "easement" interest, but instead refer simply to a grant of land, with or without a reference to a "right-of-way." There is considerable conflict in the case law as to the construction of such deeds as conveying a fee or easement.[81] Some courts have held that the term "right-of-way" could be either a fee or an easement, and thus resort to rules of construction or extrinsic evidence to aid in discerning the parties' intent.

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[77] *Caquelin v. United States,* Case No. 16-1663 (Fed. Cir., filed March 4, 2016).

[78] Scarcella, M. (2011). DOJ Suffers Defeats in Rails-to-Trails Cases. *The National Law Journal*. Retrieved from https://bit.ly/natl-law-jrn.

[79] *State v. Hess,* 684 N.W.2d 414 (Minn. 2004).

[80] Wright, D. C., & Hester, J. M. (2000). Pipes, Wires, and Bicycles: Rails-to-Trails, Utility Licenses, and the Shifting Scope of Railroad Easements from the Nineteenth to the Twenty-First Centuries. *Ecology Law Quarterly*, 27(2), 351-466.

[81] *See Annotation* "Deed to Railroad Company as Conveying Fee or Easement," 6 A.L.R.3d 973, 977 (1966), and Later Case Service.

- **How was the corridor acquired?** The typical railroad generally acquired its property interests in its corridor through one of four methods: private grant from individuals resulting from negotiations with willing landowners, condemnation proceedings when they were not, federal grants for portions traversing federal lands, or by prescription (adverse possession) where no deed or other ownership document exists. In many states, the manner of acquisition determines the property interest acquired by the railroad.

- **What state law principles govern abandonment?** Where the railroad has acquired an easement over the land, a determination must be made whether the easement has been abandoned. In most states, non-use of an easement, alone, is not sufficient but must be coupled with other affirmative actions, including removal of tracks and ties or piecemeal sales of a railroad corridor.[82]

- **The word "abandoned" has a different meaning under federal and state law.** The STB has the exclusive authority to regulate the abandonment of railroad service.[83] STB abandonment authorization is permissive only; a railroad must still take steps to effectuate that permission.[84] A railroad may fully "abandon" its corridor when the STB has granted the railroad permission to terminate its common carrier obligation to provide rail service on the line and when the railroad consummates that authority.[85] Once the STB has authorized an abandonment, the corridor may or may not be considered "abandoned" under state law depending on the applicable state law factors governing abandonment.

- **Scope of a railroad easement.** Abandonment of a railroad easement may be inferred where the corridor is put to uses that are outside the scope of the easement. Alternatively, in some states, trail use is considered to be within the scope of a railroad easement. This is sometimes known as the "shifting public use policy," under which the railroad easement is deemed broad enough to encompass other types of transportation or public highway uses.[86] Other states have rejected such a policy.[87]

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[82] *See Annotation* "What Constitutes Abandonment of a Railroad Right of Way," 95 A.L.R.2d 468-499 (1966), and Later Case Service.

[83] S*ee Chicago and North Western Transportation Co. v. Kalo Brick & Tile Co.*, 450 U.S. 311, 318 (1981).

[84] *See, e.g., Gulf M. & O. RR.,* 128 F. Supp. 311 (N.D. Ala. 1954), *aff'd,* 225 F2d 816 (5th Cir. 1955), *cert denied,* 350 U.S. 932 (1956). The exception is in Indiana, where a state statute expressly provides that railroad easements terminate upon issuance of an ICC certificate of abandonment, regardless of the terms of the conveyance. *See Penn Central Corp v. United States R Vest Corp*, 955 F2d 1158, 1160 (7th Cir. 1992).

[85] 49 C.F.R. § 1152.50(e).

[86] S*ee State ex Rel. Washington Wildlife Preservation, Inc. v. State*, 329 N.W.2d 543, 545, 547 (Minn. 1983), *cert. denied*, 463 U.S. 1209 (1983) ("Use of the [railroad] right-of-way as a recreation trail is consistent with the purpose for which the easement was originally acquired, public travel, and it imposes no additional burden on the servient estate"); *Hatch v. Cincinnati & I.R.R.*, 18 Ohio St. 92 (1868) (converting a canal into a railroad does not extinguish the original easement); *Rieger v. Penn Central Corp.*, No. 85-CA-11 (Ct. App. Greene County, Ohio, May 21, 1985).

[87] *Schnabel v. County of DuPage*, 429 N.E.2d 671 (Ill. App. 1981); *Pollnow v. State Dep't of Natural Resources*, 276 N.W.2d 738 (Wisc. 1979); *Lawson v. State of Washington*, 730 P.2d 1308 (Wash. 1986).

Federally Granted Rights-of-Way

Many of the railroad corridors in the United States, particularly corridors in the West and Midwest, were assembled with land grants made by the United States government in the 19th century to open up the Western frontier.[88] The early federal grants for railroad construction relied upon individual grants to railroads (or federal grants to a state in trust to employ for the rail line for which the grant was made).

In 1852, Congress adopted a general right-of-way statute, granting a right-of-way across public lands 100 feet in width to "all rail and plank road, or Macadamized turnpike companies...."[89] Under the 1852 Act, the roads were to be begun within 10 years and finished within 15 years thereafter. Moreover, if the road was abandoned, the 1852 Act provided that "said lands hereby granted ... revert back to the general government."[90] In 1875, Congress adopted the Railroad Right of Way Act of 1875, codified at 43 U.S.C. §§ 934-39 ("1875 Act"), granting a right-of-way through public lands.[91]

There has been much litigation over the nature of the interest conveyed by the federal government to the railroads and, particularly, the disposition of federally granted rights-of-way (FGROW) upon cessation of railroad use. In 1922, Congress passed 43 U.S.C. § 912 to dispose of the federal government's retained interests in all FGROW in case of abandonment. Under this statute, any federally granted parcel in a railroad corridor continues to exist as a railroad right-of-way, usable only for railroad or other public highway purposes, until Congress adopts a statute transferring the title[92] or until there is a judicial declaration of abandonment, whichever first occurs.[93] If there is a judicial declaration of abandonment, § 912 provides on its face that the title vests in the person or entity owning the legal subdivision traversed by the FGROW in question, unless (a) the FGROW is in a municipality, in which case it goes to the municipality, or (b) a state or local government establishes a public highway on the FGROW parcel within one year of the judicial declaration of abandonment, in which case the government's interest is transferred to the state or local government. The Courts have determined that 43 U.S.C. § 912 controls disposition of the Civil War-era grants[94] and the pre-Civil War state-mediated grants.[95]

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[88] *See* Gates, P. W., & United States. (1968). *History of Public Land Law Development*. Washington: For sale by the Supt. of Docs., U.S. Govt. Print. Off.; Root, T.E. (1987). *Railroad Land Grants From Canals to Transcontinentals: 1808-1941*. Chicago: Natural Resources Law Section, Monograph Series, No. 4, American Bar Association.

[89] Act of Aug. 4, 1852, 10 Stat. 28, § 1. In the event of deep cuts, the grant was to be of "greater width ... if necessary, not exceeding in the whole two hundred feet."

[90] Id. § 3. There were various extensions of the time deadlines in the 1852 statute until it was eventually supplanted by the 1875 Right of Way Act, discussed infra.

[91] The 1875 Act was repealed as a basis for granting new railroad rights-of-way effective Oct. 21, 1976, by P.L. 94-579, Title VII, § 706(a), 90 Stat. 2793.

[92] *See, e.g., Brown v. Washington,* 130 Wash. 2d 430, 924 P.2d 908, 916 & 924 (1996) (Congress adopts statute authorizing transfer of title to State of Washington for state trail).

[93] As a necessary precondition to seeking a judicial declaration of abandonment for purposes of 43 U.S.C. § 912, the ICC, now the STB, must determine that the line is no longer required in interstate commerce, a process known as "authorizing an abandonment." *Phillips v. Denver & R.G.W. R.,* 97 F.3d 1375, 1377 (10th Cir. 1996), *cert. denied*, 521 U.S. 1104 (1997).

[94] *See, e.g., Vieux v. East Bay Regional Park District,* 906 F.2d 1330 (9th Cir. 1990), *cert. denied,*498 U.S. 967 (1990); *King County v. Burlington Northern*, 885 F. Supp. 1419 (W.D. Wash. 1994).

[95] *See, e.g., Mauler v. Bayfield County,* 204 F. Supp.2d 1168 (W.D. Wis. 2001), aff'd, 309 F.3d 997 (7th Cir. 2002) (applying § § 912-13 to state-mediated pre-Civil War federal railroad grants in Wisconsin); *City of Maroa v. Illinois Central R.R.,* 229 Ill.App.2d 503, 592 N.E.2d 660 (App. 4th Dist.), *appeal denied,* 146 Ill.2d 631, 602 N.E.2d 456 (1992) (applying § 912 to 1850 state-mediated Illinois Central grant); *Marlow v. Malone,* 315 Ill. App.3d 897, 734 N.E.2d 195 (App. 4th Dist. 2000) (same).

In 1988, Congress modified the dispositional scheme of 43 U.S.C. § 912 as part of the National Trails System Act Amendments of 1988.[96] The Trails Act Amendments of 1988 provides that unless a public highway is established on FGROW per 43 U.S.C. §§ 913 or 912 within one year of a judicial declaration of abandonment, the federal interest in FGROW "shall remain in the United States."[97]

Litigation in the "takings" context began to challenge some of the underlying assumptions about the application of 43 U.S.C. § 912 and 16 U.S.C. § 1248(c) to federal grants under the 1875 Act, which facilitated the construction of many of the railroads built west of the Mississippi River. In 2005, the Federal Circuit determined that adjacent landowners whose land was patented from the federal government under the Homestead Act also acquired the federal government's rights to railroad corridors that had been acquired through federal land grants, and therefore 43 U.S.C. § 912 had no applicability.[98] This created a conflict between the Federal Circuit and the Tenth Circuit, which had reached a contrary decision.[99] The U.S. Supreme Court agreed to review this conflict.

In 2014, the Supreme Court adopted the Federal Circuit's reading of the 1875 Act and 43 U.S.C. § 912, holding that the United States retained no interest in 1875 Act rights-of-way where the adjacent lands had been previously conveyed.[100] The Supreme Court believed its decision to be controlled by a prior decision holding, for purposes of subsurface rights, that rights-of-way acquired through federal lands under the 1875 Act are easements that are terminated by the railroad's abandonment, and that the United States does not retain any "reversionary interest" in the rights-of-way.[101]

The Supreme Court's 2014 decision has so far had limited impact on rail-trails. First, the ruling only applies to rail-trails whose corridor was originally acquired by the railroad under the 1875 Act. In addition, the ruling does not directly impact railbanked corridors, which will protect trail managers from direct challenges. Managers of non-railbanked corridors may have a strong defense where the challenges are not brought within the applicable limitations period, which varies dependent on state law.

Conclusion

The law on rails-to-trails conversions is continually evolving as the number of rail-trails increases. Rails-to-Trails Conservancy has materials and resources on its website and provides other services to assist governmental and non-governmental organizations in sorting through the various legal, political and communications issues that may arise during the course of a rails-to trails conversion.

[96] 16 U.S.C. § 1248(c)-(g).
[97] 16 U.S.C. § 1248(c).
[98] *Hash v. U.S.A.*, 403 F.3d 1308 (Fed. Cir. 4, 2005).
[99] *See Marshall v. Chicago & Northwestern Transp. Co*., 31 F.3d 1028 (10th Cir. 1994).
[100] *Marvin M. Brandt Revocable Trust v. United States,* 134 S.Ct. 1257 (2014).
[101] *Great Northern Railway Co. v. United States,* 315 U.S. 262 (1942).

Rail-trails and Liability

A PRIMER ON TRAIL-RELATED LIABILITY ISSUES & RISK MANAGEMENT TECHNIQUES

RAILS to TRAILS CONSERVANCY

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RAILS-TO-TRAILS CONSERVANCY

This report was produced by the Rails-to-Trails Conservancy. Founded in 1986, Rails-to-Trails Conservancy is the nation's largest trails organization with 100,000 members and donors dedicated to connecting people and communities by creating a nationwide network of public trails from former rail lines and connecting corridors. RTC has helped provide new opportunities for outdoor exercise by creating and extending a nationwide network of public trails and greenways. Rails-to-Trails is a 501(c) (3) nonprofit organization and has over 100,000 individual members and donors who support the RTC mission of building and maintaining trails.

RAIL-TRAILS AND LIABILITY

A Primer on Trail-Related Liability Issues & Risk Management Techniques

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in cooperation with

National Park Service
Rivers, Trails and Conservation Assistance Program

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EXECUTIVE SUMMARY

The need for outdoor recreation areas has increased as our population has grown, our built environment has consumed more open space, and people have become more aware of the need to maintain a healthy level of physical activity.

One type of open space that has been receiving increasing amounts of attention and funding is trails. Trails are being built in urban, suburban, and rural areas. They are being built on former rail corridors as well as in vast public lands. People use trails for: walking, jogging, biking, in-line skating, skiing; even equestrians, snowmobilers and people in wheelchairs use them.

With all these uses in a variety of settings come a host of concerns about liability issues. Public agencies that are considering building a trail may worry about user injuries on the trail. Similarly, private landowners who own land adjacent to a trail may worry about trail users wandering off the trail, onto their land and injuring themselves or causing property damage. Or landowners may like to open up their land for recreational use but are concerned about the liability they may incur in doing so.

Fortunately, most states have laws that substantially limit public and private landowner liability. Recreational Use Statutes protect private landowners who want to open their land to the public for recreation free of charge. In some states, these statutes serve to protect public agencies as well. Public agencies, if not protected by the Recreational Use Statute, are often protected by governmental immunities or possess limited liability under a State Tort Claims Act. Private landowners who have land adjacent to a trail are also protected by trespassing laws. For all these parties, insurance can provide protection as well.

While concerns about liability are understandable, real-world experience shows that neither public nor private landowners have suffered from trail development. Adjacent landowners are not at risk as long as they abstain from "willful and wanton misconduct" against trespassers such as recklessly or intentionally creating a hazard. Trail managers minimize liability exposure provided they design and manage the trail in a responsible manner and do not charge for trail access. The table below provides a summary of the protections available and who they apply to.

This report concludes that trail-related liability is primarily a management issue. Laws are in place to protect all parties from unwarranted lawsuits and the rest is up to proper design, maintenance and management.

Useful risk management strategies include:

- During trail design and development, develop a list of potential hazards, design and locate the trail such that dangerous locations are avoided, develop a list of permitted trail uses and the risks associated with each, identify applicable laws, and design and construct the trail in accordance with recognized guidelines.
- Once the trail is open for use, conduct regular inspections, document the results of the inspections and any actions taken, and maintain a plan for handling medical emergencies.

TYPE OF PROTECTION	PUBLIC LANDS	PRIVATE LANDS	ADJACENT LANDOWNER
1) Insurance	Yes	Yes	Yes
2) Recreational Use Statute	Some	Yes	No
3) Trespass Law	No	No	Yes
4) Government Immunity/State/Federal Tort Claims	Yes	No	No

I. INTRODUCTION

Along with the fear of increased crime rates and decreased property values, fear of being threatened with a lawsuit is a common concern among landowners adjacent to a proposed trail. Some landowners fear that a trail user will wander onto their property, get hurt, and sue. Private landowners who permit the general public to use their land for recreational purposes may have these concerns as well.[1] Likewise, potential trail owners and managers are sometimes leery of undertaking a trail project because of the liability exposure. In general, not only are there legal protections for these circumstances but the real threat of such liability does not seem to be common.

Warning signs help minimize the threat of liability. (John McDermott)

Trail skeptics and opponents often declare the liability associated with a trail is so great that communities cannot afford the insurance necessary to protect from potential lawsuits. Real-world experience does not support these concerns. Virtually all rail-trail managers dismiss liability as a problem. Since most trails are owned or operated by a public entity, such as a county parks department or a state department of natural resources, the insurance costs associated with a trail tend to be folded into the overall insurance policy of the city, county or state. When asked, most trail managers were not able to identify the insurance costs associated with their trail.

> Virtually all rail-trails managers dismiss liability as a problem.
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Questions related to legal liability for accidents or injuries on or adjacent to trails must be answered in terms of state common (judge-made) law,[2] which varies from state to state. The following discussion provides a broad overview of trail liability issues, forms of protection, and a discussion of risk management techniques that can be used to minimize risk and reduce liability.

This report outlines the general legal issues associated with trails, including the risks and responsibilities of various constituencies. The intent is to provide trail advocates, adjacent landowners, and trail managers with a background on liability issues to prepare them to pose appropriate questions to their legal counsel when developing a trail or when an accident occurs. This report is not intended as legal advice. If you have a question pertaining to a trail in a specific jurisdiction you should consult a lawyer familiar with the case law pertaining to that jurisdiction.

II. TRAIL LIABILITY CONCERNS AND SOLUTIONS

There are two primary categories of people who might be concerned about liability issues presented by a trail: the trail managing and owning entity (typically a public entity) and private landowners. Private landowners can be divided into two categories, those who have provided an easement for a trail over their land and those who own land adjacent to a trail corridor.

Similarly, there may be a preexisting corridor traversing or lying adjacent to their property such as a former rail corridor that has been converted to a trail. In either situation, private landowners may have some concerns about their liability should a trail user stray onto their land and become injured. In the first instance, where an easement is granted, the concern may be over injuries both on the granted right-of-way as well as injuries that may occur on land under their control that is adjacent to the trail. Under the latter condition, where the landowner has no ownership interest in the trail, the landowner will only be concerned with injury to trail users wandering onto their property and getting hurt or perhaps a tree from their property falling onto the trail.

In general, people owning land adjacent to a trail—whether the trail is an easement granted by them or is held by separate title—foresee that people using the trail may be endangered by a condition on their land. Potential hazards such as a pond, a ditch, or a dead tree may cause the landowner to worry about liability for a resulting injury. The landowner may reduce their liability by taking the following actions (BCEMC 1997, p. 58):

- Work with trail designers to have the trail located away from hazards that cannot be corrected.
- Make it clear that trail users are not invited onto the adjoining land. This can be aided by having the trail designer develop signs, vegetative screening, or fencing.
- If a hazardous condition does exist near the trail, signs should be developed to warn trail users of the hazard if it cannot be mitigated.

The owner of land adjoining a trail may reduce their liability by making it clear that trail users are not invited onto the adjoining land. This can be aided by having the trail designer develop signs, vegetative screening, or fencing.

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Of particular concern to adjacent landowners are attractions to children that may be dangerous, such as a pond. Many states recognize that children may trespass to explore an attractive nuisance. These states require a legal responsibility to children, even as trespassers, that is greater than the duty of care owed to adults (BCEMC 1997, p. 58).

If a landowner provides an easement for a public-use trail, the easement contract should specify that the managing agency will carry liability insurance, will design the trail to recognized standards, and will develop and carryout a maintenance plan. The landowner may also request that an indemnification agreement be created in their favor.

Abutting property owners frequently express concern about their liability to trail users. In general, their liability, if any, is limited and is defined by their own actions in relation to the trail. If an abutting property owner possesses no interest in the trail, then he or she does not have any right or obligation to warn trail users about defects in the trail unless the landowner creates a dangerous condition on the trail by his own act or omission. In that event, the abutting landowner would be responsible for his own acts or omissions that caused the injury to a third party using the trail, just as the operator of one

car is responsible to the operator of another for an accident he caused on a city street (Montange 1989, p. 127).

The fact that a trail is formed on a railroad right-of-way pursuant to section 8(d) of the Trails Act (16 U.S.C. § 1247 (d)), commonly known as railbanking, and that some of the parcels of land comprising the right-of-way were held by the railroad only in easement form does not alter the duty of care of the abutting property owners holding the fee to trail users and is no more than the abutting landowner owed the railroad. A railroad easement generally affords the railroad exclusive use and excludes the adjacent landowner from any occupation of the surface absent the railroad's consent. An abutting property owner cannot be responsible for the condition of property from which he or she is excluded (Montange 1989, p. 128).

FORMS OF PROTECTION

There are three legal precepts, either alone or in combination, that define and in many cases limit liability for injury resulting from trail use. The first is the concept of duty of care which speaks to the responsibility that a landowner (private or public) has to anyone on their land. Second is the Recreational Use Statute (RUS) which is available in all 50 states and provides protection to private landowners and some public landowners who allow public free access to land for recreational purposes. For those public entities not covered by a RUS, states tend to have a tort claims act which defines and limits governmental liability. Third, for all private and public parties, liability insurance provides the final line of defense. Trail owners can also find much protection through risk management.

If a trail manger charges a fee for access to a recreational facility, the facility provider tends to owe a greater duty of care to the user and thus has a greater risk of liability

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DUTY OF CARE

Tort law, with regard to finding fault for an incident that occurs in a particular location, is concerned with the "class" of person who sustained the injury and the legal duty of care owed to a person in that class. The legal duty of care that a landowner owes a member of the general public varies from state to state but is generally divided into four categories. In most states, a landowner's responsibility for injuries depends on the status of the injured person. A landowner owes increasingly greater duties of care (i.e.; is more at risk) if the injured person is a "trespasser," a "licensee," an "invitee," or a "child."

TRESPASSER—a person on land without the landowners permission, whether intentionally or by mistaken belief that they are on public land. Trespassers are due the least duty of care and therefore pose the lowest level of liability risk. The landowner is generally not responsible for unsafe conditions. The landowner can only be held liable for deliberate or reckless misconduct, such as putting up a trip wire. Adjacent landowners are unlikely to be held liable for injuries sustained by trespassers on their property.

LICENSEE—a person on land with the owners permission but only for the visitor's benefit. This situation creates a slightly higher liability for the landowner. For example, a person who is permitted to hunt on a farm without paying a fee, if there were no RUS, would be classified as a licensee. If the landowner charged a fee, the hunter would probably be classified as an invitee. Again, the landowner is not responsible for discovering unsafe conditions; however the landowner must provide warning of known unsafe conditions.

INVITEE—a person on the owner's land with the owner's permission, expressly or implied, for the owner's benefit, such as a paying customer. This is the highest level of responsibility and therefore carries the highest level of liability. The owner is responsible for unknown dangers that should have been discovered. Put a different way, the landowner has a duty to:

1) Inspect the property and facilities to discover hidden dangers;

2) Remove the hidden dangers or warn the user of their presence;

3) Keep the property and facilities in reasonably safe repair; and

4) Anticipate foreseeable activities by users and take precautions to protect users from foreseeable dangers.

The landowner does not ensure the invitee's safety, but must exercise reasonable care to prevent injury. Generally, the landowner is not liable for injuries caused by known, open, or obvious dangers where there has been an appropriate warning. For example, customers using an ice rink open to the public for a fee would be invitees.

CHILD—even if trespassing, some states accord children a higher level of protection. The concept of "attractive nuisance" is particularly relevant to children. Land forms such as ponds can be attractive to children who, unaware of potential danger, may be injured if they explore such items.

Prior to the widespread adoption of RUS' by the states (see discussion below), this classification system defined the liability of adjacent landowners. Even now, trail managers or private landowners who charge a fee are at greater risk of liability because they owe the payee a greater responsibility to provide a safe experience.

Thus, where no RUS exists or is unavailable, trail users would be of the licensee class, provided the trail manager does not charge an access fee. If a trail manager charges a fee the facility provider tends to owe a greater duty of care to the user and thus has a greater risk of liability if a trail user is injured due to a condition of the trail.

RECREATIONAL USE STATUTES

The Council of State Governments produced a model recreational use statute (RUS) in 1965 in an effort to encourage private landowners[3] to open their land[4] for public recreational[5] use by limiting the landowner's liability for recreational injuries when access was provided without charge (Kozlowski, p. V1D1).

Recreational use statutes are now on the books in all fifty states. These state laws provide protection to landowners who allow the public to use their land for recreational purposes. The theory behind these statutes is that if landowners are protected from liability they would be more likely to open up their land for public recreational use and that, in turn, would reduce state expenditures to provide such areas. To recover damages, an injured person must prove "willful and wanton misconduct" on the part of the landowner essentially the same duty of care owned to a trespasser. However, if the landowner is charging a fee for access to the property, the protection offered by the recreational use statute is lost in most states.

The preamble of the model RUS is clear that it was designed for private landowners but the actual language of the model legislation does not differentiate between private and public landowners. The result is that while some states have followed the intent of the model statute and limited the immunity to private landowners, other states have extended the immunity to cover public landowners either legislatively or judicially (Goldstein 1997, p. 788).

The statutes were created to encourage landowners to make their land available for public recreation purposes by limiting their liability provided they do not charge an access fee.

Under the Federal Tort Claims Act, the federal government is liable for negligence like a private landowner under the law of the state. As a result, RUSs intended for private individuals have been held applicable to the federal government where it has opened land up for public recreation (Kozlowski, p. V1D1).

Under lease arrangements between a public agency and a private landowner, land can be provided for public recreation while the public agency agrees to defend and protect the private landowner. The private landowner may still be sued but the public agency holds the landowner harmless, taking responsibility for the cost of defending a lawsuit and any resulting judgments (Kozlowski, p. V1D2).

While state RUSs and the court interpretations of these laws vary somewhat, a few common themes can be found. The statutes were created to encourage landowners to make their land available for public recreation purposes by limiting their liability provided they do not charge an access fee. The RUS limits the duty of care a landowner would otherwise owe to a recreational licensee to keep his or her premises safe for use. It also limits a landowner's duty to warn of dangerous conditions provided such failure to warn is not considered grossly negligent, willful, wanton, or reckless. The result of many of these statutes is to limit landowner liability for injuries experienced by people partaking in recreational activities on their land. The existence of a RUS may also have the

effect of reducing insurance premiums for landowners whose lands are used for recreation (BCEMC 1997, p. 58).

To use Colorado as an example, a landowner who directly or indirectly invites or permits any person to use his or her property for recreational purposes without charge, does not:

- Extend any assurance that the premises are safe for any purpose;
- Confer upon such person the legal status of invitee or licensee to whom a duty of care is owed;
- Assume responsibility or incur liability for any injury to person or property or for the death of any person caused by an act or omission of such person (Montange 1989, p. 128).

The above protections are voided if:

- The landowner willfully or maliciously fails to guard or warn against a known dangerous condition, use, structure, or activity likely to cause harm;
- The landowner charges the person who enters or goes on the land for recreational use thereof; except that, in the case of land leased to the state or a political subdivision thereof, any consideration received by the owner for such lease shall not be deemed a charge, nor shall any consideration received by an owner from any federal governmental agency for the purpose of admitting any person constitute such a charge;
- The landowner maintains or attracts a nuisance;
- The landowner causes injuries due to a use of the land for a commercial or business enterprise (Colo. Rev. 33-41-103-104).

The recreational use statutes appear to be "working" in the sense that they are limiting liability to the extent that was intended. In addition to recreational use statutes, some states have special statutes limiting liability that may be applicable. Pennsylvania, for example, has a specific trails statute (Act 32 P.S. §§ 5621 et seq.) which limits liability for landowners who allow their land to be used for trails, trail owners, and adjacent property owners with protections similar to a recreational use statute.

A good management plan will allow for detection and warning of non-permanent hazards. (David Burwell)

These laws do not prevent somebody from suing a trail manager/owner or a private property owner who has made his or her land available to the public for recreational use, it only means the suit will not advance in court if certain conditions hold true. Thus, the trail manager/owner may incur costs to defend himself or herself. Such costs are the principal reason for purchasing liability insurance.

A list of most state RUSs can be found in the appendix. It is useful to obtain a copy of your state's RUS to discover its peculiarities as well as to find out the extent to which it has been tested in court.

PUBLIC AGENCY LIABILITY

As stated in the introduction, governments (federal, state, and local) can also find protection from lawsuits under Sovereign Immunity. The concept holds that the sovereign entity (the government) is generally immune from liability. However, the federal government and most state and local governments have waived this privilege of immunity, in many contexts, including trail user injuries, by enacting a Tort Claims Act. Such acts stipulate that the government can be held responsible for negligence under some circumstances

(Goldstein 1997, p. 793). A list of tort claims arts is in the appendix.

At the federal level, the Federal Tort Claims Act serves as a basis for the federal government's liability and many state Tort Claims Acts follow the content of the federal version. These laws lay out the limit of a state's liability and in some states the recreational use statute serves as a protection for public entities.

The Federal Tort Claims Act defines the instances under which the federal government is liable which are similar to the liability of a private individual.

The state Tort Claims Act defines the scope of liability for each state and usually pertains to the county and municipal levels of that state as well. Some states have followed the Federal Tort Claims Act and hold agencies to the same liability standards as private individuals. In these states, the RUS often applies to the public entity as well. In other states where there is a State Tort Claims Act, it will control the definition of liability under recreational circumstances. Lastly, some states have gone beyond the RUS and have enacted a law specifically to address public liability on recreational lands including on trails.

INSURANCE

Insurance is the last line of defense. While the above laws may mean a lawsuit does not ultimately prevail in the courts, they cannot prevent a suit from being filed. Insurance is necessary for both trail owners/managers as well as adjacent landowners. Fortunately, both tend to have insurance already. Most trails are owned and operated by a public entity such as a parks department. Under this structure, the responsible entity most often is covered by an umbrella insurance policy that protects all municipal activities and facilities. Such entities are self-insured. Some trails are owned by non-governmental organizations. In this case, the organization should purchase a comprehensive liability insurance policy.

These policies can be purchased from some insurance agencies, although such policies can be hard to come by. For example, Lake States Insurance, which insures the Leelanau Trail, does so only because the trail is local. Conversations held with representatives of the agency indicate that insurance has never been brought into any activity resulting from injuries on the trail. The insurance agency recommends that trail groups carry liability insurance, workman's compensation insurance if they have any employees, and insurance to protect any equipment the group may own from vandalism, theft, or fire. The basic coverage in this case is $1 million per occurrence. This costs the trail group about $1,100 per year. The premium rates are based primarily on the length of the trail as well as any infrastructure associated with the trail.

The official person or organization responsible for maintaining the trail is most vulnerable to a lawsuit should an injury occur. The responsible management entity must have a liability policy sufficient in scope to cover the costs of a jury award. The policy should also provide for the insurer to cover the costs of defending a suit for injury. The management entity must be prepared to pay for the costs of defending a suit no matter how groundless (BCEMC 1997, p. 60).

Private land trusts may especially be concerned with obtaining liability insurance, if for no other reason than to cover attorney's fees. There are at least six different types of coverage to consider (LTA 1991, p. 9):

1. Comprehensive general liability;
2. Non-owned automobile liability for liability in excess of the auto owner's limits for work associated with your organization's property;
3. Property and owned assets insurance covering buildings and personal property, if any, at the site;
4. Volunteer worker accident insurance;
5. Workers compensation/employer liability insurance if you have a paid staff;
6. Association or "directors' and officers'" liability insurance.

If economical insurance is not available, your organization may be able to join Land Trust Exchange (LTE). Member land trusts can obtain economical insurance in all six categories. Check with the Land Trust Alliance in Washington, D.C. (www.lta.org).

While the class of person and the recreation use statutes may afford protection against a successful lawsuit, these safeguards do not prohibit a liability suit from being filed. This is why private land owners as well as public entities alike main-

tain some level of general liability insurance that can be used for defending against such suits.

RISK MANAGEMENT

All of the above mentioned forms of protection aside, perhaps the best defense a trail manager has is a sound policy and practice for trail maintenance and usage. Developing a comprehensive management plan that uses risk management techniques is the best defense against an injury-related lawsuit (BCEMC 1997, p. 60).

Trails that are properly designed and maintained go a long way to warding off any potential liability. There are some general design guidelines (AASHTO and MUTCD)[6] that, if adhered to, can provide protection by showing that conventional standards were used in designing and building the trail. Trails that are designed in accordance with recognized standards or "best practices" may be able to take advantage of any design immunities under state law. Within the spectrum of public facilities, trails are quite safe, often less risky than roads, swimming pools, and playgrounds.

The managing agency should also develop a comprehensive maintenance plan that provides for regular maintenance and inspection. These procedures should be spelled out in detail in a trail management handbook and a record should be kept of each inspection including what was discovered and any corrective action taken. The trail manager should attempt to warn of or eliminate any hazardous situations before an injury occurs. Private landowners that provide public easements for a trail should ensure that such management plans are in place and used to reduce their own liability. Key points include (BCEMC 1997, p. 57); (LTA 1991, p. 8):

Trail managers cite warning signs as a good risk management technique.

During trail design and development:

- Develop an inventory of potential hazards along the corridor;
- Create a list of users that will be permitted on the trail and the risks associated with each;
- Identify all applicable laws;
- Design and location of the trail such that obvious dangers are avoided. Provide warnings of potential hazards to the extent possible;
- Complete trail design and construction by persons who are knowledgeable about design guidelines, such as those listed in AASHTO and MUTCD documents;
- Post and enforce trail regulations.

Once the trail is open for use:

- Regular inspection of the trail by a qualified person who has the expertise to identify hazardous conditions and maintenance problems;
- Correct and document maintenance problems quickly. Where a problem cannot be promptly corrected, provide warnings to trail users;
- Develop procedures for handling medical emergencies. Document these procedures as well as any occurrence of medical emergencies;
- Maintain records of all inspections, what was found, and what was done about it. Photographs of found hazardous conditions can be useful.

These risk management techniques will not only help to ensure that hazardous conditions are identified and corrected in a timely manner, thereby averting injury to trail users, but will also serve to protect the trail owner and managing agency from liability. Showing that the agency had been acting in a responsible manner can serve as an excellent defense in the event that a lawsuit develops (BCEMC 1997, p. 58).

Sixty-one rails-with-trails now operate safely in the United States. For more information, see *Rails-with-Trails*, by Rails-to-Trails Conservancy. Photo by Gwen Loose.

MANAGING SPECIAL SITUATIONS

The following are circumstances that Rails-to-Trails Conservancy has heard about through numerous conversations with local trail advocates who have expressed concern about situations that might present themselves. For the most part, these situations can be addressed through management techniques.

RAILS-WITH-TRAILS:

A variation on rails-**to**-trails is rails-**with**-trails where a trail is built along an active rail line. Sixty-one such trails exist today and there has been scant evidence of conflicts between trail users and trains (RTC, 2000). Nonetheless, railroad companies are often hesitant to place people in such close proximity to their locomotives. While this issue is a sticking point for many such projects, several projects have provided the railroad company complete indemnification with regard to any accidents that involve trail users.[7] In theory, depending on the state and the facts, a Recreational Use Statute should protect the railroad in this situation. At the time of publication, however, we could not confirm that this had been tested in court.

PESTICIDES FROM ADJACENT FARMS:

Many rail-trails traverse rural countryside and active farmland. Questions have been raised (though no incidents reported to Rail-to-Trails Conservancy) about trail users being contaminated with pesticidal spray. While a farmer may technically be liable for such an incident because it is generally unlawful to conduct a hazardous activity that can migrate onto adjacent property, simple warnings to trail users can be used to avoid such conflicts. Because such spraying is only a periodic activity, farmers can provide trail managers with notification of when such activity will occur and the trail manager can place warning signs at the trailheads. See the Marsh Creek Trail case study on page 14.

HUNTING ADJACENT TO TRAILS:

Some trails traverse public and/or private land that, may at certain periods permit hunting. Such proximity can expose trail users to potential injury. Like pesticide use/application hunting tends to take place at limited times during the year. Thus a similar mitigation technique can be used: post signs at the trailheads when hunting season is open.

Using volunteers is a great way to keep your trail operating smoothly and create a feeling of community ownership. (Dave Dionne)

USE OF VOLUNTEERS FOR TRAIL WORK:

Trail managers often use volunteers for routine trail maintenance or even for trail construction. What happens if the volunteer is injured while performing trail-related work? What happens if an action taken by a volunteer leads to an injury of a trail user? First, make sure your insurance covers volunteer workers. Second, the trail manager should be protected from any user injury created by an act of a volunteer provided the act is not one of willful or reckless misconduct. The volunteer worker is protected by the Federal Volunteer Protection Act of 1997. This act protects volunteers of nonprofit organizations or governmental entities. The Act states that such volunteers are not liable for harm caused by their acts of commission or omission provided the act was in good faith.

RAILROAD HAZARDOUS MATERIAL REMAINS:

Concern over the remnants of railroad operations are often raised when a trail is proposed for development. Railroads often used toxic substances in their operations and then there is the occasional accidental spill. Provided the trail owning/managing agency practices "due diligence" prior to acquiring and developing the corridor and no hazardous items were discovered at that time, the trail owner would probably not be considered liable for and toxic substances discovered subsequently.

Since hidden environmental hazards may exist within the corridor, it is a good idea to hire an environmental engineer to conduct an environmental assessment of the property before it is purchased. The nature of the assessment will depend on the property and the potential for contamination but should include at a minimum the equivalent of a Phase I assessment.

A Phase I assessment combines research into the property's history with a visual inspection. Courthouse records, title abstracts, historic aerial photographs, and newspaper accounts that offer background on the past uses of the site might provide some insight into the property's history. Interviews with local government representatives, adjacent landowners, and state and federal officials may also uncover historical events about which the current railroad knows nothing.

A Phase II assessment involves more thorough testing of water, air, and soil samples, as well as a more thorough investigation of the site. If contamination is found, a Phase III assessment will provide the remediation plan for clean-up.

While the techniques for identifying environmental contamination have become increasingly sophisticated, the cost and responsibility for clean-up and restoration are less clear. Federal law targets past and present owners, operators, transporters and generators of hazardous substances. Assigning responsibility and collecting money for clean-up is complicated by the history of contamination and the likelihood that the original contaminators may no longer be traceable, or if they still exist, do not have the financial capacity to pay for clean-up. Although the railroad has certain responsibilities as the property owner, do not be surprised if the railroad's representative(s) want to include clean-up costs as a negotiating point.

Overall, an environmental assessment can cost anywhere from a few thousand dollars to more then $20,000 if extensive soil and water samples are taken over a broad area. The assessment and its results can quickly become a critical issue in negotiations to acquire the property. Before you take title to the property, make sure the purchase contract clearly states who will pay for any environmental problems that have been discovered. See warranties and representations from the railroad that indicate there is no known contamination, or if that is not the case, that disclose the actual situation and plans for remediation.

III. RESULTS FROM THE REAL WORLD

Theory and practice are often two very different worlds. Fortunately, in the case of trails and liability risk, theory has translated into effective practice. This section first presents the results of a trail manager survey conducted by Rails-to-Trails Conservancy in the fall of 1997. Second, a series of brief case studies show how trails managers have dealt with some of the issues raised above.

FINDINGS FROM RTC'S TRAIL MANAGER SURVEY

In 1997, Rails-to-Trails Conservancy surveyed many rail-trail managers to ascertain, among other things, their experience with legal issues. The results of the survey show that from 1995 to 1996 only 19 of the 362 trails studied reported any claims. Of those 19 claims, only two involved instances where private property owners had suits filed against them.

The survey showed that 213 of the 362 trails were covered under a general umbrella policy or a trail specific policy. Eighty-eight trails were not covered at all and the contacts for the remaining 61 trails were unsure if the trail was covered. There were 203 responses to the question concerning the type of policy covering the trail, whether it be a trail specific policy, or an umbrella policy. Out of these trails, 192 of them were covered under a general umbrella policy, and the remaining 11 under a trail specific policy. The extra cost for a trail specific policy ranged from roughly $1,000 to $4,500 annually. Very few responded to what exactly the pay-out limit on the policies is, but those who did respond indicated a range from $300,000 to $5,000,000 per individual and $500,000 to $5,000,000 per year.

Several trails reported a total of 19 claims over a two-year period. These claims ranged from snowmobilers hitting posts to cattle from adjacent farms breaking onto the trail and knocking over bicyclists. All but two of these cases were covered under the trail's insurance policy. There were two cases in which nearby landowners were sued. The first suit was brought about when a homeowner planted a bush on the curve of the trail such that a biker, unable to see around a corner, hit an oncoming biker. The second suit was due to an accident. Cases such as the first are of concern to trail managers who, on occasion, have discussed their concerns with adjacent landowners to encourage them to remove fences, sheds, gardens and other obstructions from trail property.

CASE STUDIES

The liability concerns of a trail manager can be divided into two categories: generic and situational. Generic liability concerns are those that all trail managers face and usually pertain to a trail user getting hurt. Situational liability concerns are a function of the trail location. For instance, a trail through farmland raises concerns about trail users interacting with livestock or pesticide contamination. Trails through public or private wild lands can have issues regarding hunting. These case studies aim to illustrate real strategies trail managers use to mitigate their liability in a variety of situations.

THE COWBOY TRAIL

320 miles (when complete) through Nebraska farmland.

Larry Voecks took over management of the Cowboy Trail project in 1996. Four years later, 50 miles of the trail are open for public use, in three sections. Much of the trail traverses rural Nebraska farmland and the concerns of the farmers have been an issue from day one. The farmers were worried about the liability issues that trail users would create by crossing onto their property and using stock tanks or stock damns to bath in or drink from, get in trouble with a bull, or try to pet calves and otherwise harass livestock. Voecks has spent much of his time educating the adjacent landowners about the various legal mechanisms that would protect them if a trail user were injured on their property, including discussions of trespassing laws and the state's recreational use statute. Now that pieces of the trail have been operating for a couple of years, Voecks says that he still hears these concerns from time-to-time but not as frequently as he used to. The state also recently passed legislation to provide the adjoining landowner with the ability to obtain new fencing and fence materials from the state. The legislation defined these fences as being designed to exclude intruders. In an interesting twist to the trespass protection, Voecks suggested that it is possible that if an adjacent landowner sees a trail user on his land and does not communicate to the trail user that they are trespassing then that lack of response could be construed as tacit approval for being there.

With regard to the state's liability for trail operations, Voecks feels adequately protected there as well through a thorough signage program. Signs with trail rules are posted at all access points and at every location where trail passes are sold. Further, signs on the trail suggest that trail users dismount at bridges and at road crossings.

Should the trail managing agency be sued, Voecks says they are insured by the state. Happily, however, Voecks says that in the three years since the opening of the first section of the Cowboy Trail neither the State Game and Parks Commission nor adjacent land owners have had a suit brought against them.

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Hugh Morris

MARSH CREEK TRAIL

6.5 miles through rural Contra Costa County, California

When the East Bay Regional Park District set out to create the Marsh Creek Trail, they encountered some resistance from farmers who own land adjacent to the trail. The farmers worried about their liability because they periodically spray their crops with pesticides and felt that such operations would endanger trail users and that they would be held liable for any harm. To address these concerns, the East Bay Regional Park District (EBRPD) set out to convince the farmers that they could work together to responsibly operate the trail in a way that would protect trail users from spraying and thus, in turn, protect the farmers. The first step was to write language into the trail master plan that said that the EBRPD would close the trail whenever the farmers told them they were going to apply pesticides. This is not a major inconvenience as most farmers make such applications once or twice a year. This system appealed to some of the farmers and the EBRPD was able to open up a section of the trail. To date the system has worked well. There are still some sections of the trail that are not open because farmers have not yet been convinced. But the EBRPD indicates that having some farmers buy into the plan has helped convince other farmers to sign-on as well; thus more trail has opened as the operational experience has proved positive.

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BALTIMORE & ANNAPOLIS TRAIL PARK

14 miles through suburban Maryland

Dave Dionne has been managing the Baltimore & Annapolis Trail for thirteen years. The B&A Trail runs nearly 14 miles from Baltimore, MD to Annapolis, MD. It has an asphalt surface and runs primarily through suburban areas with both residential and commercial land uses bordering the trail. Dionne says that he and his staff keep meticulous notes about their management activities. They patrol the trail twice a day and document what they find. If they find a hazard they either correct it on the spot or provide warnings to trail users until it can be corrected. This thorough management style has paid off for Dionne several times. He reports that on three occasions a trail user has been injured on the trail and proceeded with a lawsuit against the park authority. In each case, when the plaintiff's lawyers discovered the meticulous methods used by Dionne and his staff to ensure a consistently safe experience for trail users the lawyers have backed off the case because they knew that the trail manager had been acting in a prudent manner.

Dionne also developed a volunteer trail patrol program. These volunteers help trail users in need and also report any unpermitted uses, crime, and maintenance needs to the park headquarters. The patrol consists of approximately thirty volunteer Trailblazers, ranging in age from eleven to seventy-eight. These folks receive three weekends of training for first aid, CPR, and patrol technique from the park rangers. They patrol the trail by foot, bike, and in-line skate. The Trailblazers supplement the park rangers' daily patrols.

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IV. CONCLUSIONS

General surveys of rail-trail managers conducted by Rails-to-Trails Conservancy indicate that rail-trails have not posed significant problems from the point of view of legal liability. This probably reflects the fact that trail managers are generally taking appropriate action to design, construct, and maintain recreational trails in a fashion which takes into account the safety of trail users.

In addition, it reflects that most trails are safer for bicycle and pedestrian use than the major alternatives such as public highways and roads. This point can be put another way: the risks of liability for bicycle and pedestrian use of trails are less than those associated with similar use of streets and highways. The reason is the user is less likely to be hit by a car or to run afoul of the detritus thrown from cars or other vehicles when the user is on a trail where such vehicles are prohibited. Indeed, the relative safety of trails is one of the major reasons that they are so popular with pedestrians and cyclists (Montange 1989, p. 132).

In sum, there are no special or surprising problems associated with rail-trails or trails in general from the point of view of legal liability or risk management. The laws that protect adjacent landowners as well as trail managers, coupled with strategies for designing and managing a trail, should provide ample protection for trail managers and adjacent land owners alike from a successful lawsuit.

The key, as pointed out in the case studies, is to design and manage a trail according to generally accepted guidelines. That, coupled with a sound management policy that involves regular inspection of the trail and thorough documentation of those inspections and any resulting actions, appears to provide a sound defense should an accident occur. Permanent and as-needed warning signs provide trail users with the information they need to act responsibly and safely.

APPENDIX I: A GENERAL REVIEW OF TORT LAW[8]

Common law consists of three major parts: property, contract, and tort. Property law governs the acquisition of rights persons have in external things and even in themselves. Contract law governs the transfer of rights so acquired and protected. Tort law governs the protection of things reduced to private ownership. Questions of liability for accidents or injuries on trails, or otherwise, are a matter of the law of torts—literally "civil wrongs." Tort law is sometimes called the law of accidents, even though it encompasses liability for intentional misconduct as well (Montange 1989, p. 125).

Under the tort law of most states, one person (Person A) may be liable to another person (Person B) for an accident if three factors are demonstrated: 1) that Person B was injured, 2) that Person B's injury was "proximately caused" by Person A's action or inaction, and 3) that Person A's action or inaction which proximately caused Person B's injury violated an applicable "standard" or "duty" of care to the class of which Person B is a part (see page 6 for discussion of this concept). The injury may be property loss, physical injury, or, in some cases, mental trauma ("pain and suffering"). The question of proximate cause relates to when responsibility ends, and tends to be case specific. However, much can be said about the question of standard of care and related matters (Montange 1989, p. 125).

The most general standard of care is the so-called "negligence" or "fault" standard. Under this standard, Person A owes Person B a duty to "do what a reasonable person would do under similar circumstances." In the case of a trail, this translates into an obligation to design, construct, and maintain the trail as a reasonably prudent trail manager would do. When the conduct that is allegedly the cause of the harm involves activities which are ordinary, the standard is that of a "reasonable person" and is decided by the jury without the expert guidance of what is reasonable. If the activity is somewhat out of the ordinary, the standard of care (i.e., the balance for determining whether the conduct was negligent) is often established by expert testimony. If the conduct violates an applicable law, however, some states deem it to be negligence per se or at least evidence of negligence (Montange 1989, p. 126).

"Contributory negligence" is a classic general defense to tort claims. Suppose Person B sues Person A alleging breach of standard of care by Person A proximately causing Person B's injury. Person A responds that Person B was contributorily negligent, that is, that Person B would not have sustained the injury but for his own misconduct, such as failure to heed a posted warning to walk one's bicycle across a bridge, climbing over a fence, or going too fast. Contributory negligence, if proved, would bar a recovery under classic tort law. However, the contributory negligence defense has tended to shift in some states to a comparative negligence standard. Under this standard, the trier of fact (usually the jury unless both parties elect a trial to the judge) must assign weights to the relative negligence of both sides. The parties are then responsible for their share of the overall negligence. For example, suppose again the scenario of Person B suing Person A, with Person A asserting that Person B failed to heed a warning. The jury, depending on the evidence, may determine that it was unreasonable for Person A not to afford a better warning, but that it was unreasonable for Person B to be so oblivious to the warning posted by Person A. The jury accordingly finds each side 50% responsible. In some states following strict contributory negligence rules, this may mean no financial liability on the part of Person A. Other states may require Person A to compensate Person B for the relevant percentage of B's loss; still others will do so only if Person A is found more than 50% responsible (Montange 1989, p. 126).

Governments, such as the United States government, were generally immune from liability (so-called "sovereign immunity"), except to the extent that they have waived such protection. The federal government, again generally speaking, has waived immunity for purposes considered here. Under the Federal Tort Claims Act, the United States is liable for tort claims "in the same manner and to the same extent as a private individual under like

circumstances..." (28 U.S.C. § 2674). Many states have similarly waived a portion of their sovereign immunity, and this waiver tends to apply to local governments as well (Montange 1989, p. 126).

It may be helpful to illustrate these principles with a concrete example. Colorado has waived a portion of its sovereign immunity through the Colorado Governmental Immunity Act (10 Colo. Rev. Stat. § 24-10-101 to -120). Under that statute, a local government may be held liable for injuries which were caused as a result of the breach of its duty to maintain a recreational trail in a reasonably safe condition for travel. The basic standard of care is the same as that applicable to city streets. The general rule in Colorado is that a city is under a duty to maintain its streets in a reasonably safe condition for travel. According to the Colorado Supreme Court (Montange 1989, p. 127):

> *This duty may be satisfied in one of two ways: When the city knows or, in the exercise of reasonable care, should know of a defect or dangerous condition in its streets it must either 1) repair or remedy the defect, or 2) exercise reasonable care to give adequate warning of the existence of the condition to the users of its streets (Wollman, supra).*

If the defective condition arose due to the action of a third party, the third party may of course be liable for his or her acts and omissions that proximately caused the injury (Montange 1989, p. 127).

APPENDIX II: GLOSSARY (DRAKE, 1995)

Contributory Negligence: If the injured party (plaintiff) was not acting in a reasonable and prudent manner, he or she may be shown to have contributed to the cause of the accident. This "contributory negligence" often results in rulings against the plaintiff.

Deep Pocket: Well-insured and well-funded organizations and individuals are considered by some plaintiffs to be likely sources for court settlements. They are said to have "deep pockets". Often plaintiff's attorneys bring cases against "deep pocket" agencies, corporations or individuals in an effort to maximize settlement amounts.

Defendant: The party charged with causing the loss.

Discoverable: The degree to which the defendant agency or individual was aware of or could have reasonably "discovered" the condition that most directly contributed to the accident. The longer the agency can be proved to have knowledge of the condition, the more "discoverable" it is. The longer the "discoverable" condition is present and not corrected, the greater the risk of an accident and the weaker a defendant agency's case generally becomes.

Duty: Before "negligence" can be proven, courts first determine if the subject agency or individual had a "duty" to provide for the injured party in some way. This is one of the easiest elements to prove since by definition agencies exist to provide specified services and facilities.

Liability: "Liability" indicated "responsibility." If the actions or duties of an individual, agency, or corporation lead to a loss, that party can be held responsible for the loss.

Negligence: An act or omission within the scope of the duties if an individual, agency, corporation, or other organization that leads to harm of a person or the public is said to be "negligence". Negligence must be proved. Public and private professionals are expected to exercise "ordinary care" in performance of their duties and to be "reasonable and prudent" in their actions.

Ordinary Care: Courts base settlements on the level of care that a reasonably experienced and prudent professional or other individual would have taken in the same or similar event, action, or circumstances. This level of care is referred to as "ordinary care". Ordinary care is distinguished legally from "extra-ordinary care" which parties are not expected to meet. Standards for separating "ordinary" from "extra-ordinary" are based on the expectation that 85% of travelers operate in a responsible manner (the "85th Percentile Rule").

Plaintiff: The party that suffered the loss.

Proximate Cause: The most direct omission or act of "negligence" leading to damage and/or an injury is considered the most immediate, or "proximate cause".

Reasonable and Prudent: All parties are expected to exercise responsibility, a basic level of skill and judgement in their actions. When they do, they are considered to be acting in a "reasonable and prudent" manner. When they do not, either party (plaintiff or defense) may be found liable for actions that caused or contributed to the injury or loss or harming another.

Sovereign Immunity: An agency that has full "sovereign immunity" is not required to pay settlements. Starting in the 1950s, courts began to erode government immunity, exposing them to significant court settlements. Since that time, the trend in the U.S. is to make governments responsible for their actions. Many states, but few cities, have partial immunity. This immunity puts a cap on how much can be awarded or limits exposure to certain areas such as maintenance and operations.

Tort: A wrongful act, not including breach of contract or trust, that results in injury to another's person, property or the like and for which the injured party is entitled to compensation.

APPENDIX III: STATE TORT CLAIMS ACTS AND RECREATIONAL USE STATUTES

Note: This chart is meant only as a guide. Statutes are frequently amended.

State	Tort Claims Act	Recreation Use Statute
Alabama	Code of Ala. §§ 41-9-62 et seq. Code of Ala. §§ 11-93-1 et seq.	Ala. Code Sec. § 35-15-1
Alaska	Alaska Stat. §§ 09.50.250 et seq.	Ak. Stat. Sec. 09.45.795
Arizona	Ariz. Rev. Stat. Ann. §§ 12-820 et seq.	Az Rev. Stat. Ann. Sec. § 33-1551
Arkansas	Ark. Code 1987 §§ 21-9-201 et seq.	Ar. Stat. Ann Sec. 50-1101 to 1107
California	Cal. Tort Claims Act, Deering's Cal. Gov. Code §§ 810-996.6 et seq.	Ca Gov't Code Sec. 846
Colorado	Colo. Governmental Immunity Act, Colo. Rev. Stat. §§ 24-10-101 et seq.	Co Rev. Stat. Sec. 33-41-101 to 106
Connecticut	Conn. Gen Stat. Ch 53 §§ 4-141 et seq. (administrative claims procedure).	Gen. State Sec. 52-557 f to k
Delaware	Del. Tort Claims Act, Del. Code Ann. Tit. 10, Ch 40 §§ 4001 et seq. (state and local).	De Code Ann. Title 7 Sec. 5901 to 5907
District of Columbia	D.C. Code §§ 1-1201 et seq.	Unknown
Florida	Fl. Tort Claims Act, Fla. Stat. §§ 768.28 et seq.	Fl State Ann. Sec. 375.251
Georgia	Official Code of Ga. Ann. §§ 36-33-1 et seq.	Ga Code Ann. Sec. 51-3-20 to 26
Hawaii	Hi. Rev. Stat. §§ 662-2 et seq. (State).	Hi Rev. Stat. Sec. 520-1 to 8
Idaho	Id. Code §§ 6-901 et seq.	Id Code Sec. 36-1601 to 1604
Illinois	Court of Claims Act, Ill. Rev. Stat. Ch 37 ¶ 439.8 (state); Ill. Rev. Stat. Ch 85 ¶¶ 1-101 to 10-101(local gov't. units).	Il Ann. Stat. Ch 70 Sec. 31 to 37
Indiana	Ind. Tort Claims Act., Ind. Code §§ 34-4-16.5-1 et seq.	In. Code Ann. Sec. 14-2-6-3
Iowa	Ia. Tort Claims Act, Ch 25A (state); Tort Liability of Governmental subdivisions, Ch 613A.	Ia Code Ann. Sec. 111C.1 to .7
Kansas	Kan. Stat. Ann. §§ 75-6101 et seq.	Ks Stat. Ann. Sec. 58-3201 to 3207
Kentucky	Ky Board of Claims against the Commonwealth, Ky. Rev. Stat. §§ 44.070 et seq.	Ky Rev. Stat. Ann. Sec. 150.645 & 411.190
Louisiana	LA Const. Any. 12§ 10	La Rev. Stat. Ann. Sec. 2791 & 2795
Maine	Me. Tort Claims Act, Me. Rev. Stat. Ann. §§ 14-8101 et seq.	Me Rev. Stat. Ann. Title 14. Sec. 159-A
Maryland	Md. Tort Claims Act, Ann. Code of Md., S.G. §§ 12-101 et seq. (state gov't): CJ §§ 5-401 et seq. (local gov't).	Md Nat. Res. Code Ann. NR Sec. 5-1101 to 1108
Massachusetts	Ma. Tort Claims Act, Ann. Laws of Ma., Ch 258.	Ma Gen. Law Ann. Ch 21 Sec. 17c
Michigan	Mi. Comp. Laws §§ 691.1401-691.1415.	Mi Comp. Laws Ann. Sec. 324.73301
Minnesota	Mn. Tort Claims Act, Mn. Stat. Ann. §§ 3.736 et seq. (state); Mn. Stat. Ann. §§ 466.01 et seq. (local).	Mn Stat. Ann. Sec. 87.01-.03
Mississippi	MS Code Ann. §§ 11-46-1 to 11-46-16	Ms Code Ann. Sec. 89-2-1 to 7, 21-27
Missouri	Mo. Stat. §§ 537.600 et seq.	Ch 357 Sec. 537.345-.348
Montana	Mt. Comprehensive State Insurance Plan and Tort Claimes Act, Mt. Code Ann. §§ 2-9-101 et seq. (state and local). Municipal immunity is waved pursuant to Mt. Code Ann. § 7-1-4125, which refers to the tort claims act.	Mt Rev. Code Ann. Sec. 70-16-301, 302
Nebraska	Ne. State Tort Claims Act, R.R.S. §§ 81-8,029 et seq.; Political Subdivisions Tort Claims Act. §§ 23-2401 et seq.	Ne Rev. Stat. Sec. 37-1001 to 1008

State	Tort Claims Act	Recreation Use Statute
Nevada	Nv. Rev. Stat. §§ 23-2401 et seq.	Nv Rev. Stat. Sec. 41.510
New Hampshire	NH Rev. Stat. Ann. §§ 541-B: 1 et seq. (administrative claims against the state; political subdivisions excluded).	NH Rev. Stat. Ann. Sec. 212.34
New Jersey	NJSA 59:1-1 et seq.	NJ Stat. Ann. Sec. 2A:42A-1 to 7
New Mexico	NMSA 27 §§ 41-4-1 to 41-4-27.	NM Stat. Ann. Sec. 16-3-9: 17-4-7
New York	CLS, Court of Claims Act § 8.	NY Gen. Oblig. Law Sec. 9-103
North Carolina	NC Gen. Stat. §§ 143-291 to 143-300.1	NC Gen Stat. Sec. 113A-95
North Dakota	NDCC Ch 32-12.1 (Chapter 303, S.L. 1977), applicable to political subdivisions of state.	ND Cent. Code Sec. 53-08-1 to 06
Ohio	Court of Claims Act, RC Ch 2743, applicable only to the state and its agencies or instrumentalities. Political Subdivisions Act, RC Ch 2744 applicable to political subdivisions of state.	Oh Rev. Code Ann. Sec. 1533.18; 1533.181
Oklahoma	Ok. Political Subdivision Tort Claims Act, 51 Ok. Stat. Supp. §§ 151 et seq.	Ok Stat. Ann. Title 76 Sec. 10 to 15
Oregon	Or. Rev. Stat. §§ 30.260-30.300; 30.265(2) (state and subdivisions).	Or Rev. Stat. Sec. 105.655 to .680
Pennsylvania	1 Pa. Consol. Stat. § 2310 (commonwealth); 42 Pa. Consol. Stat §§ 8541 et seq. (local Agencies); Pa. Rules of Civ. Proc. 2101 et seq. (commonwealth and political subdivisions).	Pa Stat. Ann. Title 68 Sec. 477-1 to 8
Rhode Island	RI. Gen. Laws Ann. §§ 9-31-1 et seq. (state and subdivisions).	RI Gen. Law Sec. 32-6-1 to 7
South Carolina	SC Tort Claims Act, SC Code §§ 15-78-10 et seq. (state and local).	SC Code Ann. Sec. 27-3-10 to 70
South Dakota	SD Cod. Laws 3-21-1 et seq. (state).	SD Comp. Laws Ann. Sec. 20-9-12 to 18
Tennessee	Tn. State Board of Claims Act, Tn. Code Ann. §§ 9-8-101 et seq. (administrative claims procedure against state); Tn. Governmental Tort Liability Act, T.C.A. §§ 29-20-101 et seq., applicable only to units of local government and not to the state.	Tn Code Ann. Sec. 70-7-101 to 104; Sec. 11-10-101 to 104
Texas	Tx. Rev. Civ. Stat. Ann. Art. 6252-19.	Civ. Prac. & Rem. Code Sec. 75.001 to .003
Utah	Ut. Governmental Immunity Act, Ut. Code Ann. §§ 63-30-1 to 63-30-34.	Ut Code Ann. Sec. 57-14-1 to 7
Vermont	Vt. State Tort Claims Act, Vt. Stat. Ann. 12 §§ 5601 et seq. (state).	Vt Stat. Ann. Title 10 Sec. 5212
Virginia	Va. Tort Claims Act. Code of Va. §§ 8.01-195.1 et seq. (state); Code of Va. § 8.01-222 (notice of claim to cities and towns).	Va Code Sec. 29.1-509
Washington	Wa. Rev. Code Ann. § 4.92.090 (state and subdivisions).	Wa Rev. Code Ann. Sec. 4-24.200 & .210
West Virginia	WV Court of Claims Act, WV Code §§ 14-2-1 et seq. (state); Governmental Tort Claims and Insurance Reform Act, WV Code §§ 29-12A-1 et seq. (political subdivisions).	WV Code Sec. 19-25-1 to 5
Wisconsin	Wi. Stat. Ann. § 893.80.	Wi Stat. Ann. Sec. 895.52
Wyoming	WY stat. § 1-39-101 to 1-39-118	Wy Stat. Ann. Sec. 34-19-101

Source: Tort Claims Act cites: "Landowner Liability." International Mountain Bicycling Association. Recreational Use Statutute cites: Montange, C., 1989. "Preserving Abandoned Railroad Rights-of-Way for Public Use: A Legal Manual." Rails-to-Trails Conservancy, Washington, D.C.

ENDNOTES

[1] There is a long history in the United States of private landowners allowing public use of their land for recreation. This can happen in an informal way such as for hunting or fishing, or in a more formal way where a trail is established.

[2] Sometimes federal law will relate to the issue. For example, if a former railroad right-of-way is being used for interim trail purposes pursuant to a Surface Transportation Board order implementing section 8(d) of the National Trails System Act, the interim trail user may indemnify or otherwise hold the railroad harmless from legal liability.

[3] Recreational Use Statutes protect the property "owner." While the definition of "owner" can vary somewhat from state to state, most define it broadly to include the legal owner of the land, a tenant, lessee, occupant, or person in control of the premises. Some statutes specifically include public entities in the definition of owner while other states specifically exclude public entities, while still others have left it for the courts to decide.

[4] In most states, Recreational Use Statutes apply to both land and water areas as well as to buildings, structures, and other items on the land.

[5] Most states define recreational use in the statute by listing a broad range of activities such as swimming and hiking and may even include the phrase "includes, but is not limited to" in order to prevent as narrow interpretation of the term recreation.

[6] "Guide for the Development of Bicycle Facilities." American Association of State Highway and Transportation Officials, 1999. More information about AASHTO can be found at: www.aashto.org.
Manual on Uniform Traffic Control Devices. More details of the MUTCD can be found at: www.ohs.fhwa.dot.gov/devices/mutcd.html.

[7] See "Rails-with-Trails: Design, Management, and Operating Characteristics of 61 Trails Along Active Railroads." Published by the Rails-to-Trails Conservancy, September 2000.

[8] This section of the report draws directly from a prior Rails-to-Trails Conservancy Publication, *Preserving Abandoned Railroad Rights-of-Way for Public Use: A Legal Manual*. See the reference section for full citation. This publication is no longer in print.

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Appendix D. STB's Overview of Abandonments and Alternatives to Abandonments

OVERVIEW:

Abandonments
&
Alternatives to Abandonments

Office of Public Services
Surface Transportation Board
Washington, D.C. 20423
(202) 565-1592

April, 1997

- P R E F A C E -

This handout was prepared by the Surface Transportation Board's (STB) Office of Public Services (OPS). OPS was created to help the public participate meaningfully in STB proceedings.

As part of that effort, this paper explains the standards and procedures governing abandonments. It also discusses alternative means of preserving service, including the subsidy and purchases of lines that might otherwise be abandoned.

This paper is not an agency statement approved by the STB, but OPS believes it provides a good overview of these subjects. For readers who want to explore these issues in more detail, OPS has also prepared an information bulletin entitled "So You Want to Start a Small Railroad, Surface Transportation Board Small Railroad Application Procedures"

If you want copies of these publications or have questions, please contact OPS at (202) 565-1592. One of our staff attorneys will be glad to help you.

TABLE OF CONTENTS

I. OVERVIEW

By the mid-1970's, our nation's rail transportation system was in dire financial condition. Rail carriers were faced with increased competition from other modes of transportation (especially trucking), rising labor, fuel and maintenance expenses, and pervasive regulation that made it difficult for rail carriers to get rid of unprofitable lines. These conditions had contributed to the bankruptcy of several prominent rail carriers.

Against this background, Congress enacted a series of new laws, most notably the Staggers Rail Act of 1980 (Staggers Act). Together with the implementing regulations issued by the Interstate Commerce Commission, the STB's predecessor, this legislation sought to increase the role of the marketplace, rather than government regulation, in shaping rail transportation. In essence, the Staggers Act gave railroads more flexibility to set prices and adjust service as the market requires and thus enabled them to act more competitively. At the same time, the necessity for some regulatory protection was recognized because rail carriers still have significant market power in particular situations and because rail transportation is sometimes vital to the public. The current regulatory scheme governing abandonments and acquisitions to preserve service seeks to balance these competing considerations.

Where the market has spoken clearly and regulation is found to be unnecessary, a rail carrier may usually abandon a line, subject to appropriate labor protection and environmental conditions. Indeed, lines over which no local traffic has moved for two years without any formal complaint have been exempted from traditional regulatory scrutiny and can be abandoned simply by filing a notice with the STB.

Under the more detailed abandonment application process for active lines, the Board balances the economic burden of continued operation against the public's need for the service. Permission usually will be given to abandon lines on which there are significant operating losses. On the other hand, the carrier's ability to earn more money by disinvesting from a line and reinvesting its assets elsewhere usually is not sufficient to allow abandonment in the face of a strong public need for service.

Although it may be easier for carriers to abandon unprofitable rail lines, it is also now much easier for States and private parties to preserve rail service. The Feeder Railroad Development

Program enables any financially responsible person to force a rail carrier to sell a line that has been designated for possible abandonment, even though no abandonment application has been filed. Similarly, once an abandonment application is filed for a line, financially responsible parties can offer to subsidize the carrier's service or force the railroad to sell them the line for continued rail service. To encourage entrepreneurs and the States to operate these lines, the Board has frequently exempted them from many regulatory requirements. Also, they can often avoid expensive labor protective conditions.

With this general background, we will first set out the standards and procedures that govern formal applications to abandon a line (Part II). We will then discuss exemptions, a widely used alternative to the more detailed abandonment application process (Part III). Several alternative ways of preserving rail service will be reviewed (Part IV), including the purchase or subsidy of lines slated for abandonment. The role labor plays in these cases will be examined (Part V). Finally, we explore alternative means of preserving rail rights-of-way through rail banking (Part VI).

In 1995, Congress enacted the “ICC Termination Act” which abolished the Interstate Commerce Commission and established the Surface Transportation Board to handle rail abandonments, *inter alia*. The new statutory reference is 49 U.S.C. 10903. The new rules are codified at 49 CFR Parts 1105 and 1152. A quick summary of the changes to 49 CFR 1152, which became effective on January 23, 1997, is included at Appendix I. The full text of the new rule is at Appendix IV.

II. ABANDONMENTS

Under the ICC Termination Act of 1995 (Act), a railroad may abandon a line only with the STB's permission. The Board must determine whether the "present or future public convenience and necessity require or permit" the abandonment. In making this determination, the Board balances two competing factors. The first is the need of local communities and shippers for continued service. That need is balanced against the broader public interest in freeing railroads from financial burdens that are a drain on their overall financial health and lessen their ability to operate economically elsewhere.

The railroad first must show how continued operation of the line would be a burden to it. If it cannot establish this, the abandonment will be denied. However, the railroad does not have to show an actual operating loss. It may also calculate its "opportunity costs" for the line. These are the costs of tying up the railroad's assets in the line when those assets could earn more money elsewhere.

If the railroad does demonstrate a burden, then evidence of the public's need for continued service is examined. The effect on local businesses, surrounding communities, the local economy, and the environment may be considered. Parties opposing abandonment should present that evidence and should also challenge the railroad's financial data.

With this general introduction, we will now address in more detail the steps in the abandonment process and the kinds of factors and evidence the Board considers in deciding these cases.

A. Steps In The Abandonment Process

The Act establishes strict filing and procedural requirements for abandonment applications. (49 U.S.C. 10904). The STB has adopted regulations to implement these requirements. These regulations are found at 49 CFR 1152.

Once an abandonment application is filed, interested parties have only 45 days to file protests. Yet, an effective opposition to abandonment requires substantial preparation. The Act, therefore, also gives communities and shippers advance notice of a railroad's abandonment plans.

1. System Diagram Map

The earliest indication that a railroad intends to abandon a line comes from the carrier's system diagram map. The Act requires a rail carrier to maintain a map of all its rail lines. A Class III carrier may choose to prepare a narrative description of its lines instead of a map. On this system diagram map or in its narrative report, the carrier must identify separately (1) any line for which it expects to file an abandonment application within the next three years and (2) any line that it considers to be a potential candidate for abandonment. The Board will reject an abandonment application if any part includes a line that has not been identified as a category 1 line (abandonment application planned within 3 years) for at least 60 days before the carrier filed the abandonment application. A carrier must publish its system diagram map or narrative in a newspaper of general circulation in each county containing a rail line in category 1, and publish all subsequent changes to its system diagram map. (The system diagram map rules are found at 49 U.S.C. 10903(c)(2) and 49 CFR 1152.10-13.)

Thus, the first indication that a railroad intends to abandon a line comes at least 60 days before the carrier's application is filed. <u>This time should not be wasted.</u> It gives shippers, local and State governments, and interested citizens an opportunity to meet to weigh possible opposition to abandonment, and to consider alternative means of continuing rail operations by the current railroad or another operator. For example, rate and service changes which might permit the railroad to operate more efficiently or profitably may be negotiated.

A line need not have been listed in category 2 (potentially subject to abandonment) prior to abandonment, so no weight should be attached to the fact that a line was or was not listed in category 2.

2. Notice of Intent

In addition to the system diagram map requirement, the STB requires the railroad to file a "Notice of Intent" to abandon. The railroad must publish this notice once a week for three consecutive weeks in general circulation newspapers in each country where the line is located, send it to each of the significant shippers on the line, send it to the State agency responsible for rail transportation planning, and post it at each agency station and terminal on the line. All these notice requirements must be fulfilled 15-30 days before the application is filed at the STB.

The complete form and all the information this notice must contain are set out in Section 1152.21 of the regulations. The notice describes when and how to file a protest to the proposed abandonment. It also explains how to obtain information on possible subsidy or purchase of the line. Once the Notice of Intent to abandon is received, shippers, communities, and interested citizens should organize their activities concerning the abandonment and prepare to present their position to the STB and the railroad. For help in preparing a Notice of Intent or preparing an opposition to an abandonment, please contact OPS at (202) 565-1592.

3. Abandonment Application

The abandonment application must contain detailed information about the costs and revenues on the line to be abandoned and the overall financial condition of the carrier. (A complete recitation of what must be in the application is found at 49 CFR 1152.22.) Any interested person may request a copy of the application from the carrier, and persons planning to participate should obtain a copy as soon as the application is filed and immediately begin to examine the information carefully.

Abandonment applications may contain pages of figures, tables, charts, and graphs, some of which may be less important than other parts. Opponents should make an effort to verify and, if appropriate, recalculate and reconcile key figures and totals. Shippers and small communities often lack the expertise to sort out rail financial data or the money to hire experts to do it for them. State

rail officials can help in this area and should be contacted for assistance.

A railroad may ask the Board to waive certain informational requirements. For example, a railroad is normally allowed to exclude data concerning overhead or bridge traffic (shipments not actually originated or terminated on the line sought to be abandoned) if it would retain that traffic by rerouting it over other routes. However, an opponent who believes relevant information has been left out, should appeal the waiver explaining why the information is necessary. If the Board agrees, it will rescind the waiver and require the information.

4. Protests or Comments To The Proposed Abandonment

Once an application is filed, protestants have only 45 days to submit protests.[1] Protests should attempt to quantify the harm to shippers and the community and explain each protestant's interest in continued service. If possible, they should also try to critically evaluate the railroad's financial evidence. Section 1151.25(a) of the regulations lists all the information that should be in the protest.

All larger shippers and every community on the line should submit statements describing in detail their use of the line and the impact a loss of rail service will have on their operations and area. Opposition from elected officials from both the local and national level is also very helpful.

Shippers should submit car loading data and estimates of future use -- the best are showings of projected increased traffic. They should also point out any defects in the carrier's cost data. Communities and shippers should make every effort to quantify the harm from abandonment.

Protestants should describe their interest in the proceeding in as much detail as possible. For instance, if the line sought to be abandoned is used for grain shipments and the protestant is a grain producer, the statement should at least specify the number of years in farming, the farm's size, the amount of grain produced and shipped by rail, the number of people employed directly on the farm, the availability of alternative (whether rail, truck or barge) transportation, the cost of alternative transportation compared to the cost of using this line, and any other factors believed to be relevant. In addition, protestants should present any evidence they may have developed that contradicts the revenue and cost evidence the railroad has submitted. Always use specific numbers, facts and

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[1] **NOTE:** *Oral Hearing* requests must be filed within *10 days* of receipt of the application. The Board must act on those requests within *15 days* of the filing of the application. See time line in Appendix I.

figures when possible, and explain where the information comes from or how it was developed. Cost and revenue information is usually critical. Remember: If it is shown that the line is not a financial burden to the railroad, abandonment will be denied.

Again, protests and comments to the proposed abandonment must be received at the STB within 45 days after the filing of the application. An original and 10 copies of each comment or protest must be filed with the Board. A copy must be mailed to the applicant railroad, and each copy must contain a "Certificate of Service" (a statement that the railroad was mailed a copy of the comment or protest). No set "form" exists for a protest and many letter protests are received. However, the more detailed a protest is, the more weight it will receive.

5. Modified Procedure And Oral Hearings

The Board will either set the proceeding for an oral hearing or, more often, what is called "modified procedure". (In the years 1990 and 1991, 8 of the 27 abandonment applications filed resulted in an oral hearing. During its first year in existence the STB held no oral hearings.) Modified procedure means that no oral hearing is held, and all evidence is filed in writing. Oral hearings are for the primary purpose of cross examining witnesses who have filed verified statements in the proceeding. See 49 CFR 1152.25(a). With this in mind, requests for oral hearing should specify any factual matters which are likely to be disputed and require cross-examination.

Regardless of whether modified procedure or oral hearing is used, the core of both the railroad's and protestant's case will come in the form of written evidence.

After receiving the protests and the carrier’s reply, the Board must issue its decision within 110 days after the application is filed.

6. Appeals

If a party is dissatisfied with a Director's decision, it may ask the STB to reconsider the matter. Director's decisions are made during certain stages of the proceeding. For example, the Director of the Office of Proceedings makes the determination whether or not an Offer of Financial Assistance is *bona fide.* See 49 CFR 1152.25(e) for other decisions made by the Director.

A party that is dissatisfied with a decision of the full Board may seek judicial review of the STB's decision by filing a petition for review in the appropriate United States Court of Appeals.

In situations where the abandonment application was protested a dissatisfied party may ask the STB to reopen the case if it can show material error, new evidence, or substantially changed circumstances. In an unprotested case, the only recourse for a dissatisfied party is if it can show that the carrier's abandonment application was defective (for failure to provide the required notices, for example) in which case it can ask the Board to vacate the abandonment certificate.

B. Issues In Abandonments

We will now discuss the important issues in rail abandonments and the factors the Board weighs in deciding these cases.

As explained earlier, the standard used in deciding abandonment cases is whether the railroad's burden of continued service outweighs the public's current and future need for the service.

The railroad first must establish that it is indeed suffering a loss or burden from the line. If it fails to prove this, the abandonment will be denied. However, the railroad does not have to demonstrate an "operating" loss. The Board also considers the annual "opportunity costs" of owning and operating the line. This is the cost of tying up the railroad's assets in track, land, and materials on the line, rather than putting those assets to other, more profitable uses. It is calculated by multiplying the carrier's investment in the line (including the net liquidation value of the track and land) by an appropriate annual rate of return. Where there is evidence of public need, the Board may refuse to grant abandonment based only on opportunity cost losses. If the railroad does show a loss or burden, then the protestants' evidence of public need is examined.

The statute specifically directs the STB to consider whether the abandonment "will have a serious, adverse impact on rural and community development." 49 U.S.C. 10903(d). Protestants can address this factor through evidence showing the economic impact abandonment would have on the area. This can be done by computing (1) markets that would be lost without rail service, (2) the number of business failures or relocations and lost jobs that would result from abandonment, and (3) the number of current or future ventures (such as industrial parks) that depend upon continued rail service. Likely sponsors of this type of testimony would be shippers (using data from their own business, industry, or farm), development experts from local or state governments, elected or appointed officials, and Chamber of Commerce representatives. In sparsely populated areas, for example, discontinuance of rail service may cause a significant loss of jobs and reduce the tax base upon which the community depends to support its local school system and other important public services.

A critical factor in assessing the impact of abandonment on a rail shipper's farm or business is the possible transportation alternatives available after abandonment. If shippers have already switched to truck transportation for part of their traffic, then truck transportation may be a suitable alternative for all their traffic. Yet, truck rates may be higher than rail rates, bringing into question whether the business can survive with higher transportation costs. Also, sufficient trucks may not be available in the area to handle the increased traffic, or the local road system may not be capable of handling the increased wear and tear of truck transportation. These issues need to be fully explored and developed by protestants. This is another area where State transportation specialists can provide shippers and local communities with invaluable assistance.

Local shippers also should be able to present testimony concerning past and future use of the rail line. Reasons for the low levels of past rail shipments, such as sporadic business fluctuations, drought or other local disaster, should be explained. If shippers are expecting increased rail shipments, based on sound and defensible business forecasts, this should be <u>documented.</u>

Besides the economic impact of the proposed abandonment, protestants may also point out any effect that the abandonment would have on the environment. For example, increased use of alternative modes of transportation, such as trucks, might adversely affect noise levels in congested areas or pose safety problems. The environmental consequences of abandonment are assessed by the STB's Section of Energy and Environment (SEE). For more information about environmental issues

you can contact SEE at (202) 565-1538. Also see the STB's regulations at 49 CFR 1105.

. The balancing test the Board employs to decide abandonments has factors on both sides of the equation. To be successful, protestants should not only present the harm that they will suffer from abandonment, but they should also attempt to discredit the railroad's evidence of losses or burden from operating the line.

C. Evaluating Railroad Financial Data

Nobody opposing an abandonment can afford to ignore the railroad's financial data. The railroad must show it is incurring a loss or a burden. The railroad will attempt to show that (1) it is not receiving, and cannot reasonably expect in the future to earn, sufficient revenues from the line; and/or (2) it expects to face significant costs on the line in the future that it will not be able to recover. Normally, the past revenue generated by the line can be determined fairly accurately based on carrier and shipper records. Other data are subject to interpretation by the parties, however. These include: (1) projecting the revenues for the line; (2) isolating the historical expenses of operating and maintaining the line, and projecting future operating, maintenance and rehabilitation expenses; and (3) calculating the opportunity costs of operating the line.

Protestants who can critically evaluate this data will have a better chance of success. The assistance of a CPA or rail cost analyst is useful and can be critical. Even if there is insufficient time or money to analyze the financial data thoroughly, there are a number of key issues that should be examined.

Railroads are required to include in their abandonment applications projections of their revenues and costs on the line for a "forecast year" --the 12-month period beginning the first day of the month the application is filed. To project future revenues and costs, the railroad must necessarily make assumptions. Those assumptions should be evaluated critically. Nobody can predict the future with certainty, and in many instances the protestants may be in as good or better position than the railroad to make accurate predictions. For example, a substantial component of revenues usually consists of the number of shipments originating or terminating on the line. Shippers on the line presumably know their own businesses and future transportation needs and may be able to dispute the railroad's projections of future traffic. Wherever possible, protestants should provide specific facts and figures to support their own projections.

Of course, projections as to the future usually are based upon prior experience. Thus, the railroad's historical data should also be examined. Again, there are some issues that can be explored even if a rail cost analyst or other expert is not available.

First, confirm that all the data are from the relevant periods. Historical cost and revenue data must be submitted for a so-called "base year." The base year is the most recent 12 month period for which data have been collected at the branch level, ending no earlier than 6 months prior to the filing of the application.

Second, be alert to circumstances that may make the historical data unrepresentative. For example, was the carrier's ability to meet requests for service impaired by a shortage of rail cars? Or was there a recession or drought that resulted in lower, unrepresentative traffic volumes and revenues?

Third, confirm that actual costs and revenues are used where required by the regulations. Maintenance-of-way expenses usually cannot be estimated by prorating expenses from a larger section of track; actual expenses incurred on the line sought to be abandoned are normally required. Similarly, depreciation of equipment, the return on investment for locomotives, and fuel costs must be based upon the type of locomotive and freight cars actually used on the line. The use of summary data based upon "Road" and "Yard" categories is generally unacceptable, because it tends to overstate costs when, as is often the case, a local or way train serves the branch line.

Fourth, if there are high rehabilitation or deferred maintenance costs, a qualified individual should examine the railroad's work papers and physically inspect the properties. It may be possible to further defer maintenance-of-way expenses for yet another year, taking those costs out of the forecast year. Usually only those rehabilitation costs necessary to meet Federal Railroad Administration minimum class I standards are allowed. As a rule of thumb, rehabilitation costs and maintenance-of-way expenses vary inversely. That is, if rehabilitation costs are high, then maintenance-of-way costs should be low.

Fifth, as with the actual and projected revenue and cost information, the railroad's claimed opportunity costs should also be examined thoroughly by an analyst. Even if this is not possible, several key components of opportunity costs can be examined.

For example, land values are usually an important factor in calculating opportunity costs. Protestants should check with the Register of Deeds to make sure the land included in the railroad's

calculations is and would still be owned by the railroad in the event of an abandonment. In some cases, ownership of the land reverts automatically to adjoining landholders. In addition, local bankers and real estate agents can supply accurate information on land values that may contradict the railroad's estimate of the value of its land holdings. Protestants should also (1) verify the tons of track material that will result from salvaging the line; (2) obtain an estimate of the scrap value in dollars per ton, and (3) see whether the cost of dismantling the track was deducted from the railroad's estimated sales proceeds.

It should be noted that a carrier may either calculate its own (pre-tax) cost of capital or use the industry-wide (pre-tax) cost of capital figure that is determined annually by the STB. To obtain the Board's latest cost of capital determination call the STB's Section of Costing and Financial Information at (202)565-1533.

Finally, the railroad's projected gains or losses on its rail assets should be examined. Local real estate agents or brokers can check projections of changes in value for land, and the railroad's projections can also be compared to the index price series for historical sales of rail assets maintained by the Board. The railroad must justify departures from these trends.

III. EXCEPTIONS TO THE ABANDONMENT PROCESS UNDER 49 CFR 1152.50

The STB's power to exempt rail lines from the normal abandonment procedures is found in the ICC Termination Act, 49 U.S.C. 10502. Section 10502 gives the Board a broad grant of authority to exempt carriers, services and transactions from almost any and all kinds of STB regulation. The Board must exempt a carrier, service or transaction from regulation if it finds (1) that continued regulation is unnecessary to carry out the national rail transportation policy of 49 U.S.C. 10101, and (2) that either the transaction or service is of limited scope or application of the regulatory scheme is unnecessary to protect shippers from an abuse of market power. Congress clearly contemplated that the STB would use this general exemption power broadly. The legislative history reflects Congress' desire that the Board actively exempt railroads from unnecessary regulation, particularly regulations restricting changes in rates and services. But Congress also provided the Board with authority to revoke exemptions that it has issued if and when the Board finds that its regulation is indeed necessary.

The STB and the ICC before it have both used broad exemption authority to facilitate the abandonment of lines where it believes that closer regulatory scrutiny is unnecessary, through both class exemptions and individual line exemptions. As a class, the Board has exempted the abandonment of lines over which no local traffic has moved for at least 2 years without formal complaint about a lack of service. Where a line has generated traffic within the last 2 years, the railroad may seek to persuade the STB that an exemption is nevertheless appropriate for that individual line.

These exemptions are widely used.

A. Class Exemption: Out-of-Service Lines

To invoke the class exemption for out-of-service lines, a carrier must file a notice at the Board certifying that (1) no local traffic has moved on the line for the past 2 years; (2) any overhead traffic that has moved over the line can be rerouted over other lines; and (3) no formal complaint about a lack of service is pending or has been decided in favor of the shipper.

Unlike the traditional application process, no Notice of Intent to abandon or system diagram map or narrative notice is required. However, 10 days before filing the exemption notice with the Board, the railroad must notify the affected State's Public Service Board or equivalent agency of its intention to do so. The railroad must also send an advance environmental notice to the State, in accordance with STB regulation 49 CFR 1105.11.

The STB will publish the exemption notice in the Federal Register within 20 days after it is filed. Thirty (30) days after the Federal Register notice, the railroad may abandon the line, unless the Board stays the exemption.

Stay requests that raise transportation concerns must be filed within 10 days after the exemption notice is published in the Federal Register. Stay requests based on environmental or historic preservation concerns may be filed at any time but must be file sufficiently in advance of the effective date for the Board to consider and act on the petition before the notice becomes effective. Offers to subsidize or purchase the line must be filed within 30 days after the Federal Register publication.

In addition, parties may ask the Board to reject the notice or reconsider the exemption as it applies to a particular line. Petitions to reject or reconsider may be filed within 20 days after the Federal Register notice. After the exemption takes effect, parties may ask the STB to revoke the exemption. Petitions to revoke may be filed at any time.

The STB will reject the notice if the information contained in the request is false or misleading. Therefore, if local traffic has moved on the line within the last 2 years, the exemption will be rejected.

Although environmental concerns, public need for continued service, and other issues can be raised in a petition to reconsider or revoke, the Board will disallow the exemption only in

extraordinary cases.

If use of the class exemption is disallowed for a line, the railroad is still free to apply for abandonment of the line under the regular application procedures discussed above (or seek an individual exemption under the procedures discussed below). The complete regulations applying to this class exemption are found at 49 CFR 1152.50. Also see the attached STB Timetable for class exemption proceedings at Appendix II..

B. Individual Exemptions under 49 CFR 1152.60

As with the out-of-service lines exemption, no Notice of Intent to abandon or system diagram map or narrative notice is required when a request for an individual exemption is filed. The only notice a railroad must give before filing an individual exemption request is an environmental notice to the designated State agency in each state where abandonment is proposed. To obtain the name and address of the designated agency in your State call the Board's Section of Energy and Environment at (202) 565-1538.

The Board must publish notice of the proposed exemption in the Federal Register 20 days after it is filed. No further public notice is given even if the petition is denied. Carriers frequently will serve a copy of their petition on any shippers on the line but are not required to give notice when the petition is granted or denied. Interested persons can be notified individually by the Board, if they ask that their names be placed on the Board's service list in a particular case. Parties of record (applicants and protestants) are placed on the service list automatically, but other interested persons should notify the Board's Office of the Secretary, 1925 K Street, N.W., Washington, D.C. 20423 of their desire to be served with copies of all decisions in a particular case.

A petition for an exemption generally will include only a brief description of the relevant facts. It need not be, and typically is not, accompanied by detailed financial or other information.

Persons opposing an exemption must file an opposition within 20 days after publication of the Federal Register notice. Offers to purchase or subsidize the line must be filed 120 days after the filing of the petition or exemption or 10 days after the service of the Board's decision granting the exemption, whichever occurs sooner. To receive a copy of that decision, you must have notified the Office of the Secretary of your interest in the case and have asked to be put on the service list as instructed, *supra*.

Petitions to stay the effective date of the decision may be filed in either “Petition” (Individual exemption) or “Notice” (class exemption cases). It should be noted that administrative agencies, like the Courts, have developed firm criteria for staying administrative action. To justify a stay, a petitioner must demonstrate that:

(1) there is a **strong**, and the emphasis is on **strong,** likelihood that it will prevail on the merits;

(2) it will suffer irreparable harm in the absence of a stay;

(3) other interested parties will not be substantially harmed by the issuance of a stay; and

(4) the public interest supports the granting of the stay.

The Board, as do the Courts, gives very careful consideration to each of the above criteria and has required a strong substantive showing on all of the four factors. While the showing of irreparable injury may vary from case to case, the key consideration is irreparable, and injuries that can be corrected later (however substantial in terms of money, time and energy) may not be enough to justify a stay. Similarly, in determining the public interest factor, the interests of private litigants must give way to the realization of public purposes. The burden of making a strong showing on all four of the above factors rests with the petitioner to convince the Courts or the Board that such extraordinary relief is warranted.

Where possible, parties opposed to the exemption should file an opposition or a protest with the Board before it acts on the exemption request. Even in the absence of a formal notice requirement, community leaders and shippers often are aware of a railroad's plan to seek an exemption before the carrier files its petition.

Protests and petitions for reconsideration of individual exemptions should include essentially the same kind of facts that would be included in a regular abandonment case. For instance, shippers should explain their business operations, quantify their use of the involved rail line, discuss the

availability and any additional cost of alternative transportation services, and explain the impact loss of the rail service would have on their businesses and the community. To the extent possible, protestants also should try to critically evaluate any financial information and traffic projections submitted by the railroad.

If the Board denies a carrier's request for an exemption, the carrier is free to file for authority to abandon under the regular application procedures discussed earlier.

IV. ALTERNATIVES TO ABANDONMENT

Users and interested parties should consider alternatives to abandonment at the first sign a carrier may be contemplating abandonment. The fact that the existing railroad believes the line is no longer economically viable does not necessarily mean the line cannot continue operations under other arrangements. There are many examples of small "short line" railroads operating on lines that the main line railroad sought to abandon. Congress and the STB have made it easier to preserve rail service by acquiring or subsidizing rail lines. These options will be briefly outlined below.

A. Forced Sales and Subsidies

To encourage continued service, Congress and the STB have adopted procedures that make it possible to force the sale or subsidy of lines slated for abandonment where the parties cannot agree on the price or terms of a subsidy.

1. Lines Approved For Abandonment

Under the offer of financial assistance (OFA) procedures, any financially responsible party seeking to continue service on a line approved for abandonment (or exempted) may compel the railroad to sell or conduct subsidized operations over the line. The statutory requirements and STB regulations concerning offers of financial assistance are contained at 49 U.S.C. 10904 and 49 CFR 1152.27, respectively.

Parties may request data on subsidy and acquisition costs from applicants in abandonment proceedings as soon as the Notice of Intent to abandon is filed. This includes (1) an estimate of the minimum purchase price or annual subsidy needed to keep the line in operation, (2) reports on the physical condition of the line, and (3) traffic and other data necessary to determine the amount of annual financial assistance needed to continue service. Any one who believes subsidy or acquisition is a possibility should request this information immediately and begin a thorough feasibility study.

Often the State will assist the railroad by providing substantial money for rehabilitation of the line.

In class exemption cases, where the railroad files a Notice of Exemption, Offers of Financial Assistance must be filed within 10 days of the publication of the Notice of Exemption in the Federal Register. In individual exemption cases where the carrier files a Petition for Exemption and in cases where the carrier files a full abandonment application and OFA must be filed within 10 days of the service date of the Board's order granting the exemption or abandonment application or within 120 days after the application or petition for exemption is filed, whichever is sooner. It is very important for a potential offeror to be aware of both the filing date and the date of the Board's decision. To do this, the potential offeror should ask to be placed on the Board's service list[2] for the relevant abandonment proceeding, so that the offeror will be advised as soon as any decision is in the case is served.

Each OFA is reviewed by the Board to determine whether the offeror is financially responsible and whether the offer itself is reasonable. A copy of the offeror's annual report or other financial statements should be submitted with the offer to show its financial responsibility. The STB assumes a State or local government entity to be financially responsible.

As to the reasonableness of the offer, a subsidy should cover the railroad's avoidable operating losses on the line, plus a reasonable return on the value of the line. An offer to purchase should equal the acquisition cost of the line (the net liquidation or going concern value of the line, whichever is higher). The offeror should explain how its offer was calculated and explain any disparity between its offer and the carrier's estimate.[3] If the Board finds that the offeror is financially

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[2]Write to the Office of the Secretary, Surface Transportation Board, 1925 K Street, N.W., Washington, D.C. 20423 and identify the docket number of the proceeding .

[3]Any carrier seeking abandonment authority from the Board must provide certain information to a party considering making an offer of financial assistance, including an estimate of the annual subsidy and minimum

responsible and the offer is reasonable, it will postpone the abandonment and give the parties an opportunity to negotiate.

If negotiations are successful and the parties voluntarily enter into a purchase (or subsidy) agreement which will result in continued rail service, the Board is required to approve the transaction and dismiss the abandonment application.

Should the parties fail to agree on the amount or terms of subsidy or purchase, either party may ask the STB (within 30 days after the offer is filed) to establish terms and conditions. The Board must issue a decision setting the terms and conditions, within 30 days after the request is made. The offeror then has 10 days to accept or reject the STB's terms and conditions. If the offeror chooses to accept them, then the railroad by law is forced to comply with them.

When a railroad receives more than one OFA, it can select the offeror with whom it wishes to transact business. Moreover, if the STB establishes terms and conditions at the request of an offeror who subsequently withdraws, then any other qualified offeror may take its place, forcing the railroad to go through with the subsidy or sale under those terms and conditions.

Certain conditions apply to sales under Section 10904(f)(4)(A). A purchaser may not transfer the line or discontinue service over the line for at least 2 years after consummation. After that time period, the purchaser may transfer the line back to the selling carrier, but it must wait at least 5 years before it can sell the line to others.

The financial assistance provisions of Section 10904 also apply where the Board exempts an abandonment from the formal application process. There are some differences however, particularly as to timing. For example, in exemption proceedings, persons interested in purchasing or

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purchase price required to keep the line or a portion of the line in operation. See 49 U.S.C. 10904(b)(1) and OPS's information bulletin entitled "So You Want to Start a Small Railroad" which provides a more detailed discussion of the OFA process.

subsidizing the line must first submit to the STB and the railroad a written expression of their intent to make such an offer. This expression of intent must be received within 10 days after notice of the exemption is published in the Federal Register. Once the expression of intent is received, the exemption will be automatically stayed for 40 days. The offer itself is due 30 days after the Federal Register notice. For more information on these procedures see the STB's regulations at 49 CFR 1152.27.

2. Purchase of Lines Potentially Subject to Abandonment

The feeder railroad development program was designed as an alternative to abandonment. Congress envisioned it as a method of allowing shippers, communities, or other interested parties to acquire rail lines before an abandonment application is filed. If a rail line has been listed on a carrier's system diagram map as potentially subject to abandonment, a financially responsible person can compel the Board to require a railroad to sell it the line[4]. The price for such a sale is either agreed to by the parties or set by the Board. The statutory procedures for this program are found at 49 U.S.C. 10907 and the STB's regulations are detailed at 49 CFR 1151.

In short, a proceeding commences upon the filing of a feeder line application with the Board. The applicant must show, among other things, that it can (1) pay the net liquidation value of the line or its going concern value, whichever is higher, and (2) provide adequate service for at least 3 years. The Board has 15 days to reject the application if it does not contain the prescribed information or to accept it by filing a Notice in the Federal Register no later than 30 days after the application is filed. Within 30 days after the application is accepted, any other interested party may file a competing

[4]Even if a line is not shown on the carrier's system diagram map as a candidate for potential abandonment, shippers and communities may seek to compel the Board to require a railroad to sell the line by proving that the "public convenience and necessity" requires or permits the sale. This test, however, is more difficult to satisfy.

application to acquire all or any portion of the same line. The owning railroad and other interested parties may submit verified statements containing their evidence and arguments within 60 days after the initial application is accepted. Within 80 days after the initial application is accepted, offerors may file verified replies. The STB must publish its decision in the Federal Register. Within 10 days of the service date of the decision, the offeror must file a notice with the STB and the owning railroad either accepting or rejecting the Board's terms. If two or more offerors accept the STB's terms, the owning railroad has 15 days from the service date of the Board's decision to select the offeror with whom it wishes to transact business and to notify the STB and offerors. If the parties agree on a price then that price will be the final sale price.

In theory, this program has two major advantages. It allows the parties to save the time and expense involved in the abandonment process, and it allows the new owners to take over operation of a line before further downgrading occurs. The program however, has not lived up to its potential, in part because it places the railroad and new short line owner in an adversarial relationship from the outset. It forces the railroad to sell at a price it may not agree upon and requires the newly created shortline to then develop a relationship with the railroad (with whom it must interchange traffic to reach the main line) in order to function in its new venture.

B. Voluntary Sales and Operations

Parties interested in preserving rail service need not wait until abandonment is approved to negotiate a voluntary purchase of a line proposed for abandonment or for that matter any active rail line. To make purchases of lines that might otherwise be abandoned more attractive to potential buyers, the STB has exempted these purchases from regulation. Special provisions have also been adopted to encourage continued service on abandoned lines acquired by States.

1. Class Exemptions

The statutory standards for voluntary acquisitions are found in 49 U.S.C. 10901, 10902, and 11323. Section 10901 applies only when (1) a non-carrier acquires a rail line, and (2) an existing carrier acquires an inactive line (a line that is already lawfully abandoned). Acquisitions of active rail lines by existing carriers fall under Section 10902 or 11323. These formal application procedures are seldom used to preserve rail service on lines threatened with abandonment. Instead, voluntary purchases of lines subject to abandonment are almost always consummated under exemptions to the formal acquisition procedures. These exemptions are discussed below.

a. Section 10901 Acquisitions

Following the Staggers Act and deregulation of the railroads, large Class 1 carriers began to sell or abandon unprofitable or marginally profitable lines. Requests to acquire and continue service over these lines were usually unopposed and were almost always approved because they were in the public interest. This led the ICC to promulgate broad class exemption procedures in 1986.[5] The current rules are found in 49 CFR 1150 Subpart D. Most non-carrier acquisitions and operations are now exempt from formal regulation under Section 10901, as are all carrier acquisitions of abandoned lines. When a Class II or Class III carrier acquires a line, it is governed by 49 U.S.C. 10902.

To invoke the class exemption, the acquiring party must file a verified notice including general information about the transaction, and a caption summary which will be used to provide public notice of the transaction. The exemption procedures differ depending on the carrier's size (in terms of gross revenue). If the transaction will create a Class III (smallest size) railroad, the

[5] The STB has modified these rules by decision served November 18, 1996 at Ex parte 529, Class Exemption for Acquisition or Operation of Rail Lines by Class III Rail Carriers under 49 U.S.C. 10902.

exemption will be effective 7 days after the notice is filed.

b. Section 11323 Transactions

Class exemptions have also been established for seven kinds of transactions that would otherwise require approval under 49 U.S.C. 11323 -- the statute applicable to carrier acquisitions of active rail lines. The most important for our discussion here are (1) acquisition of a line which has already been approved for abandonment and would not constitute a major market extension, (2) acquisition of nonconnecting lines, and (3) acquisition of trackage rights. (The last two categories do have some qualifications not relevant here.) See 49 CFR 1180.2(d).

To invoke these exemptions, the carrier must file a verified notice, at least one week before the transaction is to be consummated, containing the information listed in the Board's regulations at 49 CFR 1180.4(g)(1). To qualify for an exemption for acquisition or renewal of trackage rights agreements, a caption summary must be filed as well. See 49 CFR 1180.4(g)(2)(i).

2. Individual Exemptions

Where no class exemption applies, an individual exemption may be sought for almost any small rail acquisition or operation, under the Board's general exemption authority at 49 U.S.C. 10502. Such requests for individual exemptions should be tailored to the particular situation involved.

The statute itself exempts some types of rail operations and transactions from STB regulation. The acquisition or use of spur, industrial, team, switching or side tracks is exempt under 49 U.S.C. 10906. These statutory exemptions are defined narrowly and the facts of each situation must be carefully examined to determine if the exemption applies.

V. LABOR ISSUES

No discussion of the acquisition and abandonment of rail lines would be complete without recognizing the increased importance rail labor plays in many of these cases. Labor witnesses often take an active role in opposing abandonment applications and other proceedings. In addition, the ICC Termination Act provides certain protection for employees of railroads engaging in some major changes in operations. It requires railroads to protect their employees from financial loss for a period of up to 6 years and to provide other protection relating to benefits and seniority.

Labor issues may arise in any rail transaction. The STB imposes labor protective conditions (LPC's) in most abandonments.

The conditions have been crafted differently for each situation. Generally there are the Oregon Short Line conditions imposed in abandonment cases, the Mendocino Coast conditions imposed in lease transactions, and the New York Dock conditions imposed in line sales to existing carriers[6]. When imposed, these conditions obligate the selling or abandoning railroad and, in some cases, can also be imposed on the acquiring railroad. When the acquiring entity is an established railroad or is a wholly owned subsidiary that is not independent from its rail parent, conditions may be imposed on both the acquiring and selling carriers. But where there is an acquisition of a line by a non-carrier or a Class III carrier, the employees are not entitled to any labor protection. Moreover, LPC's are not imposed for forced sales under the offer of financial assistance provisions of Section

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[6]These conditions are set forth in Oregon Short Line R. Co.-- Abandonment -- Goshen, 360 ICC 91 (1979); Mendocino Coast Ry., Inc. -- Lease and Operate, 354 ICC 732 (1978) and 360 ICC 653 (1980), as clarified in Wilmington Terminal RR, Inc. -- Pur. and Lease -- CSX Transp., Inc., 6 ICC 2d 799 (1990), aff'd sub nom, Railway Labor Executives' Ass'n v. ICC, 930 F2d 511 (6th Cir. 1991) (Wilmington Terminal); and New York Dock Ry. -- Control -- Brooklyn Eastern Dist., 360 ICC 60 (1979), as clarified in Wilmington Terminal, supra. They are all variations of the original LPC agreement hammered out between labor and management in 1936, the Washington Job Protection Agreement.

10904 and are imposed only on the seller when there is a forced sale under the Feeder Railroad Development Program. [7]

The Board is not allowed to use its exemption powers under 49 U.S.C. 10502 to excuse carriers from providing employees with the LPC's they are due.

It is important at the beginning of any abandonment or acquisition proceeding to determine what position, if any, rail labor intends to take. There are some abandonments which will have minimal or no effect on rail jobs. In those cases, rail labor often decides not to participate. There are other situations in which labor witnesses play an active role, challenging railroad costing testimony and providing conflicting data in such areas as labor costs, track maintenance, and the current condition of the track and rolling stock.

[7]Feeder line purchasers are required to use the existing employees on the line to the extent possible. See 49 U.S.C. 10910 (e) and (j).

VI. ALTERNATIVE USES FOR RAIL RIGHTS-OF-WAY

The ICC Termination Act and the National Rails to Trails Act, along with the STB's regulations give interested parties the opportunity to negotiate *voluntary* agreements to use a railroad right-of-way that otherwise would be abandoned for recreational or other public use, such as a commuter rail service or a highway. These methods of preserving a railroad corridor are known as "rail banking" meaning that the right-of-way is preserved for potential future use as a railroad. Many railroads do not own the land on which their tracks lie. Rather, they have easements over the land of adjoining property owners. Unless those easements are "rail-banked" by converting them to a trail or other public use, they are extinguished.[8] Some rights-of-way which were "banked" have been reactivated. The rules for filing a request for a public use condition are slightly different from those which apply to the filing of a trails use request. The sample request which appears in this bulletin as Appendix III is a request for both types of conditions. Proponents often ask for both conditions in the same request in order to take advantage of the benefits of each type of condition. This disadvantage of this approach is that the request for a trails use condition has a filing fee, while a request for public use condition does not.

Since filing fees for all types of cases change at least once a year, it is advisable to contact the Board's Office of Public Services at (202) 565-1592 to determine the current fee, if any, before filing any pleading.

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[8] Because real estate law and practice differs from state to state, we refer to landowners along the rail line as "adjoining" property owners. Sometimes adjoining property owners may have what is commonly called a "reversionary" interest in the land, meaning that upon the termination of the easement, the land is then available for the full, unencumbered use of the landowner or fee holder. In some states, when a rail use terminates, the land on which the rail line sits passes, as a matter of state law, to the adjoining landowners even when those landowners had no title to the land prior to its use as rail property. In some cases, railroads do own the land on which the track sits in fee simple and can dispose of it as they wish.

A. Public Use Conditions

Under the terms of the ICC Termination Act at 49 U.S.C. 10905, when the Board approves or exempts an abandonment it must determine whether the rail line is suitable for alternative public use, such as highways, other forms of mass transit, conservation, energy production or transmission, or recreation. If it is, the Board may prohibit the railroad from selling or otherwise disposing of the rail corridor for up to 180 days after the effective date of the decision or notice authorizing abandonment. During the 180 day period, interested persons may negotiate with the railroad to acquire the property for public use. The railroad's consent is unnecessary for the imposition of this negotiating period. If the parties fail to reach an agreement within the 180 day period[9], the Board must allow the railroad to fully abandon the line and dispose of its property. It cannot *require* the railroad to sell its property for public use.

The Board will only impose a public use condition when it has received a request to do so pursuant to 49 CFR 1152.28. The request must:

1. state the condition sought;
2. explain the public importance of the condition;
3. state the period of time for the condition (which cannot exceed 180 days); and
4. provide justification for the requested period of time.
5. A "Certificate of Service" indicating that a copy of the public use request has been served on the carrier seeking abandonment at its address of record.

A sample request for Public Use Condition is provided in Appendix III. An original and 10 copies must be submitted to the Board.

Timing is important. In an application for abandonment, the public use proponent must file the request within 45 days of the filing of the application, i.e. 25 days after the notice of the application appears in the Federal Register. In exemption cases, whether the exemption is a class exemption (notice) or an individually sought exemption (petition), the public use condition request must be filed within 20 days after the Federal Register publication appears.

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[9]Unlike trails use conditions, public use conditions cannot be extended beyond the statutorily imposed 180 day limit, even if the parties' consent.

B. Request for Trail Use Conditions

To begin the trail use process, a trail proponent must file a trail use request in the proceeding initiated by the railroad to abandon the line. A trail use request has no effect on the Board's decision whether to give a railroad permission to abandon. It is considered only after the Board has decided to permit the abandonment.

Under 49 CFR 1152.29, the trail use request must include:

1. A map which clearly identifies the rail corridor (including mileposts) which is proposed for trail use,
2. A statement of willingness to accept financial responsibility which indicates the proponent's willingness to manage the trail, pay property taxes on the trail and accept responsibility for any liability arising from the use of the rail corridor as a trail, and.
3. An acknowledgment that trail use is subject to the user's continuing to meet the above obligations, and the possibility of future reactivation of rail service on the corridor.
4. A "Certificate of Service" indicating that a copy of the trails use request has been served on the carrier seeking abandonment at its address of record.

A sample public use condition/trails use request appears at Appendix III. An original and 10 copies of the request must be filed with the Board and a copy served on the railroad.

Unlike the public use condition, the trail use condition will only be imposed if the railroad consents. If the railroad does agree, then a condition is imposed which prohibits the rail carrier from otherwise disposing of the rail corridor for 180 days while the parties negotiate an agreement. The Board has granted an extension of that 180 day period in cases where the parties jointly request it indicating that they are close to agreement.

As with the public use condition request, timing in very important. In an abandonment application, trail use requests must be filed within 45 days of the filing of the application i.e., 25 days after the publication of the application in the Federal Register. The rail carrier seeking abandonment authority then has 15 days to notify the Board whether and with whom (if more than one proponent has submitted a request) it intends to negotiate a trail use agreement. In class

exemption cases, a trails use request must be filed within *10* days of the appearance of the notice in the Federal Register. Note that this is 10 days earlier than a public use condition request is due. In an individual exemption case (petition), a trails use request must be filed with 20 days of the appearance of the Federal Register notice. In both types of exemption cases the carrier has 10 after the trails use request is received to notify the Board whether and with whom if intends to negotiate a trails use agreement.

Appendix I

SYNOPSIS OF NEW ABANDONMENT REGULATIONS

1. Effective Date: Regulations effective on 1/23/97

2. New Uniform Schedule:

Day -60	Deadline for identifying line as category 1 on SDM.
Day -30 To Day -15	Opportunity to file Notice of Intent.
Day -20	Due date for railroad to file environmental and/or historic reports on required agencies
Day 0	**Application filed, including applicant's case in chief.**
Day +10	Due date for oral hearing requests.
Day +15	Due date for Board decision on oral hearing requests.
Day +20	Due date for Notice of Application to be published in the Federal Register.
Day +45	Due date for protests and comments, including opposition case in chief, and for public use and trail use requests.
Day +60	Due date for applicant's reply to opposition case and for applicant's response to trail use requests.
Day +110	Due date for service of decision on the merits.
Day +120	Due date for offers of financial assistance, except that if an application has been granted by decision issued sooner than Day 110, the offer of financial assistance shall be due 10 days after service of the decision granting the application.

3. Important Changes from the Old Regulations:

a. The Board will publish a notice of an abandonment application or a petition for an individual exemption in the Federal Register 20 days after the application or petition is filed.

The notice will: 1) Describe the proposal; and 2) Advise the public regarding due dates for OFAs and requests for public use and trail use conditions, and explain how to participate in the proceeding.

The railroad must file a draft notice on a disk.

Appendix II

STB TIMETABLE FOR CLASS EXEMPTION PROCEEDINGS

Abandonments and Discontinuances of Service and Trackage Rights

F-10 days	Notice of exemption procedure filed with State and other agencies.
F	Notice of exemption filed with STB. (Filing Date + F)
P (F+20 days or fewer)	Notice of exemption proceeding published in Federal Register.
P+10 days	Petition to stay effective date of exemption due. Request for Trails Use Condition Due
P+20 days	Petitions for reconsideration due. Comments due. Requests for Public Use Condition Due.
P+30 days	Exemption effective/abandonment or discontinuance may occur (unless stayed for reconsideration).

SOURCE: 49 CFR, Section 1152.50

APPENDIX III

1. **Sample Public Use Condition and**

Trail Use Request

Below is a sample of a request for both a Public Use Condition and a Trail Use Condition. The blank spaces and items in italics are to be completed by the prospective trail agency or group to reflect the specific circumstances. Remember that the requests should be mailed to both the STB and the railroad simultaneously.

[Date]

Secretary

Surface Transportation Board

Washington, DC 20423-0001

Re: [*Name of Railroad Company*] Abandonment in [*Name of County and State*], [*STB Docket Number*]

Dear Secretary:

This request is filed on behalf of [*Agency Name*], which is a [*political subdivision or government agency interested in transportation and/or natural resources, private/public interest organization interested in conservation and/or recreation, etc.*], hereinafter referred to as "proponent."

Proponent requests issuance of a Public Use Condition as well as an Interim Trail Use Condition rather than an outright abandonment authorization between [*endpoint a*] and [*endpoint b*].

A. Request For Public Use Condition

Proponent asks the STB to find that this property is suitable for other public use, specifically trail use, and to place the following conditions on the abandonment:

1. An order prohibiting the carrier from disposing of the corridor, other than the tracks, ties and signal equipment, except for public use on reasonable terms. Justification for this condition is: [example: *the rail corridor in question is along a scenic river and will connect a public park to a major residential area. The corridor would make an excellent recreational trail and conversion of the property to trail use is in accordance with local plans. In addition, the corridor provides important wildlife habitat and open space and its preservation as a recreational trail is consistent with those purposes*]. The time period sought is 180 days from the effective date of the abandonment authorization. Proponent needs this much time: [example: *to assemble or to review*

title information, complete a trail plan, or begin negotiations with the carrier].

2. An order barring removal or destruction of potential trail-related structures such as bridges, trestles, culverts and tunnels. The justification for this condition is that these structures have considerable value for recreational trail purposes. The time period requested is 180 days from the effective date of the abandonment authorization for the same reason as indicated above.

B. Request For Interim Trail Use

The railroad right-of-way in this proceeding is suitable for railbanking. In addition to the public use conditions sought above, proponent also makes the following request:

STATEMENT OF WILLINGNESS TO ASSUME

FINANCIAL RESPONSIBILITY

In order to establish interim trail use and railbanking under section 8(d) of the National Trails System Act, 16 U.S.C.

§1247(d), and 49 CFR §1152.29, is willing to assume full responsibility for management of, for any legal liability arising out of the transfer or use of (unless the user is immune from liability, in which case it need only indemnify the railroad against any potential liability], and for the payment of any and all taxes that may be levied or assessed against the right-of-way owned by and operated by .

The property, known as the , extends from railroad milepost near to railroad milepost near , a distance of miles in County, . The right-of-way is part of a line of railroad proposed for abandonment in STB Docket No. AB- (Sub-No.).

A map depicting the right-of-way is attached.

acknowledges that use of the right-of-way is subject to the user's continuing to meet its responsibilities described above and subject to possible future reconstruction and reactivation of the right-of-way for rail service.

By my signature below, I certify service upon [*Railroad Company and address*], by U.S. Mail, postage pre-paid, first class, this day of , 20 .

Respectfully submitted,

Name

on behalf of:

Appendix E. Rails-to-Trails Conservancy's Understanding Environmental Contaminants: Lessons Learned and Guidance to Keep Your Rail-Trail Project on Track

Understanding Environmental Contaminants

Lessons Learned and Guidance to Keep Your Rail-Trail Project on Track

Prepared by Rails-to-Trails Conservancy

Understanding Environmental Contaminants —

Lessons Learned and Guidance to Keep Your Rail-Trail Project on Track

September 24, 2004

TRAILDART
TRAIL DEVELOPMENT ASSISTANCE RESPONSE TEAM

A Service of Rails-to-Trails Conservancy

PROJECT TEAM MEMBERS

Jeffrey Ciabotti

Betsy Goodrich

Hugh Morris

Steve Winslow, Esq.

MISSION:
The purpose of Rails-to-Trails Conservancy
is to enrich America's communities and countryside
by creating a nationwide network of public trails
from former rail lines and connecting corridors.

Special thanks to

Craig Della Penna, Barbara Richey and Jennifer Simmons,

and project managers of the case studies:

Stuart Beckley, Ignacio Dayirt, Sean Duperron,
Leo Hennessy, Jeff Nangle, PELSP

TABLE OF CONTENTS

PREFACE

LETTER COMING

INTRODUCTION

Throughout Rails-to-Trails Conservancy's (RTC) 18 years of experience, contamination has generally not been an obstacle when developing rail-trails. Communities wishing to convert rail corridors into multi-use paths sometimes find themselves in the difficult position of dealing with known, potential or perceived contamination along a railbed. Questions arise during all phases of trail development, from land acquisition to management. Future trail users may ask about potential exposure at public meetings. Trail opponents may raise concerns about contamination as a means to impede or thwart trail development or property acquisition. Elected officials may fear contaminant clean-up could escalate project costs. Abutters may worry about dust kicked up during construction. Trail managers need answers to questions about contamination to keep projects on track, however no comprehensive source of information existed to aid trail developers in addressing these complex issues.

This report serves as a national resource guide to assist communities in utilizing new and existing brownfield programs to understand and address environmental clean-up issues that may inhibit the conversion of unused rail rights-of-way (ROW) into multi-use trails. RTC's objective was to address brownfield concerns by researching appropriate legal, funding and construction issues related to rail-to-trail conversions. The findings of this research will assist local communities to resolve potentially complex contamination occurrences by employing successful strategies outlined in this report.

To address this problem and provide guidance to communities struggling to convert rail corridors into multi-use trails, this report seeks to answer the following questions:

- What potential contamination may be encountered along rail-lines?
- What steps need to be taken when contamination is found?
- How have other communities effectively addressed the legal, funding and construction issues of a contaminated site?
- What are the federal and state resources available to assist communities as they deal with legal, funding, testing, remediation and construction issues?

To answer these questions, the research team conducted a survey of trail mangers to report the incidence of contamination and any remediation efforts, and case studies were chosen to analyze how other communities have addressed these issues. In the following pages you will also find a review of legal issues, funding sources and other state and federal resources available to trail developers. Finally, guidelines have been provided to the trail developer who must tackle the issue of remediation on a rail corridor.

This national resource guide has been created to aid communities where a potential hazard has been identified. Each rail corridor is unique and contamination may not exist or varies depending on uses of the corridor. However based on the survey conducted for this report — Lexis search on media over the past 20 years and contact with trail managers — Rails-to-Trails Conservancy has found that, overall, potential contamination along a corridor has not hindered the creation of rail-trails.

RAIL-TRAILS – A BACKGROUND

HISTORY OF THE RAIL-TRAIL MOVEMENT

It began in the mid-1960s, quietly, gradually, hesitatingly. There wasn't much fanfare. It was primarily a Midwestern phenomenon, barely noticed in places like Los Angeles, New York or Washington, D.C. People didn't say, "Is that the latest fad?" They said, "That's a really *smart* idea!"

The idea was to convert unused or abandoned rail corridors into public trails. A simple concept, unlike the complex railroad system that was crumbling physically and financially. It didn't require or even claim an inventor. Once the tracks were removed, people naturally started walking along the grades, socializing, exploring, discovering old railroad relics, and marveling at old industrial facilities such as bridges, tunnels, abandoned mills, sidings and switches. In the snows of winter the unconventional outdoor enthusiast skied or snowshoed on the corridor. In the days before even running and all-terrain bicycling were common pastimes, the predominant activity was walking. Of course, none of the corridors were paved or even graded. They were simply abandoned stretches of land.

"Rails-to-Trails" is what people started calling the movement, and the name was catchy and descriptive enough to give the concept a tiny niche in the fledgling environmental movement that was gathering momentum and bracing for huge battles shaping over clean air and water. However, it was destined to move into the mainstream of the conservation and environmental protection. After all, it had all the ingredients: recycling, land conservation, wildlife habitat and historical preservation, non-motorized transportation, physical fitness, recreation access for wheelchair users and numerous other benefits.

In 1965 few Americans understood the national importance of rail-trails. Rails-to-trails was still a highly localized movement. But gradually a realization emerged that America desperately needed a national trails system and that abandoned rail corridors were the perfect backbone for that network. Today, more than 35 years later, rail-trails have begun to make a significant mark, with 12,585 miles of rail-trails and approximately 100 million users per year.

THE VALUE OF RAIL-TRAILS

Rail-trails provide places for cyclists, hikers, walkers, runners, inline skaters, cross-country skiers, equestrians and physically challenged individuals to exercise and experience the many natural and cultural wonders of the nation's urban, suburban and rural environments. Rail-trails not only serve as independent community amenities, they also enhance existing recreation resources by linking neighborhoods and schools to parks, waterfronts, recreation centers and other facilities.

Multiple Recreation Opportunities. Rail corridors are flat or have gentle grades, making them perfect for multiple users, including walkers, inline skaters, bicyclists and people with disabilities. Trails are multimodal and versatile passageways.

Economic Renewal and Growth. Trail users spend money on products and services related to recreational activities. Bicycle and inline skate shops, food stores, hotels and tourist locations report an increase in business as a result of trails. Trail-related businesses spring up in communities with trail, spurring economic growth in the area.

Increased Property Values. Studies have shown that properties on land adjacent to trails and greenways often increase in value. People are willing to pay more money to have a multi-use trail in their

neighborhood. Trails have become an important amenity that homebuyers seek when choosing where to live.

Healthy Living. The U.S. Surgeon General estimates that 60 percent of American adults are not regularly active and 25 percent are not active at all. In communities across the country, people do not have access to trails, parks or other recreation areas close to their homes. Trails and greenways provide safe, inexpensive avenues for regular exercise.

Environmental Protection. Trails and greenways help improve air and water quality. Communities with trails provide enjoyable and safe options for clean transportation, which reduces air pollution. By protecting land along rivers and streams, greenways prevent soil erosion and filter pollution caused by agricultural and road runoff.

Connecting People and Communities. Trails serve as utilitarian transportation corridors between neighborhoods and workplaces. They connect congested urban areas with open space. By bringing people to greenways for their daily commutes, trails unite people and their natural surroundings.

Regional Systems. Bringing trails together to form networks dramatically increases the positive impact trails can have on their communities by creating threads of green linkages within and between communities. Regional trail systems increase the value of the whole by connecting the parts, forming a more cohesive transportation system allowing people to travel to other communities or to work and combine trail use with other forms of transit.

NATIONAL PERSPECTIVE: RAIL-TRAIL CONVERSIONS AND ENVIRONMENTAL CONTAMINATION

LEGACY OF THE RAILROADS

By the beginning of the 20th century railroad transportation was synonymous with industry and success. Having a railroad in town was considered a great status symbol and communities often bid against one another to entice the railroad to come to town. In the United States, railroads reached a peak in total mileage around World War I with approximately 270,000 miles of track. The system has since shrunk to the current total of about 105,000 miles. The collapse of the railroad industry can be generally attributed to the loss of cargo traffic to trucks in the 1950s and loss of passenger traffic to increased automobile travel.

In the early 1980s the rapid abandonment of corridors by railroads and the dismantling of this valuable network set off alarms, and Congress passed an amendment to the National Trails System Act in 1983. This law allowed unneeded rail lines to be "railbanked," or set aside for use in the future as a transportation corridor, while being used as a trail in the interim.

The collapse of the railroad industry has left a network of linear transportation corridors, which if lost today would be difficult, if not impossible, to recreate. While no longer needed for rail use, these important corridors are being recycled and offer communities the opportunity to create multi-use trails. Today, in 2004, we are nearing 13,000 miles of open rail-trails that are used for a variety of purposes including physical activity, recreation and transportation.

RECYCLING RAILROAD CORRIDORS — CONTEXT AND ISSUES

In addition to leaving an intricate network of linear corridors, the railroad industry left contamination associated with its other activities. Discarded materials used by adjacent industries, contamination associated with regular railroad management and repair such as weed control, leaks from material transfers or accidents, loading practices and other instances of contamination may be found in varying degrees along rail corridors, depending on the railroad's management practices and type of industry along the corridor. The type and extent of contamination falls into two general categories, residual contamination that may be found along any stretch of corridor — urban, suburban or rural — and contamination associated with industrial uses along the corridor.

The most common contamination found along rail corridors is residual contamination from railroad operations. The most commonly reported contaminants along rail corridors include arsenic, which was used as an herbicide to control weeds, metals and constituents of oil or fuel (petroleum products), which likely dripped from the rail cars as they passed over the corridor. Other possible

THE GREENBUSH LINE CORRIDOR in Hingham, Mass., was tested for contamination in 2003 as part of a project to reconstruct and re-open this line for commuter rail use, which had previously operated for about 100 years, but was shutdown in 1959. The Massachusetts Bay Transportation Authority collected 622 soil samples along the corridor. A review of that data shows that 11 percent of the samples exceed the Massachusetts Department of Environmental Protection's standards that indicate the presence of an imminent hazard and that more than 20 percent exceed contaminant reporting levels for arsenic.

SOURCE: Massachusetts Department of Environmental Protection, "Best Management Practices for Controlling Exposure to Soil during the Development of Rail Trails."

contaminants include creosote used to preserve wood ties, coal ash from engines, and polynuclear aromatic hydrocarbons (PAHs) from diesel exhaust. Data collected in Massachusetts during the development of a commuter rail serves as one example of the results of extensive testing for residual contamination. Trail development can often serve as the most practical method to deal with risks posed by residual contamination.

Industrial activities either in railyards or adjoining the rail also contribute contaminants. These areas are often associated with switching and rail yards, where higher levels of petroleum, metals, pesticides and other substances associated with repairs and general maintenance can be found. In addition, higher contamination levels have been found on sidings or in areas adjacent to industries where contaminants have spread onto the rail bed. These areas may warrant targeted investigations to identify if elevated or more hazardous levels of contamination require specific clean-ups are present. (See Case Study 1: Manhan Rail Trail.)

NATIONAL SURVEYS

In order to assess the degree to which the issue of contamination impacted rail-to-trail conversions, Rails-to-Trails Conservancy (RTC) conducted a national review of what was done on current rail-trails as well as a survey of coverage of this issue in the media.

SUMMARY OF RAIL-TRAIL MANAGER SURVEY RESULTS

In an effort to assess the actual efforts of rail-trail developers around the country to uncover traces of contaminated residue from past railroad operations, and any subsequent effort to mitigate any such substances found in the corridor being developed for trail use, RTC developed a questionnaire designed to elicit any actions or discoveries of consequence (See appendix A for questionnaire.)

This survey was e-mailed to 715 trail contacts. Of these, 112 returned the survey filled out either in whole or in part and 81 were discovered to be defunct e-mail addresses. Of the active e-mails, the survey received an 18 percent response rate. A summary of the responses is below and an itemization of responses to key questions is reproduced in Appendix B.

As shown below in the Summary of Responses, the survey shows that most rail-trail developers and managers followed due diligence procedures (including Phase I assessment and visual inspection), surveying the corridor, to one degree or another, and finding nothing, continued with development plans.

SUMMARY OF RESPONSES	
Trails indicating Phase I Assessment	20
Trails indicating Phase II Assessment	3
Trails indicating visual inspection	16
Trails indicating soil samples	10
Trails finding toxic residue	10
Trails finding “no evidence” of contamination	15

In addition to surveying trail managers on the trail corridor, they were asked about railroad sidings and operations years. RTC was curious as to whether these parcels of land were more likely to be contaminated. Only two respondents remarked on this situation and concluded that they tested and found no contamination of concern.

SUMMARY OF LEXIS SEARCH — MEDIA

Project managers may be concerned that public attention could unduly focus on the contamination and detract from efforts to promote trail development. One way to gauge potential public concern about contamination on rail corridors is to look at the news articles reported in the media. Rails-to-Trails Conservancy conducted a search of newspaper articles on Lexis. Search criteria included major newspapers and were subject to Lexis search exclusions and rules. The search revealed that while there were more than 3,000 articles that mentioned rail-trails, few mentioned the most common residual contaminants; arsenic and creosote. Criteria for the search and exclusions can be found in Appendix D. The table below summarizes the number of articles found with each set of search criteria.

RESULTS OF LEXIS RESEARCH ON "RAIL TRAILS" AND "TOXINS"

Terms	Hits: All News (English)	Hits: Major Newspapers
Rail trails	more than 3000	more than 3000
Rail trails, toxins	22	8
Rail trails, toxins, arsenic	4	0
Rail trails, toxins, arsenic, creosote	0	0
Rail trails, toxins, creosote	1	1
Rail trails, creosote	13	6
Rail trails, arsenic	19	3
Rail trails, arsenic, creosote	0	0

RISK MANAGEMENT STRATEGIES

When dealing with a corridor that may be contaminated, it is important that the trail developer employ a risk management strategy that includes planning, designing, constructing and maintaining the trail to reduce risks to construction workers, maintenance crews and trail users. This is also the best defense against liability. This section provides some steps that trail developers should take when building and managing a trail.

Why should a Trail Manager be concerned about hazardous materials in a rail corridor?

- Protect human health and the environment;
- Liability which may result in litigation;
- Funding sources or lending institutions may require investigation (due diligence);
- Regulatory requirements, and;
- Construction and maintenance considerations.

When should you be concerned about potential contamination?

PRE-PURCHASE

Prior to purchasing the corridor and after finalizing a preliminary agreement with the railroad representatives, the buyer should complete due diligence procedures and become familiar with federal and state regulations concerning liability. This process entails examining the state of the title, surveying the property, appraising the corridor's value, assessing the integrity of structures within the corridor and conducting an environmental assessment of the corridor. After these steps are complete, if the due diligence raises new issues or reveals contamination problems, the buyer should meet with the railroad representatives or landowner to renegotiate the terms of the agreement. Following this meeting, if the buyer is content with the new terms of the agreement then the acquisition of the corridor should be finalized.

POST-PURCHASE

For the following reasons, you will still want to be concerned about contamination even if you have acquired the property without following the ASTM requirements:

- People using the right-of-way prior to construction may be exposed to contaminants at unsafe levels;
- Construction contractors may need to test soil that looks contaminated in order to comply with Occupational Safety and Health Administration requirements for their workers;
- Any soil removed during construction may be subject to either federal and state hazardous waste disposal requirements;
- Identifying contaminated soil prior to construction allows you to properly manage and budget for handling of contaminants. You may even be able to relocate soils to other parts of your project area to avoid off-site disposal costs.

TYPICAL CONTAMINANTS — WHAT YOU MIGHT FIND

What constitutes a contaminant?

In general a contaminant is any physical, chemical, biological or radiological substance such as an element, compound, mixture, solution, etc. that can be found in any media (air, surface water, groundwater or soil) that may be harmful to human health or have adverse effects on the environment. In terms of federal regulations and statutes, a contaminant has been defined as a hazardous substance, hazardous waste or pollutant by various policies including the Comprehensive Environmental Response Compensation Liability Act (CERCLA), the Solid Waster Disposal Act, Clean Water Act and the Clean Air Act. In Section 40 CFR302 of the CERCLA, there are 717 substances listed as hazardous materials. CERCLA and state laws that were surveyed appear to exempt the normal applications of pesticide from clean-up laws. In some states this exemption also applies to herbicides and fertilizers.

What are the contaminants I should be aware of when acquiring a rail corridor?

- Railroad ties (wood-treating chemicals including creosote)
- Spilled or leaked liquids (oil, gasoline, diesel fuel, cleaning solvents and detergents)
- Herbicides
- Fossil fuel combustion products (PAHs)
- Roofing shingles (asbestos)
- Air Compressors (used in braking and for starting engines)
- Transformers and Capacitors (used in train controls and electric generation)
- Metals (arsenic — pesticides, wood preservatives, fossil fuel combustion; mercury — combustion products, leaking gauges)

DUE DILIGENCE

The term "due diligence" represents the process of evaluating the risks and value of a corridor that is to be purchased. To exercise due diligence a corridor buyer must implement a plan to identify possible hazards and carry out the appropriate corrective action to prevent acquisition of an environmentally contaminated area. Due diligence is important in legal matters as a buyer could face potential lawsuits pertaining to the health and safety of the corridor's patrons.

The level of due diligence warranted will depend on the

BASIC PROCESS STEPS

- *Conduct due diligence, inventory potential hazards along the corridor;*
- *Analyze potential adverse health effects caused by hazardous substances released to human and ecological receptors;*
- *Determine what, if any, additional mitigation steps need to be taken;*
- *Examine both risks and benefits associated with various remedial alternatives;*
- *Provide information needed by regulators and the public;*
- *Design and locate the trail to avoid dangers. Warnings of potential hazards should be provided and hazards should be mitigated to the extent possible;*
- *Follow state and federal laws regarding construction in a contaminated area and removal of contaminated soils and other materials;*
- *Once the trail is open for use, a comprehensive management plan that includes risk management should be in place;*
- *A qualified person should regularly inspect the trail to identify potential hazards and maintenance problems, and;*
- *Signage and fencing should be posted to protect trail users when needed.*

situation and the state's regulations. As can be seen by the survey responses and the Lexis search, contamination has not been a hinderance to trail development. However starting with some basic due diligence will help the trail developer decide what levels of assessment are needed.

STATE REGULATIONS

Unless a rail-trail happens to run through a Federal National Priority List or "Superfund" site, the EPA will probably not have direct regulatory involvement in any clean-up actions. EPA policies and federal brownfield legislation often limit EPA regulatory involvement when a clean-up follows state requirements. Each state has different requirements. The American Society for Testing and Materials (ASTM) has developed inquiry standards that EPA has adopted, which may also be adopted by the state. The state's lead environmental agency will be the best place to find state contamination clean-up requirements. Most states now have a division that works on clean-up or remediation that is often found in the state environmental protection agency. A trail developer could also consult an environmental professional about what the state requires for levels of investigation.

Many state programs have similar steps but differ in how involved state officials will be in each step. Generally the steps in the clean-up process are as follows:

EVOLUTION OF CLEAN-UP LAWS

IN 1970 THE CLEAN AIR AND CLEAN WATER ACTS banned many pollution discharges into air and water. Companies initially complied by capturing pollutants and storing them in drums, lagoons or dumping them in landfills. By the late 1970s those wastes had seeped into soil and groundwater, and harmed or threatened to harm people, plants and wildlife. In reaction to major waste sites such as Love Canal in Upstate New York, in 1980 Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. CERCLA authorized the EPA to undertake clean-ups and then sue polluters and property owners for those costs.

CERCLA had an important prospective impact—polluters became much more aware of where any hazardous wastes were going and began to seek facilities to destroy the wastes rather than dump them. Many industrial and commercial property purchasers began inspecting and testing properties for the presence of contamination to protect themselves from legal liability and clean-up costs.

In the early 1980s, many states enacted laws similar to CERCLA to spur waste site clean-up. Agencies hired staff to oversee each step of work. Although enacted in reaction to "Love Canal," EPA and state agencies began to find everyday practices of common businesses such as gas stations, repair shops, dry cleaners and manufacturers also resulted in releases of contamination. The list of locations that may have posed a risk to health and the environment grew at a rapid rate and quickly outstripped the federal and state government resources available to undertake clean-up or force polluters to do so.

New testing technologies allowed soil and water testing with accuracies in the parts per billion range. The accuracy of these tests stood in contrast to the knowledge of whether such levels of contamination posed a risk to either people's health or the environment. Faced with this uncertainty agencies took the position that contaminants must be reduced to nondetectable limits, or to limits that would protect any foreseeable use. Many less contaminated properties began to linger on the federal and state lists. Prospective buyers started to avoid acquiring these properties do avoid regulatory delays and clean-up costs that were often uncertain.

- An initial assessment (the due diligence report should suffice for this step);
- A follow-up assessment that includes sampling areas of concern identified in the Initial Assessment;
- Determination of existing risks and target clean-up levels;
- Development of a remedial plan to cost-effectively achieve the clean-up levels;
- Implementation of the remedial plan, and;
- Post clean-up close-out.

The level of a state's involvement determines the pace of clean-up and can also affect overall costs. Some states will review and approve each assessment report and clean-up plan before a developer can proceed to the next step. A clean-up agreement with the state may need to be signed requiring the trail developer to pay the costs of state review. More and more states have developed programs that allow private parties to proceed with assessments and clean-ups supervised by licensed environmental professionals. In Massachusetts, for instance, most clean-ups proceed entirely under the direction of private clean-up professionals and do not require any approval by the state.

Determining the level of clean-up for a corridor fundamentally determines how much mitigation is necessary. Several approaches have been developed on determining how much clean-up is necessary. Initially most states developed site-specific standards based on a methodology of extrapolating health risks from contaminant levels known as "risk assessment." Risk assessment methods contain many variables and assumptions. As a result the development of site-specific standards can be time-consuming. Some states have developed generic clean-up levels based on the current and expected use of the site. These generic levels greatly simplify the clean-up decision-making process and create a "bright finish line."

States using generic clean-up standards require developers to file deed notices if contaminant levels remaining on-site will not protect people in all situations. The deed notice may include the following information: (1) a plan indicating the location covered by the notice, (2) a description of the contaminants of concern, (3) a list of allowable and restricted uses, (4) a plan to maintain any cap or barrier and 5) steps that must be taken when contaminated soils need to be excavated.

Once clean-up levels have been established, clean-up alternatives are reviewed, costs and a clean-up plan are developed. Many states now allow asphalt and landscaping to serve as protective barriers for contaminated soils. An environmental consultant or state environmental agency should be able to recommend the thickness of asphalt and ground cover that has been found acceptable in other locations in the state. In some instances, half-a-foot to two feet of contaminated soil may need to be removed or treated. Any soil removed off-site must be transported to an appropriate location. For instance, Massachusetts prohibits contaminated soils from being transported to any location significantly less contaminated than the soil. This helps prevent circumstances where slightly contaminated soil ends up in the backyards of new residential developments.

The clean-up plan must be developed into a detailed scope of work to be included in the construction contract. The scope should be as detailed as possible and discuss how contamination will be addressed, including test protocols, quantities and types of contaminants to be cleaned-up.

Often the contractor that constructs the trail will also be responsible for removing railroad ties and contaminated soil. A contractor can make more money removing contaminated soil than clean soil.

HIRING AN ENVIRONMENTAL PROFESSIONAL

AN ENVIRONMENTAL PROFESSIONAL can quickly gather information from national and state databases and records sources, such as Sanborn Maps, speeding the understanding of what areas along the rail-trail are of most concern. Trail advocacy groups can assist with this effort by gathering historical information about industries along the line and property ownership.

Many states keep lists of environmental consultants, however, these lists will not provide much guidance on the right consultant for the project. Consult with staff within the trail organization or other government agencies that deal regularly with buying and redeveloping property, and who have hired environmental consultants in the past. Government agencies may also have to follow procurement requirements for hiring service professionals.

Here's a brief list of questions to ask any environmental professional:

- *Does the professional have licenses for and experience performing due diligence investigations for real estate transactions in the local area? Do they have experience with the American Society for Testing and Materials standards?*
- *Have they directed soil removal and other remedial actions, and understand the proper regulatory steps and costs for those actions?*
- *Is the firm familiar with sample collection of soil, ground water and surface water?*
- *Has the firm performed on-site testing of soil for pesticides and herbicides typically found on rail lines? Are they familiar with analytical requirements? What laboratory do they use for testing?*
- *Does the firm comply with Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response Standard certification and safety training requirements?*

Depending on the procurement requirements discuss general needs and obtain fixed price quotes from several firms on the due diligence investigation.

An engineer or consultant independent of the construction contractor can confirm the quantities of material the construction contractor removes and that the correct testing procedures have been followed. The construction contract should require the construction company to make reasonable efforts to minimize unwanted off-site disposal of contaminated soil.

LEVELS OF INVESTIGATION

Is the corridor a brownfield?

According to the U.S. Environmental Protection Agency (EPA), the word "brownfield" is used to describe areas of abandoned or underused land that is perceived to be, or in fact is, environmentally contaminated due to past industrial or commercial use. Railroad corridors, or sections of corridors, can be considered brownfields. If a corridor or an adjacent property is suspected to be a brownfield, the state natural resources or environmental protection agency should be contacted to determine if the property has been identified as a brownfield. If this is not the case, a Phase I, and possibly a Phase II environmental site assessment may be necessary.

ENVIRONMENTAL ASSESSMENT

If there is a possibility that a trail corridor may be contaminated, an environmental expert should be enlisted to conduct an environmental assessment, especially before negotiations for or a purchase of the property. The nature of the assessment will depend on the property and the potential for contamination, but should include, at a minimum, the equivalent of a Phase I assessment.

A Phase I assessment combines research into the property's history with a visual inspection. Courthouse records, title abstracts, historic aerial photographs and newspaper accounts offering background on the past uses of the site might provide some insight into the

property's history. Interviews with local government representatives, adjacent landowners, and state and federal officials may also uncover historical events about which the current railroad knows nothing. Phase I assessments are not regulated by the federal government, but may be by the state. The scope of work for the Phase I may include:

- Investigate the rail line history and locate old stations, crossings, spurs and rail yards. The Valuation Plans and historical aerial photographs for the properties abutting the rail line can provide much of this information;
- Investigate site use, identify commercial and industrial stretches and conduct historical research of adjacent properties. The Valuation Plans and Sanborn Insurance maps can provide much of the information for the snapshot in time when they were developed. Local historical societies may have information on leading local industrialists and their businesses;
- Review the existing federal and state lists of known or suspected disposal sites to see if any are located along the right-of-way;
- Inquire with neighbors, fire department personnel or the local historical society for further information on train crashes, accidents and other incidents that may have released chemicals;
- Conduct a thorough, visual inspection of the right-of-way, looking for:
    - Contaminated soil as evidenced by discoloration, odors, differences in soil properties, pipes, or buried debris;
    - Signs of illegal dumping of waste from businesses or industry (not simply household trash);
    - Stressed vegetation or "dead zones";
    - Areas of soil run-off, both away from the right-of-way and toward the right-of-way;
    - Signs of wind erosion sufficient to create a dust inhalation exposure, and;
    - Signs of public use of the existing right-of-way (condoned or trespassing), such as dirt-bike trails, play forts, beverage cans and fire pits.
- Prepare a list of locations that warrant further investigation including sampling techniques, assessment costs and if possible at this stage an estimate of potential clean-up costs.

If the Phase I study identifies problem areas, a Phase II assessment may be required. The Phase II assessment can be avoided if the Phase I does not find an area of significant contamination and the corridor owner assumes responsibility for clean-up costs should problem areas need attention. A Phase II assessment involves more thorough testing of water, air and soil samples, as well as a more thorough investigation of the site. If contamination is found, a Phase III assessment will review clean-up alternatives, clean-up costs and recommend a remediation plan for clean-up.

While the techniques for identifying environmental contamination have become increasingly sophisticated, the cost and responsibility for cleanup and restoration are less clear. Federal law targets past and present owners, operators, transporters and generators of hazardous substances. Assigning responsibility and collecting money for clean-up is complicated by the history of contamination and the likelihood that the original contaminators may no longer be traceable, or if they still exist, do not have the finan-

cial capacity to pay for clean-up. Although the railroad has certain responsibilities as the property owner, do not be surprised if the railroad's representative wants to include cleanup costs as a negotiating point.

Overall, an environmental assessment can cost anywhere from a few thousand dollars to more then $20,000 if extensive soil and water samples are taken over a broad area. The assessment and its results can quickly become a critical issue in negotiations to acquire the property. Before taking title to the property, make sure the purchase contract clearly states who will pay for any environmental problems that have been discovered. Seek warranties and representations from the railroad indicating there is no known contamination, or if that is not the case, disclosing the actual situation and plans for remediation.

REMEDIATION ALTERNATIVES

Once it is determined that remediation is needed, the environmental consultant should prepare an estimate of the approximate costs of alternatives to address the identified contaminants. This cost estimate may be used in negotiations to reduce acquisition costs. If the trail developer owns the land or will be accepting it for a nominal charge, they will want to include the clean-up plan in any construction contract for the project.

Railroad Ties

Generally, salvaging of track and ties prior to construction can be profitable, depending on the market. However, if high levels of contamination are found, this may not be the case. An environmental consultant can help identify licensed facilities that will accept old railroad ties for disposal. In order to avoid liability for illegal disposal, do not reuse the ties on existing properties or allow the public to take them away. On-site burial may be possible if your project includes a large area such as a parking lot. The Massachusetts Department of Conservation and Recreation disposed of ties and contaminated soil under a parking lot built while creating a park on a former municipal dump along the Neoponset River near Boston. Ballast can be used to serve as a sub-base for the new trail.

Trail Construction

Communities can take several actions to address residual and industrial contamination on rail corridors. Taking care of remediation during trail construction can be the most effective means to address contamination. The following is a list of the most common methods for addressing residual contamination on a rail corridor. Combining these methods can be an effective way to address residual contamination and site-specific contamination associated with industry. The Massachusetts Department of Environmental Protection has developed Best Management Practices that promote capping in areas with residual contamination.

The most common methods for addressing residual contamination on a rail corridor include:

- Cut and Fill — Soil containing high contamination is removed, replaced by clean soil to fill the corridor. Regrading of the site may require fill to be placed in certain areas. See if the design engineer and construction company can use contaminated soil where fill is needed, or for another use such as roadway subgrade, or disposed of in an appropriate manner as outlined by the state's environmental laws. If your corridor is wide enough, you may be able to create vegetated berms on the edges of the trail to contain the contaminated soil. Contaminated soils should never be relocated to areas with high human contact, such as playgrounds, schools or residential yards. (See Case Study 3: Doyle Street Greenway.)

- Capping the Surface — Hard surfaces, such as asphalt and cement, may be used to "cap" or cover and isolate contaminated soil along the corridor. Likewise the use of crushed stone with appropriate depth may also be used. Your consultant or state agency should be able to provide you with guidance on these issues. (See Case Study 2: Betsie Valley Trail.)

- Exclusions — In cases where contamination is, or is perceived to be, higher due to due diligence research, a trail developer may choose to exclude a portion of the corridor from purchase and use a separate route alternative to avoid human contact with the contaminated site. This may also be employed as a temporary alternative until a contaminated site may be remediated. (See Case Study 1: Manhan Rail Trail.)

- Signage and Fencing — Signage and fencing are used to keep trail users on the trail and protect them from specific contaminated sites. (See Case Study 4: Trail of the Coeur d'Alenes.)

- Phytoremediation — The process of cleaning contaminated soil and water with plants. Phytoremediation is best used for contamination in the top layers of soil, where the roots of the plants reach. It may be employed in combination with other techniques.

RECOVERING CLEAN-UP COSTS FROM THE POLLUTER

If the organization involved in trail development and remediation did not cause the pollution, recovering the costs to clean-up the contamination may be an option if the polluter can be identified. Involve polluters as soon as possible so they can be involved and possibly fund investigations and clean-up planning. Document that the plan follows clean-up laws to ensure your organization can seek cost recovery. In order to do so any soil samples collected and tested must have a documented "chain-of-custody" and records must have been adequately kept on how samples were collected and handled.

Pursuing polluters can be cost prohibitive and time consuming. If the railroad is the major polluter the best way to handle these costs is during the negotiations of the land transfer. An agency or local environmental attorney can help negotiate conditions regarding environmental clean-up as part of the land transfer.

MANAGEMENT AND MAINTENANCE

Managing risks associated with a contaminated corridor does not stop after construction ends. If contaminated soil is removed, then the problem is eliminated. However if the area with elevated contamination was simply capped with a hard surface it will be important for the trail manager to stay on top of maintenance to ensure the trail user is sufficiently protected. Regular maintenance, as well as reconstruction of a trail surface at the end of its life — 15 years for asphalt and 10 years for crushed stone) will be important. In addition, if needed, trail signage and fencing should be maintained. (See Case Study 4: Trail of the Coeur d'Alenes.) More information about trail maintenance can be found in Rails-to-Trails Conservancy's "Trails for the Twenty-First Century, Planning, Design, and Management Manual for Multi-Use Trails," by Charles Flink, Kristina Olka and Robert Searns.

CASE STUDIES

SUMMARY

The case studies serve as examples of ways communities have addressed contamination. An environmental professional and agency contacts can help you evaluate the best approach to your situation. In an effort to gain a more thorough understanding of the impact of discovering contaminants on a corridor, we have selected four rail-trail projects which did encounter some level of contamination and developed in-depth case studies exploring the mitigation measures taken.

CASE STUDY 1: MANHAN RAIL TRAIL, EASTHAMPTON, MASSACHUSETTS

BACKGROUND

The Manhan Rail Trail provides a good example of the barriers that communities must surmount in order to convert an old rail corridor into a multi-use community trail. When complete, this eight-mile trail will run from Easthampton to Northampton, Mass. Four of the five miles of the trail in Easthampton opened in June 2004. The remaining one-mile contaminated section of corridor in Easthampton is currently not open to the public.

Typical of many New England communities, Easthampton, Mass., was a manufacturing city serving the textile, chemical household cleaner and insulation industries. It was also served by a railroad that thrived until the mid-1970s when much of the industrial activity ceased. The Manhan Rail Trail follows the former New Haven Railroad's Canal Division corridor, which paralleled the Farmington canal running from New Haven, Conn. to Northampton, Mass.

By the late 1970s changes in the environmental laws and relocation of businesses to places like North and South Carolina, brought about a shift that made the mill buildings largely dormant. By 1991 the Pioneer Valley Railroad (PVRR) — which had taken over all the trackage in the city — instituted a freight surcharge because of poor track conditions. The surcharge drove the last customer using the railroad, the W.R. Grace & Co.'s Zonolite plant, to close. The railroad filed for abandonment of the approximately five miles of corridor in Easthampton in 1992.

The Friends of the Manhan Rail Trail formed in 1996 to advocate for the trail. The city of Easthampton approved the purchase of the corridor, and by 1999 the PVRR removed the track and the city acquired the corridor.

CONTAMINANTS AND REMEDIATION

The primary concern over contamination along the Manhan Rail Trail was at the site of the former W.R. Grace & Co plant, where raw materials (semi-processed vermiculite ore containing temolite asbestos, a suspected carcinogen) were converted to insulation. The Massachusetts Department of Environmental Protection (MDEP) and the U.S. Environmental Protection Agency (EPA) began testing the soil along the corridor in 2000. W.R. Grace & Co., agreed to conduct further testing, which showed asbestos contamination extending about 700 feet north and 200 feet south of Wemelco Way along the abandoned rail bed. At around this time, W.R. Grace & Co. entered into Chapter 11 bankruptcy because of the number of asbestos-related lawsuits filed against it.

The city of Easthampton hired Tighe & Bond, an environmental engineering company, to assess the degree of contamination and recommend a remediation treatment. Tighe & Bond estimated it would cost approximately $260,000 primarily in disposal costs to clean up the contamination along nearly 1,000 feet (40 feet wide) of the planned bike path route.

The city of Easthampton is still waiting for funding to clean up the site. The proposed method of remediation is to replace one foot (deep) of contaminated material with clean soil and pave the trail. Simply paving the trail was discounted because the railroad ties are still in place and the city is interested in installing a parallel sewer line. The trail will be fenced and signed in order to keep the users on the trail.

FUNDING

Initial testing of the corridor was conducted as part of a larger project to test W.R. Grace sites by the MDEP and the EPA. Tighe & Bond, the environmental engineering company that assessed the degree of contamination and recommended clean-up, donated their time to the project, thus reducing costs to the city.

Identifying funding sources for remediation of the corridor was difficult. In 2003 and 2004 the City of Easthampton submitted grant applications to the EPA's Brownfields Clean Up program but did not receive funding. However, U.S. Representative John Olver (D-Mass.) announced the inclusion of $750,000 in the new transportation bill to remediate the asbestos and construct the rail-trail, which is still pending.

Additionally, in early 2003, the city of Easthampton filed a claim against W.R. Grace & Co. for its failure to clean up asbestos-contaminated soils at the site of its former manufacturing plant on Wemelco Way. The case is still pending.

LESSONS LEARNED

The first hurdle was convincing the responsible parties that the asbestos should be cleaned up, rather than the alternative of not building a trail and thus not needing to clean the contaminated land.

The second major challenge with this project was finding a funding source for the cleanup. Project planners found that the EPA Brownfields Assessment and Cleanup program was a good potential source of funding. Instead, the project is being funded through the next transportation legislation before Congress at the time of this report.

The final lesson learned in this project was that better communication between the state agencies would have been beneficial, especially between the state highway and environmental protection departments.

CONTACT INFORMATION

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BACKGROUND

The 22-mile Betsie Valley Trail is located in Benzie County, Mich., along the shores of Lake Michigan between the communities of Thomasville and Frankfort. Rail use began on this line in the 1880's, first to bring wood to Elberta, Mich., to fire metal refining ovens and later to carry passengers between the Thompsonville depot and Frankfort. In the 1930's rail car ferry service began from Elberta, allowing rail cars to be shipped across Lake Michigan. In 1980 the Michigan Department of Transportation (MDOT) purchased the bankrupt Ann Arbor Railroad company. In 1982 the last rail car was transported by ferry and in 1985 the train made its last trip through Benzie County.

Twenty-two miles of the Betsie Valley Trail are open for use and another mile is still under development and slated to be complete by the end of 2004. The Michigan Department of Natural Resources (MDNR) owns the majority of the line and the last two half-mile sections are owned by the Village Alberta and the City of Frankfurt. However, the trail is maintained and operated by Benzie County. Seven miles of the Betsie Valley Trail are surfaced with asphalt, three with crushed limestone (in the Crystal Lake Area), and an additional 12 miles are currently unimproved and are open to snowmobiles.

Concerns over arsenic contamination in the soils of the rail corridor were raised by adjacent property owners opposed to trail development. Beginning in 1988 and ending with a settlement in 1996, adjacent property owners sued MDOT for ownership of the rail corridor along a three-mile stretch of beach front on Crystal Lake. The settlement allowed for adjacent owners to purchase the beach/rail property adjacent to their homes provided they agreed to a lifetime rail, utility and trail easement. The trail location could be relocated provided that 1) it was at the property owner's expense; 2) it would be continuous; 3) have safe curve radius; and 4) have sight distances and meet general safe trail design standards. Once the relocation was approved by the MDNR, a land survey was taken to create the easement language for each property deed. This is being completed now.

CONTAMINANTS AND REMEDIATION

In May 1999 six soil samples were collected from the middle of the railroad corridor, approximately four to six inches below grade. Analysis of the samples showed levels of arsenic ranging from 8.4 parts per million (ppm) to 72 ppm. This is elevated above Michigan Department of Environmental Quality's (MDEQ) standards for residential direct contact. In June 1999 additional samples were taken from the shallow ground water beneath the

railroad bed. Results showed that contaminants were not leaching into the groundwater. Soil sample results showed contaminants decreased rapidly as you moved out from the center of the tracks.

Additional testing was performed in July 2001 and May 2002. This testing revealed arsenic (8.4–72 ppm) and benzopyrene (0–9ppm) (a Poly Aromatic Hydrocarbon or PAH). The conclusion from these tests was that the three miles along Crystal Lake were contaminated, though there is reason to believe that the entire 22-mile corridor in Benzie County is contaminated at a similar level.

Seven miles of the corridor is capped by the trail surface. In the Crystal Lake area, the contaminants were removed and a crushed limestone surface laid. This eliminated direct contact and was cost effective. These sections of trail did not require additional time to complete construction. The contractor was required to follow guidelines on working with contaminated soil, such as ensuring soils did not become airborne during construction.

Along the Crystal Lake segment of the trail, contaminated soil was removed in varying amounts. This was done because of the proximity of the contaminants to homes in this section. Homeowners in this section were insistent that the state clean the contaminants out. Excavation of the contaminated soil began in October 2002 and was completed in June 2003 by MacKenzie Environmental. Construction of the corridor has not been completed.

For removal of contaminated soils in the Crystal Lake segment, the involved agencies were MDEQ, MDNR, Michigan Department of Community Health, MDOT, Crystal Lake Property Rights Association and MacKenzie Environmental.

The surface work in other sections of the trail to cap the contaminates involved MDNR, MDEQ, Betsie Valley Trail Management Council (Benzie County), Johnson Hill Land Ethics (landscape architect), Gourdie Fraser and Assoc., (engineering firm), Elmer's Crane and Dozer, and Kramer Contracting.

FUNDING

The total cost for clean up, engineering and trail surface (crushed stone) for the 3.3-mile section along Crystal Lake was $750,000. MDEQ, MDNR, and MDOT contributed funding to the project.

Construction cost for the capped section of trail did not involve additional expenses because of the contaminants. The cost and process to surface the trail is essentially the same with or without contaminates. Funding consisted of state and federal grants and foundation and local funds were used to match the grants.

LESSONS LEARNED

Due to the court settlement for the Crystal Lake segment, adjacent property owners were allowed to relocate the trail. Many property owners did this by moving the railroad ballast stones off the corridor and onto a new location. This spread the contaminants over a much greater area. This required more testing, additional on-site monitoring of the soil removal process, and more costs. The other sections of the trail created no major challenges.

Because of the potential health impacts adjacent landowners can be particularly concerned about contamination near their homes. Efforts to educate people in the communities with the facts will be time well spent. Most people will read the information and realize the best course of action is to cap the contaminated earth. The public agency is then responsible for developing and presenting a plan to cap the contaminated soil.

CONTACT INFORMATION

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BACKGROUND

The Doyle Street Greenway is located in Emeryville, Calif., a small community of less than 10,000 people across the bay from the San Francisco. The trail project is part of a larger city-wide renaissance to transform itself from an old industrial landscape with many brownfield projects to a livable community with vibrant high tech and commercial industries. The 0.4-mile rail-trail follows a Santa Fe Railroad spur line that once serviced Emeryville, Calif., and Berkeley, Calif. It will be extended by an additional 0.4 miles in order to connect it to other trails.

CONTAMINANTS AND REMEDIATION

Testing of the corridor began before the city of Emeryville purchased the rail corridor from Union Pacific. Both soil and groundwater testing were undertaken to determine the nature and extent of contamination. The soil sample tests showed higher levels of arsenic (up to 689 mg/kg), lead (up to 3,227 mg/kg), and petroleum hydrocarbons (TPH as diesel at concentrations up to 11,300 mg/kg). It was determined that the entire 2,200-foot rail-trail was contaminated.

To clean up the site, approximately 2.5 feet across the entire site of contaminated soil was excavated and disposed of, off-site. It was replaced by a layer of clean fill and a combination of hard-surface and greenscape was chosen as the surface material. This method was chosen because it offered the most thorough level of protection of the public's health and minimized long-term maintenance and liability issues.

The remediation process involved the cooperation of the city of Emeryville, the U.S. Environmental Protection Agency's (EPA) Department of Toxic Substances Control, the California Environmental Protection Agency's Regional Water Quality Control Board and Union Pacific Railroad.

FUNDING

The project cost approximately $1 million and was funded in part by EPA's Brownfields Assessment Demonstration Pilot Program as well as by the city of Emeryville, California State Park and Bicycle Bond Funds, Union Pacific Railroad and Pulte Homes, which paid for improvements adjacent to their developments.

LESSONS LEARNED

A major challenge to this project was developing accurate cost estimates for use in negotiations with the railroad. Estimates are difficult to nail down because there are so many different components to such a project that impact the costs, such as acquisition and sampling schedule, and shifting costs of improvements to the private sector through development and design negotiations.

In putting the project together, staff from the city of Emeryville found it useful to engage the various regulatory agencies early in the process in order to avoid surprises during negotiations or after property had been purchased. Much to their advantage, the city of Emeryville can serve as a regulatory agency for less complicated projects, such as this one. The city is very familiar with the redevelopment of railroad spurs because of the large number of them within the city, and therefore is familiar with the special issues surrounding these projects.

Project staff also found it useful to have sufficient funding for the project, allowing them to work through various problems that developed during the course of the project. For example, it is difficult to completely characterize the contaminants in the soil and so having flexibility as the project progressed permitting project managers to react to new information as it became available.

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U.S. EPA Region 9 Brownfields Team
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www.epa.gov/region09/waste/brown/index.html
www.epa.gov/brownfields/

CASE STUDY 4: TRAIL OF THE COEUR D'ALENES, KOOTENAI, SHOSHONE, AND BENEWAY COUNTIES, IDAHO

BACKGROUND

The Trail of the Coeur d'Alenes is a 10-foot-wide, 73-mile-long asphalt trail. It stretches west from the mountain mining town of Mullen, Idaho on the Montana border, along the Coeur d'Alene River in Idaho's Silver Valley to Plummer, Idaho in the prairie lands near the Washington border. As a former Superfund site, this rail-trail presents an extreme case of contamination.

Construction for the rail corridor began in 1886 when silver was discovered and the railroad was used to transport ore and other concentrates. Mine waste was used as fill material in constructing the corridor and further contamination occurred when flooding carried mine waste from non-railroad source points to other parts of the railroad corridor. Union Pacific (UP) proposed abandoning the corridor in the 1990s and the State of Idaho and the Coeur d'Alenes tribe jointly filed for railbanking. In 1996, the Justice Department filed a lawsuit against UP, in which the railroad agreed to pay $30 million to clean up the contaminated corridor. Construction took place between 2001 and 2004.

CONTAMINANTS AND REMEDIATION

A level 1, complete human health risk assessment, was conducted to determine if trail contamination would cause health risks. Hundreds of sample cores at various depths along the entire length of the right-of-way were taken. Contaminants such as lead, arsenic and other heavy metals were found all along the corridor. Contamination levels varied but tests indicated contamination greater than 30,000 part per million in some places.

According to the Environmental Protection Agency (EPA), an engineering evaluation/cost analysis determined that the best option for remediation of the heavy metal contamination was to remove and dispose of some contaminated material, lay vegetative barriers and cap the corridor with asphalt. Contaminated soil was removed and replaced by noncontaminated materials on the section of the corridor near Chatcolet Lake on the Coeur d'Alene Tribe Reservation. A total of 175,000 cubic yards of contaminated materials were removed and remediated, approximately 200,000 cubic yards of barrier material were utilized, and 65 miles of 10-foot-wide asphalt capped the surface.

Ties were removed, decontaminated and salvaged, and tie dump areas from the railroad operations were cleaned up. Lastly, vegetative, asphalt and gravel barriers were used to control trail user exposure to lead.

Trail signage and outreach materials are in use to educate and protect the trail user. A brochure can be found at each trail head recommending removing dirt from clothes, toys, pets, shoes and equipment before leaving the area.

The brochure also warns not to let children play near shore lines or off the trail, and for trail users to carry water for drinking and washing.

The agencies involved in the mitigation process included: Idaho Department of Parks and Recreation, Coeur d' Alenes Tribe, Department of Justice, EPA, Idaho Department of Environmental Quality, U.S. Fish and Wildlife Service, Panhandle Health, Army Corp of Engineers, Union Pacific Railroad, counties and cities, Idaho Attorney General's Office and the Idaho Dept of Transportation.

FUNDING

The entire trail, except for one short section of trail between Mullan and Kellogg which was paved with a $1 million Transportation Enhancements grant, was funded and built by UP under a concent decree that UP entered into with the federal government, the State of Idaho and the Coeur d'Alene Tribe. UP's estimated costs are $30 to $40 million dollars.

UP is still responsible for long-term flood damage to the trail, soil and asphalt barriers and bridges. They keep track of these costs so in the future the government and UP can negotiate a trust fund to cover these long-term costs.

LESSONS LEARNED

Trail advocates, including government agencies, faced a long process with many barriers to build a multi-use trail through a superfund site. At the time there were no similar examples to refer to, which would have made the process easier. There were many opponents to the project and it was difficult to coordinate the many agencies and entities involved in negotiating the deal with Union Pacific.

CONTACT INFORMATION

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www.idahoparks.org/pdf/TrailCDAweb.pdf

FUNDING AND OTHER RESOURCES

This section provides additional resources for federal and state assistance and funding sources.

FEDERAL AND STATE RESOURCES

ENVIRONMENTAL PROTECTION AGENCY (EPA)

The EPA maintains an extensive Web site on Superfund information. Pertinent information includes the section on "Laws, Policies & Guidelines" and the section on "Human Health & Ecological Risk." The "Exposure to contaminants" heading under "Human Health & Ecological Risk" is extremely useful.

www.epa.gov/superfund/index.htm

The EPA also maintains information on brownfields. www.epa.gov/brownfields/ and www.epa.gov/brownfields/liab.htm

SAMPLE STATE PROGRAMS:

COMMONWEALTH OF MASSACHUSETTS, DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE SITE CLEANUP.

The bureau has developed detailed "Best Management Practices for Rail Trail Conversion." www.mass.gov/dep/bwsc/files/railtrail.doc

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION: BROWNFIELD INFORMATION

The Web site offers information about brownfields in New York with links to the Brownfield Cleanup Program, the Environmental Restoration Program and State Superfund Program.

www.dec.state.ny.us/website/der/bfield/

TEXAS BROWNFIELDS REDEVELOPMENT INITIATIVE

In close partnership with EPA and other federal, state and local redevelopment agencies, and stakeholders, Texas is facilitating clean-up, transferability, and revitalization of brownfields. The Web site provides in-depth information about federal tax incentives and property tax incentives.

www.tnrcc.state.tx.us/permitting/remed/vcp/brownfields.html

WISCONSIN DEPARTMENT OF NATURAL RESOURCES (DNR): BROWNFIELD INFORMATION

The DNR's Web site provides a wide range of information on financial and liability tools in order to assist local governments, businesses, lenders and others to clean up and redevelop brownfields in Wisconsin.

dnr.wi.gov/org/aw/rr/rbrownfields/

WASHINGTON STATE DEPARTMENT OF ECOLOGY: TOXICS CLEANUP PROGRAM

This is a good example of what states are doing to promote environmental remedial actions. The Web site provides specific information regarding statewide policies on toxic substances.

www.ecy.wa.gov/programs/tcp/cleanup.html

FUNDING SOURCES

ENVIRONMENTAL PROTECTION AGENCY (EPA)

BROWNFIELDS ASSESSMENT GRANTS

These grants fund activities to inventory, characterize, assess and conduct planning and community involvement related to brownfield sites. The performance period is two years. Different levels of funding are available for assessment related to various contaminants, with a total application cap of $700,000. For more information see www.epa.gov/brownfields/pilot.htm.

REVOLVING LOAN FUND GRANTS (RLF)

These grants provide funding for grant recipients to capitalize a revolving loan fund and provide subgrants to carry out cleanup activities at brownfield sites. Revolving loan funds generally are used to provide no- or low-interest loans for brownfields cleanup. Grants are available up to $1 million and require a 20 percent match by the applicant. Performance period for these grants is five years. For more information see www.epa.gov/brownfields/pilot.htm.

CLEAN-UP GRANTS

These grants fund actual clean-up activities at brownfields sites. Funds are available up to $200,000 per site, with a limit of five sites per applicant. It requires a 20 percent match by applicant, and the applicant must own property that will be cleaned. A minimum of a Phase I site assessment must be completed prior to a proposal submission. The performance period for these grants is two years. For more information see www.epa.gov/brownfields/pilot.htm.

HEALTHY URBAN COMMUNITIES GRANT PROGRAM (NEW ENGLAND ONLY)

The 2003 grants program integrated nine New England programs dealing with toxics, schools, urban environment and more. Projects funded targeted communities at risk, sensitive populations (i.e. elderly and children), assessed and understood environmental and human health risks, increased collaboration through community-based projects, built institutional and community capacity to understand and solve environmental and health problems, and achieved measurable benefits. Green and open space projects have been funded, but no grants were awarded in 2003 for testing or remediation along rail corridors being converted to rail-trails. The grants program may change for 2004.

Check the Web site for details at www.epa.gov/region01/eco/uep/grants.html.

U.S. DEPARTMENT OF TRANSPORTATION

TRANSPORTATION ENHANCEMENTS (TE)

Environmental testing and remediation along a rail corridor may be eligible for TE funds if the project qualifies under the TE category of "Conversion of Abandoned Railway Corridors to Trails." However not every state utilizes TE money for these purposes and the project sponsor should check with the state TE coordinator first. Visit www.enhancements.org for more information about TE and state contact information.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG)

CDBG grants may be used for a wide variety of projects that improve communities. Assessment and clean up of rail corridors that are being converted into multi-use community trails may qualify under these funds. U.S. Housing and Urban Development administers these grants for designated entitlement communities. Each state administers the funds for nonentitlement communities. For more information about these funds see www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm.

MASSACHUSETTS STATE AND LOCAL FUNDING SOURCES

COMMUNITY PRESERVATION ACT FUNDS (CPA)

CPA allows towns and cities to approve a referendum allowing them to levy a community-wide property tax surcharge of up to three percent for the purpose of creating a local Community Preservation Fund and qualifying for state matching funds. Funds raised through the CPA may be used for acquisition, creation, preservation, rehabilitation and restoration of open space. Testing and remediation would qualify for funding under this program. For more information, contact the Trust for Public Land at www.tpl.org.

MASSACHUSETTS BROWNFIELDS REDEVELOPMENT FUNDS

These grants fund testing and remediation on brownfield sites, but are currently restricted to redevelopment for economic development (housing, business, etc.). Though cleaning open space does improve communities, thus increasing the property values and inspiring local investment and business, these activities do not currently qualify for this funding. However this funding could potentially be used for testing and remediation of former railroad yards for redevelopment.

APPENDIX A: SURVEY FORM TO TRAIL MANAGERS — ATTEMPT 1 AND ATTEMPT 2

Name of trail:

Open for use or still under development, or both:

If open, surface type:

Miles of open trail:

Miles of trail under development:

County(ies) and state:

Please answer the following questions in as much detail as possible:

- A brief history of rail use on the corridor and when it stopped.
- Any other background that may be useful, relevant, or interesting.
- Type of testing done.
- Type of toxin(s) found and levels.
- Length of trail contaminated.
- Method of mitigation and why that method was chosen.
- Who was involved in mitigation process (list all government and private entities).
- Cost of mitigation.
- How long did the mitigation process take.
- Funding sources (various local, state, federal assistance programs, and any private monies used).
- Major challenges to remediation project.
- Suggestions to others to others in same situation / words of advice.
- Having gone through this, what would have made this process easier for you, resources that would have made the project easier (more, bigger, easier access to funding sources, clearer regulations, information).
- Impact of past contamination and remediation on ongoing maintenance (cost and otherwise).
- Contact information (name, organization, address, phone, e-mail, web site).
- Please send photos if you have them (before, during clean up, after).

APPENDIX B: TRAIL MANAGER SURVEY RESPONSES

TRAIL MANAGER SURVEY

CHIEF LADIGA TRAIL, AL
Extent of testing: Phase I.
Test results: Found no contaminants.
Comments: Ties taken up by railroad.

OLD RAIL ROAD BED, AL
Extent of testing: Unknown, railroad went into bankruptcy in late 1880s.
Test results: NA
Comments: NA

TBD, AL
Extent of testing: Trail still under development but not concerned as railroad was used to haul lumber. Inspection will probably happen during engineering yet to come.
Test results: NA
Comments: NA

TBD, AR
Extent of testing: Trail still under development and no testing has been done as of yet.
Test results: NA
Comments: NA

MOHAVE AND MILLTOWN RAILROAD TRAIL, AZ
Extent of testing: Did not survey or test because 1) not aware that it could be a problem because 2) the railroad was in service only a short time and the ties were removed 50 years ago.
Test results: NA
Comments: NA

OHLONE GREENWAY BICYCLE TRAIL, CA
Extent of testing: Not aware of any testing, but all city staff who were involved in project are gone.
Test results: NA
Comments: City recently purchased a siding from the railroad for a park next to the trail. The city did soil testing but no contamination was found.

UNION PACIFIC TRAIL, CA
Extent of testing: Phase II test.
Test results: NA
Comments: NA

UPPER TAMPA TRAIL, FL
Extent of testing: No testing done as part of trail project, but land was acquired five years prior and some testing may have been done then.
Test results: NA
Comments: NA

ARABIA MOUNTAIN TRAIL, GA
Extent of testing: Level 1 test.
Test results: NA
Comments: Corridor abandoned in 1936, not concerned.

NW ATLANTA GREENWAY TRAIL, GA
Extent of testing: No testing.
Test results: NA
Comments: Ties removed by salvage company for resale.

SILVER COMET TRAIL, GA
Extent of testing: No testing.
Test results: NA
Comments: Ties removed by salvage company for resale.

TRAIL OF THE COEUR D'ALENES, ID
Extent of testing: Extensive soil testing every few feet and Comprehensive Environmental Response, Compensation and Liability Act. The entire 72-mile trail was built on a contaminated area.
Test results: Heavy metal contamination found along entire corridor. Soil was removed and corridor was capped. Process cost $20 million to $30 million. Union Pacific paid all expenses. Took four to six years.
Comments: NA

TUNNEL HILL STATE TRAIL, IL
Extent of testing: One area tested for fuel contamination.
Test results: Contamination found. Earth removed and monitoring well installed using funds from Leaking Underground Storage Tank program. Cost was approximately $87,000.
Comments: NA

HASKELL RAIL TRAIL, KS
Extent of testing: Visual inspection did not prompt concern.
Test results: NA
Comments: Ties removed by salvage company.

PATUXENT BRANCH TRAIL, MD
Extent of testing: No testing was done. Train ceased operation in 1928 and had served a granite quarry.
Test results: NA
Comments: NA

THREE NOTCH TRAIL, MD
Extent of testing: NA
Test results: NA
Comments: Twenty-eight-mile trail appears to be informally open. Respondent indicated that no contamination issues are expected as they move forward with development but no reason given as to why not except that the railroad took up the ties when they abandoned the line.

FIND NAME, ME
Extent of testing: No testing.
Test results: There was some concern, but no indication of contaminants have been found.
Comments: Railroad stopped operation in 1952. Ties were removed at that time. Sounds as though trail is not open yet (perhaps that is why it has no name).

FRED MEIJER HEARTLAND TRAIL, MI
Extent of testing: Checked county records for corridor use. Visual inspection conducted during acquisition stage.
Test results: NA
Comments: NA

SKEGEMOG SWAMP PATHWAY, MI
Extent of testing: No testing, were not concerned.
Test results: NA
Comments: NA

CENTRAL LAKES TRAIL, MN
Extent of testing: Did not test. Trailside vegetation indicates that contamination is not a problem.
Test results: NA
Comments: NA

LAKE WOBEGONE TRAIL, MN
Extent of testing: Did a field survey and contacted the Minnesota Pollution Control Agency for a listing of any known contamination on the corridor.
Test results: No contamination found.
Comments: NA

FRISCO HIGHLINE TRAIL, MO
Extent of testing: Phase 1, concerned about spills from derailments.
Test results: Investigation found two underground fuel tanks which were removed. Results were reported to board (this trail is under private management). Remediation cost was $15,000 and was split by Burlington, Northern, Santa Fe and Ozark Greenways. Delayed project 11 months.
Comments: NA

GRANT'S TRAIL, MO
Extent of testing: Phase 1.
Test results: Asbestos tiles from old building or from dumping were found. Results reported to railroad and they had them removed. No delay in trail project, no increase in cost of liability insurance.
Comments: NA

LONGLEAF TRACE TRAIL, MS
Extent of testing: Visual inspection and local knowledge.
Test results: No remediation required.
Comments: Ties removed by railroad prior to transfer of corridor.

SOMERS TRAIL, MT
Extent of testing: Some sort of testing, apparently.
Test results: Mostly creosote. Environmental Protection Agency cleaned up.
Comments: NA

AMERICAN TOBACCO TRAIL, NC
Extent of testing: No testing, not an issue.
Test results: NA
Comments: Ties removed by railroad.

HOMESTEAD, NE
Extent of testing: Phase 1.
Test results: Results: no indication of contamination. No delay of project.
Comments: Ties removed prior to acquisition.

MOPAC EAST, NE
Extent of testing: Visual inspection.
Test results: NA
Comments: Ties salvaged prior to National Resources District taking ownership.

OAK CREEK TRAIL, NE
Extent of testing: Visual inspection and checked spill records.
Test results: NA
Comments: Ties salvaged before National Resources District took ownership. National Resources District feels trail users have little to no exposure to any contaminants that may be there.

PAULINSKILL VALLEY TRAIL, NJ
Extent of testing: New Jersey Green Acres surveys all property before acquisition.
Test results: No contamination was found.
Comments: NA

SUSSEX BRANCH TRAIL, NJ
Extent of testing: New Jersey Green Acres surveys all property for hazardous waste prior to acquisition.
Test results: No contamination was found.
Comments: NA

ASSABET RIVER RAIL TRAIL, NY
Extent of testing: Level 1.
Test results: Old oil drums had been dumped, but not necessarily by railroad.
Comments: Put $200,000 in development fund to cover cost of any needed remediation. Felt that with asphalt surface, a capping would protect against any potential contamination. Did not do any soil testing.

CAYUGA-SENECA CANALWAY TRAIL, NY
Extent of testing: Not started State Environmental Quality Review Act yet.
Test results: NA
Comments: NA

CLARKE RAIL TRAIL, NY
Extent of testing: Phase 1 at time of acquisition.
Test results: No major problems found.
Comments: Corridor had been abandoned for decades and tracks and ties were removed.

GENESEE VALLEY GREENWAY TRAIL, NY
Extent of testing: Literature search.
Test results: Not concerned because railroad abandoned operations 25 years ago.
Comments: Ties gone when Department of Environmental Conservation bought corridor from a utility.

GROVELAND SECONDARY TRAIL, NY
Extent of testing: Don't know.
Test results: NA
Comments: NA

LAKE PLACID TO SARANAC LAKE RECREATION PATHWAY, NY
Extent of testing: Trail still under development, design stage, no testing as of yet.
Test results: NA
Comments: NA

REMSEN TO LAKE PLACID TRAVEL CORRIDOR, NY
Extent of testing: Soil and water samples. Creosote was considered non-mobile and bound to soil immediately adjacent to ties and therefore not in contact with trail user.
Test results: No herbicide residue found. No delays.
Comments: NA

ADENA RECREATION TRAIL, OH
Extent of testing: No need to investigate; Ohio Environmental Protection Agency tracks toxic spills and none were found in corridor.
Test results: NA
Comments: NA

BLACKHAND TRAIL, OH
Extent of testing: Not known. Trail opened in 1980 and records concerning acquisition and development are no longer available.
Test results: NA
Comments: NA

HUFFMAN PRAIRIE OVERLOOK TRAIL, OH
Extent of testing: Visual examination.
Test results: Little, if any, contamination, remediation not required.
Comments: This is a rail-with-trail and trail is a good distance from active rail line so no contamination was expected.

LOWER SCIOTO TRAIL, OH
Extent of testing: No environmental issues.
Test results: NA
Comments: Rails and ties removed long before they took possession, perhaps 35 years ago.

SPRINGFIELD BRANCH TRAIL, OH
Extent of testing: Trail just getting to planning stage. An environmental assessment will be conducted by the design consultant and will be reviewed by Ohio Department of Transportation.
Test results: NA
Comments: Railroad removed ties before abandoning corridor.

WRIGHT BROTHERS HUFFMAN PRAIRIE BIKEWAY (KAUFFMAN AVENUE BIKEWAY), OH
Extent of testing: Visual inspection and soil samples.
Test results: Finding of no significant impact.
Comments: Investigation took about three months. This is a rail-with-trail and the trail is 20 to 30 yards from active line.

SPRINGWATER ON THE WILLAMETTE, OR
Extent of testing: Phase 1 conducted before purchase.
Test results: Result: No cause for concern, capping would provide any needed protection.
Comments: NA

ALLEGHENY RIVER TRAIL, PA
Extent of testing: Site issued Categorical Exclusion by Pennsylvania Department of Transportation.
Test results: No contamination found.
Comments: Railroad history provided no reason to be concern.

CLARION-LITTLE TOBY RAIL TRAIL, PA
Extent of testing: Not aware of testing, issue not raised.
Test results: NA
Comments: NA

ERNST TRAIL, PA
Extent of testing: Did not test. Issues were discussed but were not a concern. No obvious problems.
Test results: NA
Comments: Railroad abandoned about 30 years ago.

GREATER HAZLETON RAILS TO TRAILS, PA
Extent of testing: Trail not open yet. Phase 1 test. Were concerned because area is a superfund site.
Test results: No major toxics found. Capping, berming, phytoremediation, soil recycling, soil disposal all used on broader site. It cost $15 million to clean up entire site but trail is only very small portion and not actually in the superfund area.
Comments: NA

MONTOUR TRAIL, PA
Extent of testing: Soil testing.
Test results: No sign of contamination found.
Comments: Most ties were gone when they took possession of corridor. Those that were left were put into landfills, some were recycled, a few were burned until they learned that they should not do that.

SANDY CREEK TRAIL, PA
Extent of testing: Site was issued a categorical exclusion by Pennsylvania Department of Transportation because there was no reason to believe that contaminants were present in any significant amount.
Test results: NA
Comments: Railroad hauled coal from 1906 until 1980's. No evidence of dumping or contamination other than occasional coal car accident.

HISTORIC UNION PACIFIC RAIL TRAIL STATE PARK, UT
Extent of testing: Tested air, soil and water for the first 3.5 miles out of Park City of the 28-mile trail.
Test results: Specific findings considered privileged, but generally found traces of heavy metals from mining and processing of ore.
Comments: Remediation effort was capping of trail. Delayed project 1.5 to two years. Findings did not impact liability insurance.

W&OD TRAIL, VA
Extent of testing: Soil testing for arsenic. Photo shows spraying.
Test results: No trace of arsenic found.
Comments: NA

D&H RAIL TRAIL, VT
Extent of testing: No testing. Plant growth on corridor was robust.
Test results: NA
Comments: Issue was of no concern to developing agency until eight years after trail was built when a citizen asked about the issue of contamination. Vermont Agency of Transportation was no concerned, no investigation.

TBD, WA
Extent of testing: Corridor in city ownership for at least 11 years. Respondent unsure of history, as far as she knows, no testing was conducted.
Test results: NA
Comments: NA

400 STATE TRAIL, WI
Extent of testing: Phase 1.
Test results: NA
Comments: Ties sold for salvage.

BADGER STATE TRAIL, WI
Extent of testing: No testing; no sign of contamination.
Test results: NA
Comments: Ties removed by contractor and resold.

ELROY-SPARTA TRAIL, WI
Extent of testing: Phase 1
Test results: NA
Comments: Ties sold for salvage.

LA CROSSE RIVER STATE TRAIL, WI
Extent of testing: Phase 1.
Test results: NA
Comments: Some ties were sold, some buried, some left on site.

SOUTHWEST BIKE PATH, WI
Extent of testing: Phase 1 and Phase 2.
Test results: Found arsenic and chromium above regulatory limits in all 10 borings, plus lead in one boring. Results reported to Wisconsin Department of Natural Resources and Wisconsin Department of Transportation. No material was removed from site, rather all soil would be covered with either asphalt or topsoil and vegetation. This solution added little, if any, extra cost. Fees were covered by a Transportation Enhancements grant that was awarded to build the trail. This process of testing and remediation did not result in any project delay because these findings were foreseen and thus the time to deal with them were included in the original project schedule.
Comments: Ties were disposed of at licensed landfill.

SUGAR RIVER STATE PARK TRAIL, WI
Extent of testing: No testing, trail developed in 1973.
Test results: NA
Comments: Ties were piled and rotted.

TBD, WI
Extent of testing: No contamination encountered.
Test results: NA
Comments: NA

MEDICINE BOW TRAIL, WY
Extent of testing: Environmental assessment ongoing.
Test results: NA
Comments: NA

APPENDIX C: CASE STUDY SURVEY FORM

Name of trail:

Open for use or still under development, or both:

If open, surface type:

Miles of open trail:

Miles of trail under development:

County(ies) and state:

Please answer the following questions in as much detail as possible:

- A brief history of rail use on the corridor and when it stopped.
- Any other background that may be useful, relevant, or interesting.
- Type of testing done.
- Type of toxin(s) found and levels.
- Length of trail contaminated.
- Method of mitigation and why that method was chosen.
- Who was involved in mitigation process (list all government and private entities).
- Cost of mitigation.
- How long did the mitigation process take.
- Funding sources (various local, state, federal assistance programs, and any private monies used).
- Major challenges to remediation project.
- Suggestions to others to others in same situation/words of advice.
- Having gone through this, what would have made this process easier for you, resources that would have made the project easier (more, bigger, easier access to funding sources, clearer regulations, information).
- Impact of past contamination and remediation on ongoing maintenance (cost and otherwise).
- Contact information (name, organization, address, phone, e-mail, web site).
- Please send photos if you have them (before, during clean up, after).

APPENDIX D

LEXIS SEARCH CRITERIA AND EXCLUSIONS

Access to certain freelance articles and other features within this publication (i.e. photographs, classifieds, etc...) may not be available. U.S. newspapers must be listed in the top 50 circulation in Editor & Publisher Year Book. Newspapers published outside the United States must be in English language and listed as a national newspaper in Benn's World Media Directory or one of the top 5 percent in circulation for the country.

EXCLUSIONS

EIU publications are excluded from all subscriptions.
DPA (English language file) (file: DPA)
The Straits Times (file: STRAIT)
Business Times Singapore (file: BUSTMS)
Business Monitor News (file: BMINWS)

Due to vendor restrictions the following sources have been excluded from group files in web products.

Aerometric Information Reporting System; AIRS
Annals of Neurology; ANN
Annals of Plastic Surgery; ANPS
Comprehensive Env. Response Compensation & Liability Info. System; CERCLS
Dimensions in Health Care; DHC
DM News; DMNEWS
Emergency Response Notification System; ERNS
EPA Civil Enforcement Docket; EPADKT
Facility Index System; FINDS
FIFRA & TSCA Tracking System; FTTS
Hospitals and Health Networks; HOSP
IDD Merger and Acquisition Reports — Archival; IDDMA
IDD Mergers and Acquisition Database — Canada — Archival; IDDCAN
IDD Mergers and Acquisition Database — European Reports — Archival; IDDEUR
IDD Mergers and Acquisition Database — US Reports — Archival; IDDUS
IDD Mergers and Acquisitions Database — UK Reports — Archival; IDDUK
Institutional Investor Publications; IIALL
Leaking Underground Storage Tanks (LUST) Site Records; LUST
National Pollutant Discharge Elimination System Facility Information; NPDESF
National Priority List Descriptions of Hazardous Waste Sites; NPLIST
National Priority List of Hazardous Waste Sites; NPLDSC
No Further Remedial Action Planned; NFRAP
Potentially Responsible Parties (PRP) Superfund Enforcement Tracking System; PRP
RCRA Corrective Action Record; CORACT
Resource Conservation & Recovery Information System; RCRIS
Solid Waste Site Records; SWS
State Priority Lists; SPL
Surgery, Gynecology and Obstetrics; SGO
Toxic Chemical Release Inventory; TRIS
Underground/Aboveground Storage Tank Site Records; USTAST
World Financial Markets; WLDFIN

TRAILDART

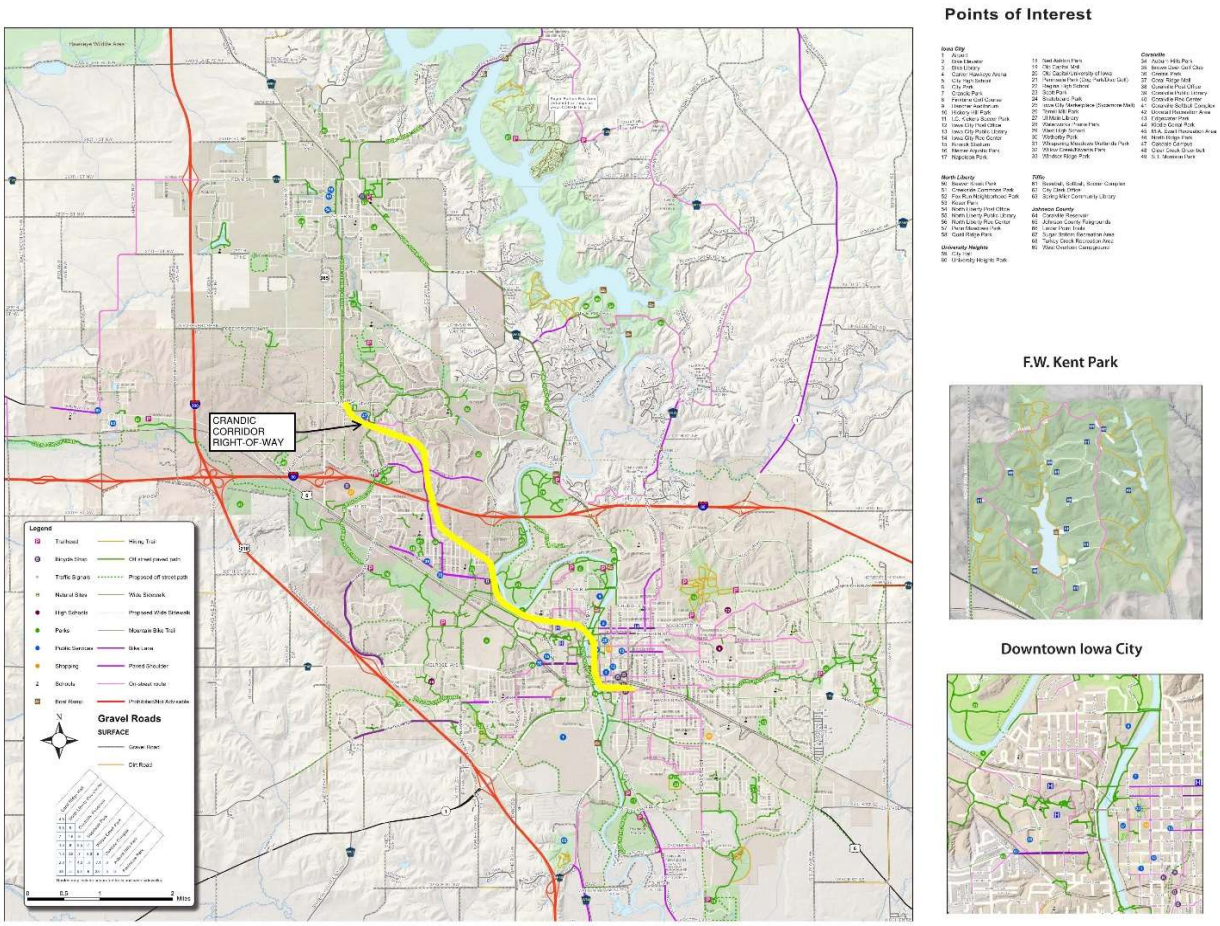
TRAIL DEVELOPMENT ASSISTANCE RESPONSE TEAM

A Service of Rails-to-Trails Conservancy

Rails-to-Trails Conservancy • 1100 Seventeenth Street N.W., 10th Floor • Washington, D.C. 20036
Tel: 202-331-9696 • Fax: 202-331-9680 • www.railtrails.org

Appendix F. Iowa City Trails Map

Iowa City Metro Area Trails



Link to Original Map: https://www8.iowa-city.org/weblink/0/doc/1512414/Electronic.aspx

Iowa City Metro Area Trails

CRANDIC CORRIDOR RIGHT-OF-WAY

Sugar Bottom Rec Area Detailed trail maps at: www.ICORRMTB.org

Native plantings until 180th St

Hawkeye Wildlife Area

Legend

Trailhead	Hiking Trail
Bicycle Shop	Off street paved path
Traffic Signals	Proposed off street path
Natural Sites	Wide Sidewalk
High Schools	Proposed Wide Sidewalk
Parks	Mountain Bike Trail
Public Services	Bike Lane
Shopping	Paved Shoulder
Schools	On-street route
Boat Ramp	Prohibited/Not Advisable

Gravel Roads

SURFACE

- Gravel Road
- Dirt Road

Coral Ridge Mall	North Liberty Rec Center	Coralville Reservoir	Napoleon Park	Willow Creek Park	Oakdale Campus	Auburn Hills Park	Peninsula Park
4.6							
6.8	.5						
7	1.6	.6					
4.3	.9	8.5	.4				
1.3	3.8	.7	8.3	.6			
2.8	.1	4.2	.8	7.1	.8		
3.6	.5	5.7	6	2.6	.5	6	

Routes may include separated trails and wide sidewalks

0 0.5 1 2 Miles

Points of Interest

Iowa City

1 Airport
2 Bike Elevator
3 Bike Library
4 Carver Hawkeye Arena
5 City High School
6 City Park
7 Crandic Park
8 Finkbine Golf Course
9 Hancher Auditorium
10 Hickory Hill Park
11 I.C. Kickers Soccer Park
12 Iowa City Post Office
13 Iowa City Public Library
14 Iowa City Rec Center
15 Kinnick Stadium
16 Mercer Aquatic Park
17 Napoleon Park
18 Ned Ashton Park
19 Old Capitol Mall
20 Old Capitol/University of Iowa
21 Peninsula Park (Dog Park/Disc Golf)
22 Regina High School
23 Scott Park
24 Skateboard Park
25 Iowa City Marketplace (Sycamore Mall)
26 Terrell Mill Park
27 UI Main Library
28 Waterworks Prairie Park
29 West High School
30 Wetherby Park
31 Whispering Meadows Wetlands Park
32 Willow Creek/Kiwanis Park
33 Windsor Ridge Park

North Liberty

50 Beaver Kreek Park
51 Creekside Commons Park
52 Fox Run Neighborhood Park
53 Koser Park
54 North Liberty Post Office
55 North Liberty Public Library
56 North Liberty Rec Center
57 Penn Meadows Park
58 Quail Ridge Park

University Heights

59 City Hall
60 University Heights Park

Tiffin

61 Baseball, Softball, Soccer Complex
62 City Clerk Office
63 Spring Mier Community Library

Johnson County

64 Coralville Reservoir
65 Johnson County Fairgrounds
66 Linder Point Trails
67 Sugar Bottom Recreation Area
68 Turkey Creek Recreation Area
69 West Overlook Campground

Coralville

34 Auburn Hills Park
35 Brown Deer Golf Club
36 Central Park
37 Coral Ridge Mall
38 Coralville Post Office
39 Coralville Public Library
40 Coralville Rec Center
41 Coralville Softball Complex
42 Dovetail Recreation Area
43 Edgewater Park
44 Kiddie Corral Park
45 M.A. Ewalt Recreation Area
46 North Ridge Park
47 Oakdale Campus
48 Clear Creek Greenbelt
49 S.T. Morrison Park

F.W. Kent Park

Downtown Iowa City

Appendix G. Public Resources Related to Trail Economic Development

IMPLEMENTING TRAIL-BASED ECONOMIC DEVELOPMENT PROGRAMS

A Handbook
For Iowa
Communities

Iowa Department of Transportation

TABLE OF CONTENTS

Planning for trails can be a confusing process. A tremendous level of coordination is needed simply to plan and construct trails. Once trails are in place, they present communities with a variety of economic development opportunities.

This handbook outlines a variety of ways in which governments, businesses, chambers of commerce, tourism promoters, and individual citizens can help their communities develop and implement trail-based economic development programs.

INTRODUCTION

As new recreational trails are developed throughout Iowa, many more people will benefit from additional outdoor recreation opportunities. The benefits of trails extend well beyond fitness and leisure pastimes. Trails hold tremendous potential for economic and community development. To make sure that Iowa's communities truly benefit from new trails, this handbook outlines ways to capitalize on the economic development potential associated with both new and existing trails. Its intended audiences are communities and agencies throughout the State of Iowa.

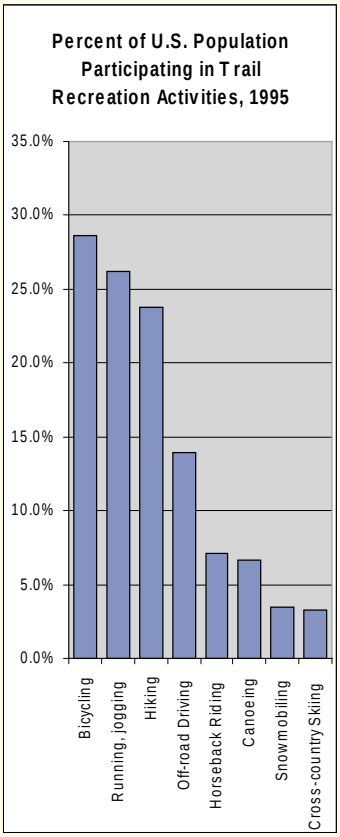
This handbook draws upon the histories of many trails and towns from all over the United States. In recent years, communities have come up with a variety of innovative and effective approaches to trail-based economic development. The case studies in this handbook (see pages 6-9 for a summary) describe programs from throughout the Midwest and examine these approaches in detail.

Purposes of Handbook

- To set forth guiding principles for implementing trail based community development approaches
- To provide a mix of case studies identifying lessons learned and best practices from other places (both successes and failures) and documenting the relevant physical, cultural, and economic conditions and changes
- To enumerate techniques for determining how to measure and convey the potential benefits stemming from a trail system based on the national experience, and how to develop a logical, though hypothetical, estimate of the benefits
- To reflect current "best thinking" from a variety of experts in the field

Recreational Trail Use by Category

From 1994 to 1995 the United States Forest Service conducted a survey of participation in outdoor recreation activities across the country. The following table illustrates participation rates for several types of trail-related recreation.



Clearly, bicycling, running, and hiking are the most popular outdoor recreation activities. In general, warmer weather activities are far more popular, with fewer than 5.0 percent of all Americans participating in either snowmobiling or cross-country skiing.

Existing Trail Programs in the Waterloo-Cedar Falls Area

As mentioned in the introduction, the State of Iowa already boasts several high-quality recreational trail programs. The Waterloo-Cedar Falls area has been particularly proactive in making trails a major part of both local and regional economic development strategies. A short summary follows of existing trail programs in this metropolitan area:

- The Cedar Valley Nature Trail is a 52-mile rail-trail that connects Cedar Rapids and Waterloo. It serves as the "backbone" that connects more than 70 miles of local trails in the Waterloo-Cedar Falls area, and draws riders from a multi-state area.

- Since 1996 the four-day Cedar Trails Festival has been held to celebrate the local trail system. Events include many types of trail use, including road and mountain biking, in-line skating, walking, running, and a "Dog Jog." Local businesses have noted increases in summertime sales since 1996.

- Acknowledging the popularity of recreational trails, the Black Hawk Metropolitan Area Transportation Policy Board has adopted bicycle-friendly policies, and plans to install bicycle racks on buses in the near future.

- To describe implementation strategies applicable to different types of communities and trail users that address:
  - tourism development;
  - economic development;
  - downtown revitalization; and
  - citizen participation
- To address the logical roles and responsibilities of various state agencies, local governments, private sector entities, and concerned non-profits, and how they can work together for mutual benefit

GUIDING PRINCIPLES

No two communities will approach trail-based economic development in the same way, as illustrated by the case studies found throughout this handbook. Communities that succeed at promoting community and economic development through trail recreation may approach the process from many angles, but all began with clear visions of how they wanted the trail system to help their communities. The national experience suggests keeping these principles in mind to guide the planning process:

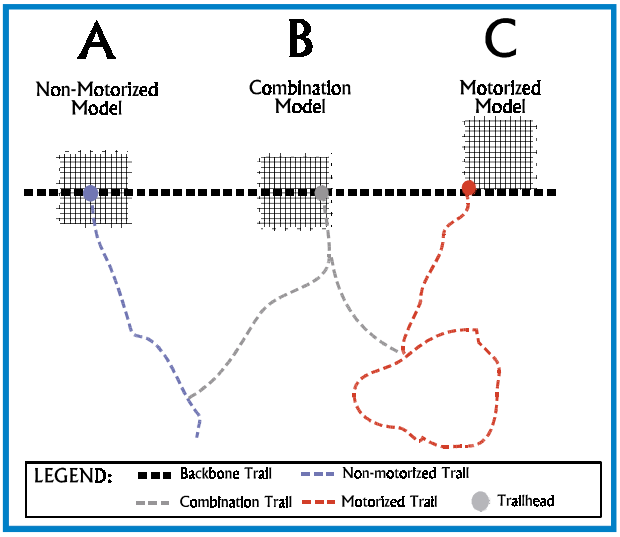
1. **Understand Community Capacity and Desires--** Communities lacking quality lodging, entertainment, or dining services are ill-equipped to accommodate large numbers of visiting trail users and should not market themselves as recreation destinations until adequate services are developed. Even some communities that are able to handle trail tourism may refrain from it for other reasons. For example, if a community is established as an antiquing destination, business owners may not want to compromise the current experience by courting trail recreation.

2. **Identify Target Markets Based on Trail Characteristics--** In most cases, the surface of the trail that runs near or through your town will be the primary determinant of the types of users it will draw. For example, an asphalt trail will be attractive to in-line skaters and cross-country skiers, but unattractive to mountain bikers and off-limits to studded-tread snowmobiles.

3. **Determine Community's Relationship to the Trail System--** In addition to the trail's surface, a community's position in the regional trail hierarchy also influences its role in the system and the nature of its economic development

opportunities. There are two facets to a community's positioning: the hierarchy of the trail (backbone, loop, spur); and its location along the trail. For example, a town located at the junction of a backbone and a spur trail naturally attracts overnight visitors who will start out from that point, while a town located in the middle of a loop trail is more inclined to draw midday visitation.

4. **Choose Trailhead Sites Based on Desired User Markets and Impacts--** The needs and impacts of motorized and non-motorized trail users differ widely. For example, non-motorized users (e.g., bicyclists, cross-country skiers) can pass through residential areas into historic downtowns with minimal impact, but motorized users such as snowmobilers or all-terrain vehicle (ATV) riders cannot. As a result, a community must decide where to locate trailheads based on the types of users they will serve. The diagram below illustrates three different approaches to locating trailheads.



A. Trailheads Geared Towards Non-Motorized Users in Town Center.

B. Trailheads Geared Towards Combination Market on Edge of Downtown.

C. Trailheads Geared Toward Motorized Users on Outskirts of Town.

5. **Locate Trailheads Within Town Boundaries to Concentrate Economic Impacts--** Most recreational trail users own their equipment and provide their own transportation to trailheads. As a result, offering equipment rental and shuttle service in town has some economic benefit, but much of the potential impact will be lost if trailheads are located in isolated places. Situating trailheads within the boundaries of a town not only enables service businesses (gas stations, convenience stores, outfitters) to cluster around them, but it also increases the chances that tired trail users will stay for dinner or even overnight.

6. **Build Off Existing Markets--** Existing visitors to your community provide the logical starting point for promoting trail recreation. Those who already visit provide a reliable

The surface of a trail can help determine its target markets. In-line skating requires smooth paved surfaces and well-maintained bridge crossings. Here, on the Paul Bunyan Trail in Minnesota, in-line skaters share the trail with bicyclists. In the winter this trail is used by snowmobilers (non-studded treads only) and cross-country skiers.

base of tourists, and it is important to educate this group about the recreational opportunities in your community. The two goals of targeting this market are to extend lengths of stay and to encourage repeat visitation to use the trails.

7. **Cultivate Partnerships--** Partnerships among public agencies, and businesses are essential for success. Within local and county government alone, trail planning involves many departments, including parks and recreation, planning, and transportation. If a local government seeks an economic return on its investment in trails, it must build partnerships with businesses because businesses provide the return. On the private side, businesses need to work together in order to build and maintain a critical mass of trail-related commercial activity.

CASE STUDIES

In planning for trail-based economic development, it helps to be aware of the experiences of other communities. For this purpose, a number of "case studies" are included throughout this handbook and can be found as light blue-colored sidebars. These case studies document how different public and private entities use trail recreation as a tool for economic development.

Types of Case Studies

Three types of case studies are included: cities and towns; businesses; and festivals. The various perspectives provided by these different cases provide valuable insights for a wide range of community leaders.

Cities and Towns

How a city or town capitalizes on a nearby recreational trail depends on several factors. These factors include:

- type of trail (motorized, non-motorized);
- size of community;
- existing physical character of community;
- existing visitor attractions in community;
- level of public support for trails;
- commitment from elected officials and business leaders;
- proximity to potential recreational users.

CASE STUDY

Marthasville, Missouri

Cities and Towns, Main Street Revitalization

When the MKT (Katy) Railroad discontinued its route in 1986, the Katy Trail was created in its right-of-way. The trail was made possible by the National Rails to Trails Conservancy's railbanking program, which earmarks rights-of-way for future transportation uses. The use of railbanking quieted objections from local landowners that the right-of-way should remain in private ownership. As the popularity of the Katy Trail has grown among hikers and bicyclists, trail towns like Marthasville have responded to the new demand for visitor services.

The Katy Trail features many historic railroad bridges.

Following the opening of the Katy Trail, the first bed and breakfast opened, and was quickly booked for much of the year. Knowing that unmet demand could drive away visitors, its owner decided to help a competitor get established. This cooperative spirit is common in Marthasville, as many new businesses give new life to its Main Street.

Since so many variables exist, cities and towns have taken a wide variety of approaches. Case studies for cities and towns examine three different ways in which towns have used recreational trails to promote development:

1. **Regional Economic Development -** packaging trails as a quality of life enhancement to retain or recruit businesses and residents.
2. **Tourism Development -** using trails as a way to attract hotels, restaurants and other tourism-related businesses.
3. **Main Street Revitalization -** linking trails with historic business districts in order to channel demand retail shops, restaurants, and services.

The opening of the Ohio and Erie Canal Trail was cause for celebration in Cleveland, as more than 25,000 people attended its opening. Making trail-related activities into special events is an excellent way to publicize your community as a trail destination.

Businesses

Businesses profiled as case studies include outfitters, lodging places, restaurants, and other merchants. Although these businesses fill different needs, they share a common thread: they could not exist without the boost provided by being located on or near trails. Thus, the business case studies focus on enterprises that either opened as a direct response to demand created by trail recreation or that transformed themselves in response to new markets presented by trail users.

Festivals

Many cities and towns stage annual festivals in order to build and promote unique identities. In many cases, the festival itself becomes synonymous with the place, as with Sturgis, South Dakota, home of the Sturgis Motorcycle Rally and Races. The festivals profiled in this handbook do more than provide an annual boost to their local economies; they also help promote year-round activities in their surrounding areas.

CASE STUDY

Traverse City, Michigan

Cities and Towns, Tourism Development

Prior to opening its first ski trails in the 1950s, the popular summer resort town of Traverse City had to cope with slow winter seasons. Today, Traverse City anchors a diverse area with hundreds of miles of trails used year-round for both motorized and non-motorized recreation. The local visitor experience goes well beyond recreation, and local tourism promoters are careful not to just promote to niche groups like cross-country skiers or mountain bikers. Marketing strategies instead target families, packaging recreation with attractions like cherry orchards, festivals, arts and crafts, historic hotels and resorts, and natural scenery. Traverse City's success has been aided by extensive media relations efforts, as travel writers from warmer climates are invited on familiarization (or "fam") tours each year. As a result of these efforts, large numbers of visitors who cannot go skiing or snowmobiling back home now come to Traverse City for these purposes.

CASE STUDY

Rochester, Minnesota

Cities and Towns, Economic Development

Home to the world-famous Mayo Clinic, Rochester repeatedly ranks as one of America's best places to live. As its economy expands, Rochester has come to understand that companies can now locate just about anywhere, and frequently choose locations based on quality of life. Rochester has therefore dedicated itself to providing the best recreation amenities, an effort aided by successful coordination among several government agencies, sports associations and sponsor corporations. The starting point for Rochester's strategy has been its land use policy, which dictates a citywide network of parks and trails, and mandates that new homes have easy access to these facilities. Rochester's trail system also connects with several nearby towns, an indication of regional cooperation. This sort of coordination has been an integral part of the success of Rochester's economic development programs.

Top 10 Lessons from Case Studies

Reviewing the case studies in this handbook provides many insights to communities. The following list summarizes the top 10 considerations from the case studies, in no particular order:

1. **Trails are just one element of a larger visitor experience,** and providing other opportunities (both recreational and non-recreational) draws a more diverse group of visitors. In turn, this allows for a greater variety of businesses.

2. Establishing a community as a viable trail destination mandates that **individual businesses must take individual risks as entrepreneurs** while simultaneously working together with other businesses to build critical mass.

3. **Trail users pass along knowledge to others by word of mouth,** as well as learning about destinations from travel articles, on the Internet, etc. To ensure outstanding peer recommendations, towns and businesses must provide a quality visitor experience to each individual trail user.

4. **Year-round activity is crucial** to the survival of many trail-related businesses. Even if recreational trail use is seasonal, communities can provide off-season attractions that provide different experiences.

5. **Trail planning in urban areas requires cooperation and coordination** not only from different political jurisdictions, but also among various public and private entities within each jurisdiction.

6. Slogans and marketing themes are meaningless unless the entire community buys into them. **Building a true community identity requires the support of political leaders, businesspeople, and the public.**

7. **Recreation alone will not induce visitors to stay overnight.** Communities must provide quality lodging, and dining activities to supplement the draw of recreation.

Business combines with bicycles to create a pleasant environment outside Wilson's Restaurant in Door County, Wisconsin.

8. **Different types of trail users behave differently.** For example, snowmobilers are more likely to travel in larger parties, stay longer, and spend more money than bicyclists. As a result, the types of users on a given trail will go a long way toward determining the character of a trail community.

9. A festival only creates economic impacts for a few days each year. To be effective economic development tools, **festivals must become points-of-entry for year-round experiences.**

10. In the global economy, companies can locate just about anywhere and many will make locational decisions based on quality of life. **A community with ample opportunities for trail recreation can leverage this advantage for economic development purposes.**

The remainder of this handbook builds on these 10 lessons to provide suggestions and guidance for communities in the process of trail-based economic development planning.

CAPITALIZING ON TRAIL RECREATION: A HOW-TO GUIDE

Although creating or expanding a trail system can deliver significant economic benefits by itself, communities can do more to capitalize on the economic potential of trails. Trails generate economic impacts by delivering additional spending to businesses. As businesses become more productive, new jobs and tax revenues follow. The additional spending may result from increased visitation or by changing the behavior of an existing pool of resident shoppers.

The trail system represents a vehicle for influencing how both residents and outsiders view a community. More importantly, the trail system can become a way to persuade recreational visitors to think about the community from a business perspective. Conversely, if business visitors already travel to your community, the trail system can be used to influence business visitors to consider returning for leisure purposes.

Clearly, organizing economic development programs around trail recreation is not an easy undertaking. If your community chooses to pursue such programs, many steps must be taken along the way. This section describes the five major steps that comprise the process. As with any other public process, it is extremely important to keep citizens involved and informed from the outset. For this reason, the best place to start is with the community at large.

CASE STUDY

Kansas City Metro Area

Cities and Towns, Economic Development

In 1990 a group of local landscape architects drafted maps illustrating possibilities for a regional greenway system in the Kansas City area. Since then, this grassroots group has lobbied communities to help realize their dream.

Although the concept was new to many, support has been strong, particularly due to the potential to turn trail plans into federal matching funds. The challenge has been to create a plan that accounts for the diverse needs of different places: largely developed Clay County wants to use recreational amenities to retain and recruit businesses, while semi-rural Platte County simply seeks to preserve open space. Though each community holds different expectations for greenways, all recognize the value they add to quality of life. More importantly, communities are aware that greenways are eligible for federal dollars, and can often be constructed with only minimal local public investment.

CASE STUDY

Sparta, Wisconsin

Cities and Towns, Tourism Development

Sparta's famous bicycle rider greets visitors to the town.

One of the nation's first rail-trails was the Elroy-Sparta State Trail in southwestern Wisconsin. Built in the 1960s, this multi-use trail has proven very popular due to three long tunnels that punctuate its 32 miles. Since this trail opened, several others have opened in the area, making the region a popular destination for bicyclists, cross-country skiers, snowmobilers, and hikers. The Elroy-Sparta Trail draws 100,000 to 120,000 users each year, many of whom travel from other states. The trail's northern anchor, Sparta, decided in 1991 to make its trails synonymous with its identity by declaring itself the "Bicycling Capital of America." This theme is evident from the 30-foot tall fiberglass statue of a bicycle rider that welcomes visitors to the town.

(Continued on next page)

Step 1: Enlist Citizen Involvement

Any initiative intended to enact change in a community, from creating a trails system to revitalizing Main Street, must include some degree of citizen participation. Obtaining input from the public simply makes sense, regardless of whether local regulation requires it. Avoiding a system for letting local residents and other stakeholders express their concerns and contribute their ideas makes for a weaker approach and opens the process up to criticism that can derail the best laid plans.

The classic public hearing scenario-a gathering in the town hall or school auditorium-where the assembled hear presentations on the anticipated improvements and implementation approach, can be adapted to almost any situation. Including people with a variety of points of view, issues and desires should be a principal goal. Obtaining this level of participation means going beyond the standard hearing notice printed in the local paper. Contacting people through their social and service clubs, churches, sports leagues, children's schools and other non-traditional means will help attract participants.

Other communities ask that plan representatives be allowed to speak briefly at other meetings to gain input and solicit attendance for larger events. A special effort should be made to include potential plan opponents to ensure a valid process invulnerable to charges that these views were somehow ignored. In the course of trail planning, local property rights activists should be expected, and thus should be welcomed.

Citizen involvement also benefits from community participation in leading meetings. Training local residents to facilitate community sessions helps keep people engaged. Fairness in the process, perhaps by establishing rules of behavior and techniques for organizing the public conversation, is easiest to enforce neighbor-to-neighbor.

Once you have organized public meetings, the next issue is to formulate an agenda. In developing any economic development program, the starting point is to clearly define a

By providing public services to users of the Katy Trail, the town of Augusta, Missouri has established itself as a trail-friendly community. This attractive historic building was refitted for public restrooms for trail users.

direction. When assembling a marketing strategy based on a tourism-related entity like trail recreation, the starting point is to create a community identity.

Step 2: Build a Community Identity

Building and maintaining an identity as a tourist destination is an ongoing process. To promote tourism in your community, the first step is to conduct an honest and thorough process of identifying the benefits a visitor will derive from visiting. This assessment of community character and visitor experience should tap into insights provided by both residents and people from other places. Residents may know their hometowns inside out, but tourists often notice unusual or charming attributes that residents tend to take for granted.

Findings from this assessment will guide the process of creating marketing materials and messages, which in turn shape visitors' expectations of the experience in your community. Creating a reasonable level of expectation is important, as many destinations oversell themselves and send visitors home disappointed. Through the assessment process, a community-wide vision of a desirable future can be developed, as well as a sense of what steps are required to achieve it.

Once your community has established a clearer idea of its tourist identity, some initial investments must be made prior to mounting a marketing campaign, including:

- printing basic collateral materials, such as a combination map and guidebook, brochures suitable for distribution at State and other visitor centers, and materials suitable for inclusion in cooperative advertising vehicles such as the state visitor guide. Sponsorships by businesses can reduce public costs.
- opening a storefront visitor center.
- establishing an 800 number, which may either ring locally or at a contract call center.
- hiring staff and/or recruiting volunteers to implement publicity programs, organize special events and coordinate with area businesses and organizations concerned with tourism development.

Now you should be ready to take on a marketing and public relations campaign.

Sparta, Wisconsin (continued)

The crushed stone surface of the trail limits traffic on the trail, mainly from in-line skaters. The surface also allows the trail to accommodate studded-tread snowmobiles, thus enabling Sparta and its neighboring towns to enjoy the benefits of tourism year-round. Cross-country skiers in the area generally ski at local parks and golf courses to avoid competing with snowmobilers.

A view of the entrance to one of the Elroy-Sparta Trail's landmark train tunnels.

Sparta's commitment to its identity is also expressed by its businesses: hotels and campgrounds provide free trail passes; restaurants serve healthier food desired by bicyclists; arts and crafts and novelty shops serve visiting trail users; tour operators package bus tours that include lodging, bike rental, and shuttle service to different points along trails. By capitalizing on trail-related tourism, Sparta has not only established a new identity, but an economic future as well.

The Effects of Trails on Property Values

Opponents to recreational trails often cite the negative impacts of trail users on nearby properties as a reason for their objections. However, these fears can be addressed by showing the positive effects of trails on property values.

A 1995 study by the National Park Service cites many examples of how trails have increased values of nearby properties. These examples are noteworthy because they come from all over the country. They include:

- In Boulder, Colorado, housing prices declined by $4.20 per additional foot that a property was located from a trail.
- 61 percent of homeowners along the Luce Line Trail in Minnesota believed that the trail increased their property values.
- Homes located near the Burke-Gilman Trail in Seattle were found to sell for six percent more than comparable homes not located near the trail.
- Homes in Worcester, Massachusetts, next to parks sold for $2,700 more than similar homes 2,000 feet away from parks.

Step 3: Develop a Marketing Plan

Increasing awareness about your community means you will need to develop, implement, evaluate, and refine a marketing and public relations plan. Key points to keep in mind are listed below.

- Marketing programs should reflect consumer needs and convey the benefits of your community to visitors. Unless tourists' needs are satisfied, they will not visit again and may advise others not to visit. What distinguishes your town from other places? What aspects of your trail system differentiate it from the alternatives? What else is there to see and do that persuades people to stay overnight?

- Marketing is more than advertising and printing brochures. It includes all communication efforts such as personal outreach, assistance, and public relations (e.g., visitor information provision, signage, hospitality, etc.) . For this reason, marketing must involve people who interact with visitors before, during and after they spend time in your community. Service employees like cashiers and hotel housekeepers may need hospitality training to understand their important role in marketing the community.

- Marketing claims must be honest, accurate and consistent with your community's ability to deliver. Travelers often decide to "buy" tourism experiences sight-unseen, so the marketing campaign has to provide clues about what to expect. Today's tourist is generally well-informed and is often suspicious of overblown advertising claims.

- Publicity is more effective than placing paid advertisements because an independent third party vouches for the experience your community and trail system offers. Organizing events and festivals, especially when a charity benefits, helps attract publicity. Travel writers specializing in non-traditional tourist experiences are always on the lookout for interesting "undiscovered" destinations to profile for their readers. Communities can also work with the Iowa Division of Tourism to be included on familiarization (or "fam") trips that they organize for industry insiders.

- If you do choose to pay for advertising, know what you hope to achieve. If you concentrate on niche markets you can reach better prospects in a cost-efficient manner. By contrast, mass marketing is expensive, but increases

awareness over time. Resist the temptation to pursue the best available target markets until your town is ready to host knowledgeable visitors and not just meet, but exceed their expectations. Web sites or newsgroups aimed at trail users and newsletters distributed by clubs or equipment sellers are inexpensive and efficient means of reaching niche markets. Avoid alienating readers with a "hard-sell" approach.

The easiest approach is simply to make sure that existing brochures and other marketing communications feature the trail experience. Many towns work together to promote a trail system: if there's more to see and do along the way, a trail becomes more attractive as a destination. Others encourage the state's Division of Tourism to highlight trail experiences. Also, other attractions in your region will benefit from promoting the trail system as part of a whole array of things to see and do that entices visitors to come and stay.

Existing tourism promotion mechanisms, particularly at the state and regional levels, represent important resources to communities seeking to expand visitation. Too many smaller communities duplicate services available from tourism promotion counterparts at regional or state levels, often because local businesses insist on separate advertising and promotion campaigns. The most cost-effective advertising, especially for smaller communities, usually entails "piggybacking" onto existing efforts like the statewide visitor guide or joint advertising opportunities. These mechanisms can also issue press releases to promote your community's trail activities.

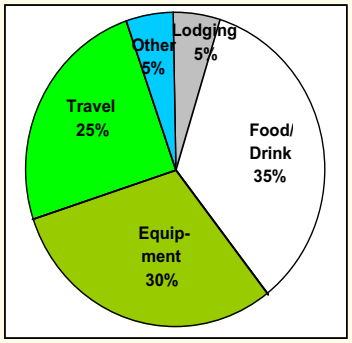
State and regional tourism offices serve the function of maintaining relationships with tour developers and group tour operators. They also create itineraries for "fam" tours designed for travel writers and others influential within the industry. It is much more efficient to work with local hotels, attractions, restaurants, museums and others catering to tourists to create a compelling reason for the state to include your community on fam tours. Otherwise your community would need to develop contacts from scratch.

A final facet of marketing could be creating new special events or expanding existing events, as they provide a great reason to mount a publicity blitz. However, festivals, competitive events and other community-wide activities require an immense amount of work to organize. Athletic events can incorporate the trail system, with activities ranging from extremely serious professional races to non-competitive events geared towards benefiting charities.

Economic Impact of OHV Use in California

California has more than 100,000 miles of motorized trails and has invested over $250 million in funds raised from user fees in the trail system. The state parks department even has a special division for off-highway vehicles (OHV), which conducted a study in 1993 of the economic impact of OHV recreation in California, and discovered the following:

- Users spend $1.2 billion each year on vehicles, equipment and trip-related expenses.
- This spending results in an additional $3.0 billion of annual economic activity and supports 43,000 jobs statewide.
- The average OHV-using household spends $3,500 per year on expenses related to their OHVs.
- Snowmobiling is the most family-oriented OHV activity, as 55.3 percent of snowmobilers came with family members.



Economic Impacts of Trails and Greenways

A number of communities and agencies have made estimates of the economic impacts of trails and greenways. These include:

- A 1992 study by the National Park Service examined the economic impact of rail trails in various locations, including the Heritage Trail in Iowa. The study found that the average trail user spent between $4 and $11 per day, depending on the location of the trail and opportunities to spend. Annual impacts per trail surveyed were in the range of $1.2 to $1.8 million.

- The Maryland Northern Central Rail Trail, located near Baltimore, profiled its users and came up with the following data:
  - 450,000 annual users,
  - annual economic impact of $3,380,000,
  - almost all visitors were from the county itself.

- The Hatfield-McCoy Trail in West Virginia is a 2,000-mile network currently under development. Each area county has been allocated two trailheads, to be located in towns. Annual economic impact is projected at $107 million, with 3,200 permanent jobs.

Step 4: Choose an Approach to Economic Development

As was discussed in the Guiding Principles section, each community will have different needs and preferences for economic development programs. You can see from the case studies profiled throughout this handbook that towns and businesses can and have used trail recreation to promote economic development in a variety of ways. The three broad categories of these programs are community development, tourism development, and downtown revitalization.

Community Development Approaches

Community development includes neighborhood revitalization and business attraction efforts. The contributions of trails to quality of life and sense of place represent an important economic development asset. Trails:

- help current residents and business-owners feel connected to the community;
- enable prospective employers and employees to envision themselves enjoying "the good life" in town; and
- convey a sense that the public sector-whether local government, service organizations or partnerships-cares about providing a quality amenity and conserving natural and scenic experiences.

Trails can be used to address all three facets of typical economic development strategies: expansion, retention and attraction of businesses. Trails are particularly useful because they provide a free or low-cost recreational amenity while creating many opportunities to expose the advantages your community offers as a business location to people. Furthermore, trails reinforce your community's desirability as a place to live and work to current residents and employees.

While some trail users will absorb these messages without overt prompting, communities can take steps to speed the desired results. Techniques range from subliminal to direct, but must center on making quality of life apparent to existing trail users and on using the trail system to attract new, economically desirable users. As an example, community event bulletin boards can be installed at trailheads where people can post notices about church suppers, lost dogs, day care providers, etc. This provides a service for residents while sending a message to visitors that the town is friendly and active.

At the more aggressive end of the spectrum, communities can use the trail system as the centerpiece of a package geared toward the corporate events and outings market. These packages might entail cooperative partnerships with local restaurants (e.g., to cater a picnic) or hotels to extend lengths of stay and increase the associated economic impact.

This scene from downtown Boonville, Missouri captures both its frontier town heritage and its present day role of a tourist destination along the Katy Trail.

Existing corporations can become partners in community programs. Helping companies root themselves in the community lessens the likelihood of eventual relocation, as connected companies tend to expand in place rather than move to greener pastures. Securing the involvement of corporations may entail offering incentives, like promoting trail-based fitness programs for employees in exchange for health insurance savings. Incentive programs may also be designed to encourage employees to shop within the community. Particularly in larger cities, encouraging shopping at work instead of where they live can translate into significant business volume.

Another source of potential economic development linked to trails concerns "free agents" who operate small businesses, often from home. These people view communities principally as residents rather than as business owners. Their enterprises reflect lifestyle decisions as much as business decisions, and these lifestyle decisions can be strongly influenced by trails. Some of these businesses will grow into significant employers, outgrowing the home office and needing to rent commercial space. Others will remain small enterprises that still generate economic activity for the community. Making communities attractive to free agents means ensuring that zoning and other land use regulations are reasonable concerning home-based businesses, and that information regarding sources of assistance to small businesses is easily obtainable.

CASE STUDY

Lanesboro, Minnesota

Cities and Towns, Main Street Revitalization

Lanesboro uses this logo in its promotional materials to illustrate its diverse range of visitor attractions.

The Root River State Trail is located in southeastern Minnesota, anchored by the Town of Lanesboro. For the trail's first 12 years it was unpaved and only drew limited use. Its paving induced tremendous levels of usage, particularly among bicyclists and in-line skaters. As Lanesboro's reputation grew, other types of users have also been attracted, including cross-country skiers, canoeists, and tubers.

The Root River Trail itself is part of a larger system that includes bicycle and snowmobile trails and scenic drives. This larger system has drawn year-round visitation and diverse visitor types to the area. In response, an equally diverse range of new businesses has emerged in Lanesboro, including Amish craft stores, a natural history bookstore, restaurants, and a summer stock theater. Businesses in Lanesboro work together to co-market their services to visitors.

CASE STUDY

Scenic Cycles

Business, Bike Shop

Scenic Cycles opened in 1991, the same year the Katy Trail came to Marthasville, Missouri. Starting with 10 bikes and 12 water bottles, it now maintains a 4,000 square-foot building and $100,000 in inventory. The shop shuttles customers to and from different parts of the trail, and even to and from the St. Louis airport. Scenic Cycles sponsors and participates in several small local races and events, and sells tickets for larger events in the area.

Though Scenic Cycles uses the Internet, yellow pages, billboards, and the newspaper for advertising, management contends that word of mouth is its best source of business, as trail users often refer the shop to others. The trail is of great importance to the business' success. Management feels that the presence of the trail has attracted and sustained businesses in the community that, without the trail's presence, would not make it. Several B&Bs, numerous restaurants, bars, and antique stores are located in Marthasville near the trail.

Tourism Development Approaches

The most reliable source of tourism development is to tap into existing markets in order to encourage longer stays and repeat visits. This strategy means educating business visitors about local leisure and recreation opportunities, and pitching business opportunities to leisure visitors. Ensuring that current visitors have access to information about a community's charms as a business location and vice versa is relatively simple. Overkill-three ring binders crammed with demographic and labor force data on every hotel room nightstand-should be avoided, as it smacks of desperation and alienates some visitors. Instead:

- link existing web sites devoted to visitor information and economic development;
- stock local visitor centers with information about economic development programs and opportunities; and
- purchase ads in visitor brochures on behalf of the economic development agency.

Downtown Revitalization Approaches

Although trails can help attract visitors to a community either temporarily (as tourists) or permanently (as residents or business owners), the quality and character of the central business district (CBD) truly distinguishes a community. An attractive downtown with an array of merchants offering an enticing variety of goods and services makes the community more attractive as a destination. In other words, the better the downtown, the more money spent by visitors and residents. Part of capitalizing on the trail system entails reinvesting in the CBD, in keeping with the community's market-based trail development decisions discussed on page 5. While visitor markets alone may fail to generate enough business volume to support many merchants, when combined with resident spending, they often make the difference between profitability and failure.

Trail users represent a new market niche for existing businesses and entrepreneurs to consider. Communities that provide access to technical assistance can help merchants determine how best to take advantage of new markets while enhancing the core business. Ways in which merchants can achieve this include changing merchandise selection, display and window design, and marketing. For example, a deli might create a snack pack for hikers that includes a Power Bar and bottled water along

with more traditional sandwich fare. A shoe store might display snowshoes in the front window. Businesses serving a broader clientele (i.e., a bike shop) might find locations near the trail to be especially attractive.

Downtowns often feature large and under-utilized spaces, perhaps former department stores or hotels. Downtown revitalization efforts can include grouping small tenants together in these areas. This model, akin to establishing a retail incubator or creating a flea market or multi-tenant antiques "mall," assumes that one entity takes management responsibility for shared services such as utilities and cleaning. In the flea market version, each enterprise handles its own transactions, while in the antiques mall approach, a central checkout counter serves all tenants. While some of these enterprises will remain small, others may outgrow the shared space and take over nearby storefronts.

Main Street-style programs can also go a long way towards creating a vibrant, attractive downtown. Small seed funds can be leveraged to develop façade programs and other property improvements. Business associations or the public sector often fund improvements such as historic lampposts, banners and a uniform sign style. Adjusting parking and other regulations may be necessary to ensure easy availability for casual shoppers, for example, enforcing a two-hour time limit to motivate employees to park off Main Street.

Step 5: Organize for Implementation

Implementing a trail-based economic development plan requires ensuring that the organizational, technical and financial resources are in place to do the job. Each entity in the process has to help define its most suitable role and understand its place in the bigger picture.

Users of motorized trails are excellent sources of revenue and economic impact. Motorized users like snowmobilers and ATV riders are willing to travel greater distances and to spend more money than are non-motorized trail users. In addition, motorized trails are frequently constructed and maintained with funding from user fees, thus easing the burden on public agencies to raise money for trails.

CASE STUDY

Mrs. B's Historic Lanesboro Inn

Business, Bed & Breakfast

When Mrs. B's opened in 1983 in Lanesboro, Minnesota, it was the first B&B in the area. Soon after, the Root River State Trail opened and there are now 10. The trail is a critical resource for Mrs. B's, as an estimated 50 to 60 percent of its guests are trail users. Mrs. B's advertises in newspapers and magazines and is a member of the local chamber/visitor center. Management insists that a critical mass of lodging, restaurants, and activities must be available in order to entice tourists to the area and encourage them to stay, as a trail alone will not sustain a tourism economy.

Overnight visitors were the key to making tourism the focus of the local economy. Mrs. B's credits Lanesboro's success to business owners, who welcomed competition in order to build critical mass. Despite not having the funds to encourage development, the town government did play a part, as it passed a law prohibiting hotel franchises in Lanesboro.

CASE STUDY

Out Spokin' Adventures

Business, Bike Shop

Out Spokin' Adventures is a seasonal operation in Sparta, Wisconsin, that rents bicycles and coordinates tours of nearby trails. The owners operate the business from their home, shuttling bicycles, riders and luggage to points along nearby trails. Though Out Spokin' Adventures advertises in local interest magazines and newsletters, the Internet and word of mouth are its best promotional tools. When a customer asks for a business card, they give two, and ask the customer to give one away to someone else back home. The store also prints a map of local trails and roads that are accessible by bicycle, and sells advertising space on the map to cover the expense.

Management has noticed that Sparta is shifting towards a more regional promotion strategy, and that businesses and attractions are now adopting the same mentality. Management cites the importance of lodging and restaurants to encourage visitors to spend more time in the area, as well as the availability of non-recreational diversions.

The following points list the various elements required for implementation:

- creating partnerships between public, quasi-public and private sector entities;
- identifying logical roles and responsibilities-state agencies, local government units, private sector entities, and concerned non-profits; and
- determining the structure of the primary implementing entity-does implementing the plan require a new organization or does it fall within the mission and capabilities of an existing organization(s)?

Regarding the final point, it is rare that a single entity implements such a plan alone. More commonly, a coalition of existing entities (i.e., Chamber of Commerce, tourism promotion organization, downtown revitalization group) will band together to implement the plan. In such coalitions, an internal decision-making process must be clearly defined at the outset in order to avoid later conflicts.

Coalitions also need to establish how the new group will interact with other interests. Who will speak for it when the local newspaper reporter calls? How will it respond to the concerns of elected officials, particularly when they are inconsistent with the plan? Finally, how can coalition members assure their respective memberships that other projects won't receive short shrift? Anticipating these issues and brainstorming answers will prevent problems in the future.

The final step in the organization process is to identify suitable funding mechanisms. This step will vary from community to community, based upon individual situations. A few suggestions for funding are:

1. public appropriations, perhaps directly from sales tax revenue;
2. private donations;
3. corporate sponsorships of trails;
4. membership programs; and
5. user fees on trails or other earned revenues.

MEASURING POTENTIAL BENEFITS

Defining Economic Impact Analysis

In the course of developing and implementing a trail-based economic development program, you may find it necessary to prove the economic benefits of trail recreation to local citizens and elected officials. As with any major public sector investment, your community will want quantifiable evidence that investing in recreational trails will create economic value for the community. For this purpose, many communities make use of an **economic impact analysis** as a tool to estimate the magnitude of new economic activity that results from public spending. An economic impact analysis measures the extent to which a given one-time economic event or ongoing economic activity contributes to the economy of a region of interest. Economic impacts from trails will include:

- building new trails (construction activity only), representing a number of one-time economic events;
- spending directly associated with trail users (both motorized and non-motorized), representing ongoing economic activity; and
- additional spending induced by spending from trail users, also known as indirect economic impact.

The paragraphs below explain the theory behind economic impact analysis and highlight key terms in **red, boldface type**.

Economic impact analysis determines how long a dollar circulates within an economy before being **exported** elsewhere to purchase a good or service which is unavailable locally. For example, if a tourist pays $50 for a room in a hotel, some of those dollars will be used to pay the salaries of hotel workers, who in turn will spend their wages to buy groceries. The grocery store, in turn, will buy a share of its produce from local farmers, and will pay the salary of a cashier who will buy a sofa from a local furniture store. All of these **rounds** of spending are retained in the local economy.

This economic cycle continues indefinitely, but the more integrated the economy, the longer it takes before the original expenditure is **leaked** from the economy when dollars are spent elsewhere. Some **leakage** occurs during each round of

CASE STUDY

Silver Country ATV Festival

Festival, Motorized Vehicles

The Silver Country region contains more than 1,000 miles of mostly motorized trails in Montana, Idaho, and Washington. In order to market the area to tourists and adventure travelers with recreational interests, Silver Country, Inc., a tourism development corporation, founded the Silver Country ATV Festival. The festival, held in Wallace, Idaho, and marketed as "the Sturgis of ATV Festivals," features an "Old West" ATV rodeo with an obstacle course through a huge mud bog, trail rides, and drag races. Other events include an ATV parade, a chili and BBQ cook-off, archery, musket shooting and black powder exhibitions, live music, and a crafts fair. Building on the notoriety of the festival, year-round lodging and recreation packages like guided ATV tours are now offered in the area. In 2000, the festival was altered to encompass five smaller festivals held between May and August.

CASE STUDY

Chequamegon Fat Tire Festival

Festival, Non-Motorized Vehicles

This mountain biking event held in Cable and Hayward, Wisconsin, began in 1983 as a race with just 27 riders. Today the Fat Tire Festival includes several races with a management-established maximum of 2,500 riders, as well as a number of other family-oriented events during a three-day period. Registration for racers is in such demand that management has allotted the space to participants by a lottery of entries. The Fat Tire Festival attributes much of its early promotional success to the mailing of a pre- and post-race tabloid newspaper, "Fat Tracks." The race itself uses portions of the Birkebeiner (or "Birkie") Trail, as well as other logging and fire roads, and is a linear race rather than a circuit, taking participants from Cable to Hayward.

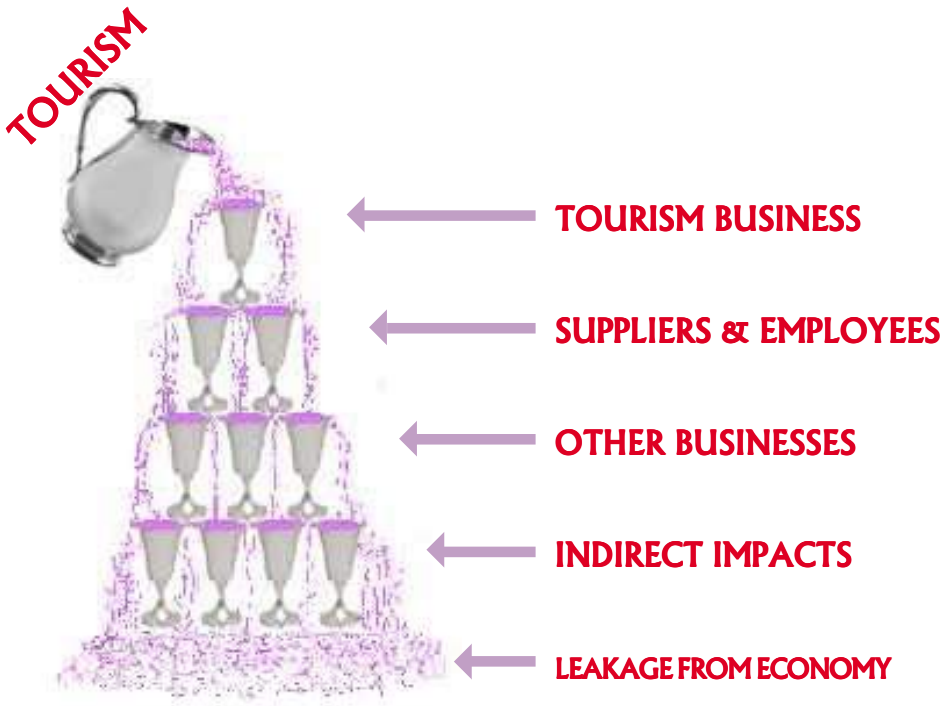
(Continued on next page)

A postcard from the Chequamegon Fat Tire Festival.

spending: the hotel will spend a portion of the $50 for advertising in a national publication; workers in the hotel may order clothing from a catalog wholesaler in another city; and the grocery store may buy dry goods from a national distributor.

A local economy's ability to avoid leakage is described by economic **multipliers**. A multiplier calculates the additional economic activity **induced** by a new economic event in terms of wages, jobs, or output. For example, if the employment multiplier for the hotel sector in a given county is 1.75, the opening of a new hotel with 100 net new employees will result in the creation of 75 additional jobs elsewhere in the county. Similarly, if the total annual payroll of the hotel is $1.0 million and the county's wages multiplier is 1.5, the new jobs induced by the hotel will total $1.5 million in annual wages.

To help explain how economic impact works, the following diagram outlines the various "rounds" of spending that will result from trail-related activity. **Imagine tourism as a pitcher of water and your local economy as a pyramid of glasses**. As tourist dollars pour into local businesses in your economy, these businesses must, in turn, buy more supplies and hire more employees. These suppliers and employees then spend money at other local businesses, thus inducing further impacts. Some dollars will be leaked from the economy during each step in the process. The challenge of economic development is to minimize the leakage.



Methodological Issues to Consider

Economic impact analysis is a simple tool and its results can provide potent arguments for or against a project. However, it is also easily misused. Assumptions underlying an economic impact analysis must be made carefully, to withstand public scrutiny. Key methodological issues include the following:

- **Identify a reasonable area of interest.** The U.S. Bureau of Economic Analysis (BEA) only determines multipliers for counties, and not for cities or towns. Communities that adapt county figures for local use often misstate the benefits.

- **Establish reasonable cause and effect relationships.** Economic impact from a new trail results when one of two things occurs: 1) when no comparable recreation experience previously existed in the study area; and 2) when users spend money where there were previously no opportunities to spend. New users and new businesses would not have arrived but for the construction of a new trail.

- **Distinguish total spending from net new spending.** For example, if snowmobile sales increase in the winter following the construction of a trail, how much is due to the trail and how much is simply due to a vibrant economy or above-average snowfalls?

- **Account for one-time expenditures.** One-time expenditures, such as the money spent building the trail, also generate economic benefits.

Modeling the Costs and Benefits of Trail Programs

The final step in measuring the potential impacts associated with trail systems is to create an economic model. Small communities should seek help from economic development specialists (i.e., the Institute for Decision Making-see page 23 for contact information), as many technical issues must be considered. The analysis entails identifying and describing all costs and benefits associated with the trails program, using both quantitative and qualitative gauges. Considerations include:

- Projecting the number and origin of trail users. How many are visitors? How many are local residents?

- Inventorying public support services and their capacity to accommodate the expected trail users, such as safety, sewer, water, rest rooms, streets, parking, etc.

Chequamegon Fat Tire Festival (Continued)

Events at the festival include a warm-up event, a Pasta Feast, product displays, awards presentations, and free family activities such as the Klunker Bike Toss and a Children's Bicycle Rodeo. The festival fills the area's hotel rooms and keeps people enjoying the trails and scenery of the Chequamegon National Forest all weekend. The race was modeled after the 7,500-participant American Birkebeiner, North America's largest cross-country skiing race, and uses part of this course as its path. TREK, Telemark Resort, and several other local businesses sponsor the Fat Tire Festival. Members of the community, many of whom are with volunteer organizations (churches, schools, and clubs), staff the race. Participants and spectators mainly come from large cities in the region like Minneapolis/St. Paul, Madison, Milwaukee, and Chicago.

Summary of Colorado OHV User Survey

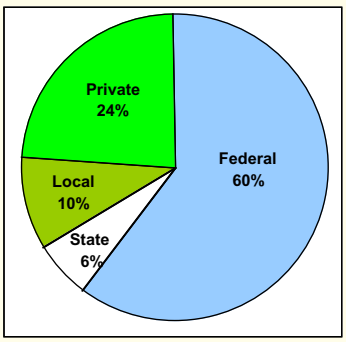
In 1999 the State of Colorado conducted a survey of owners of off-highway vehicle (OHV) owners. Surveys were sent to a random sample of riders from its OHV registration list, and 784 responses were returned. According to this survey, the typical Colorado OHV user:

- is a 48 year-old white male with 20 years of riding experience;
- takes two trips per month, averaging 4.7 hours and 29 miles each;
- does not belong to a riding club and instead rides in a group of three or four people.

Other notable findings:

- the 784 respondents owned a total of 3,524 OHVs, an average of 4.49 per person;
- riders expect free usage of trails on public land; and
- a high-quality riding experience is valued more than having on-site amenities.

The following graph depicts the agencies responsible for stewardship of lands where Colorado OHV users ride.



- Determining whether private support services can be expanded too, such as guide service, hotel and motel rooms, restaurants, transportation, etc.

- Estimating tourist spending for different types of visitors (daytripper vs. overnight) to calculate sales volume and estimating spending by resident trail users that but for the trail would accrue elsewhere

Benefits most commonly associated with trail-related spending are increased local incomes and employment. Tax revenues may also increase, providing tax relief to local residents if additional revenues exceed the costs of providing additional public services. Any increase in the demand for public services (for example, extra police or improved public rest rooms), is a cost of trail development, as are the costs of promoting the trail.

Beyond such quantifiable impacts, other impacts cannot be expressed in dollars and cents. The impacts of these non-quantifiable factors can be described qualitatively by using plus and minus signs, perhaps using the public participation process to explore relative significance. People may disagree about whether a consequence is positive or negative (one person's thriving business district is another's traffic jam), but the point is to think through consequences thoroughly in an open forum. Since community support is key to the trail program's success, consensus about expected impacts is crucial to determine whether to proceed or revise the approach.

The final step is to choose and then apply economic multipliers. Small communities that wish to use economic impact techniques to measure trail systems' impact on local revenues can adapt multipliers from existing national or regional studies to obtain a rough estimate; again, outside help on these complex analyses is desirable. If no multipliers are available, the relationship will probably fall within the range of 0.3 to 0.5.

In plain English, for every new dollar spent by trail users in your community (by tourists, or as avoided leakage) all local government entities will probably realize increased revenues totaling between 30 and 50 cents after the completion of all rounds of economic activity, and including all inter-government transactions. The more integrated the economy, the higher the multiplier will be, which favors urban over rural areas. Rural areas offering products entailing a great deal of local production labor (e.g., crafts) can also experience higher multipliers.

SOURCES OF ASSISTANCE

Federal Government

National Park Service
Rivers, Trails & Conservation Assistance Program
www.ncrc.nps.gov/rtca
Midwest Regional Office
1709 Jackson Street
Omaha, NE 68102-2571
(402) 221-3350

Federal Highway Administration - Iowa Division
www.fhwa.dot.gov/iadiv
105 Sixth Street
Ames, IA 50010
(515) 233-7300

State Government

Iowa Department of Transportation
Office of Systems Planning
www.dot.state.ia.us
800 Lincoln Way
Ames, IA 50010
(515) 239-1669

Iowa Department of Natural Resources
Parks, Recreation and Preserves Division
www.state.ia.us/government/dnr/organiza/ppd/parksdiv.htm
Wallace State Office Building
900 E. Grand Avenue
Des Moines, IA 50319
(515) 281-5814

Iowa Department of Economic Development
Division of Tourism
www.traveliowa.com
200 E. Grand Avenue
Des Moines, IA 50309
(515) 242-4727

Other Resources

American Council of Snowmobile Associations
www.snowmobileacsa.org
271 Woodland Pass, Suite 216
East Lansing, MI 48823
(517) 351-4362

American Discovery Trail Society
www.discoverytrail.org
PO Box 20155
Washington, DC 20041-2155
(800) 663-2387

American Hiking Society
www.americanhiking.org
1422 Fenwick Lane
Silver Spring, MD 20910
(301) 565-6704

American Motorcyclist Association
www.ama-cycle.org
13515 Yarmouth Drive
Pickerington, OH 43147
(614) 856-1900

American Trails
www.americantrails.org
P.O. Box 11046
Prescott, AZ 86304
(520) 632-1140

Institute for Decision Making
www.esd.uni.edu/idm
University of Northern Iowa
College of Business Administration
The Curris Business Building, Suite 5
Cedar Falls, IA 50614-0120
(800) 782-9520

League of American Bicyclists
www.bikeleague.org
1612 K Street, N.W., Suite 401
Washington, DC 20006
(202) 822-1333

National Off-Highway Vehicle Conservation Council
www.nohvcc.org
4718 S. Taylor Drive
Sheboygan, WI 53081
(800) 348-6487

Rails-to-Trails Conservancy
www.railtrails.org
1100 17th Street, N.W., 10th Floor
Washington, DC 20036
(202) 331-9696

The Trust for Public Land
Midwest Regional Office
www.tpl.org/tpl/nearu/mwro/index.html
420 N. Fifth Street, Suite 865
Minneapolis, MN 55401
(612) 338-8494

continued on next page

Case Study Contacts

Cities and Towns

Black Hawk County Conservation Board
www.co.black-hawk.ia.us/depts/conservation
2410 W. Lone Tree Road
Cedar Falls, IA 50613
(319) 266-0328

Lanesboro Area Visitor Center
www.lanesboro.com
P.O. Box 348
Lanesboro, MN 55949
(800) 944-2670

Marthasville Chamber of Commerce
www.marthasville.org
P.O. Box 95
Marthasville, MO 63357
(636) 433-5242

Mid-America Regional Council (Kansas City)
www.marc.org
600 Broadway, 300 Rivergate Center
Kansas City, MO 64105-1554
(816) 474-4240

Rochester Area Economic Development, Inc.
www.rochestermn.com
220 S. Broadway, Suite 100
Rochester, MN 55904
(507) 288-0208

Sparta Area Chamber of Commerce
www.spartan.org
123 N. Water Street
Sparta, WI 54656
(800) 354-BIKE

Traverse City Convention & Visitor's Bureau
www.tcvisitor.com
101 W. Grandview Parkway
Traverse City, MI 49684
(800) 940-1120

Businesses

Mrs. B's Historic Lanesboro Inn
101 Parkway Avenue North
Lanesboro, MN 55949
(800) 657-4710

Out Spokin' Adventures
www.outspokinadventures.com
409 N. Court Street
Sparta, WI 54656
(800) 4WE-BIKE

Scenic Cycles
www.scenic-cycles.com
P.O. Box 41, 203 Depot Street
Marthasville, MO 63357
(636) 433-2909

Festivals

Chequamegon Fat Tire Festival
www.cheqfattire.com
P.O. Box 267
Cable, WI 54821
(715) 798-3594

Silver Country ATV Festival
www.silver-country.com
P.O. Box 889
Wallace, ID 83873
(208) 753-1043

CREDITS AND NOTES

This handbook was prepared by Economics Research Associates (ERA) of Washington, DC, under a sub-contract to SRF Consulting Group, Inc. SRF is the lead consultant to the Iowa Department of Transportation's *Iowa Trails 2000* resource document. This handbook was designed to serve two purposes: 1) a companion piece to *Iowa Trails 2000*; and 2) a stand-alone guide to be used by communities throughout Iowa.

For further information about *Iowa Trails 2000* or for additional copies of this handbook please contact:

Iowa Department of Transportation
Office of Systems Planning
www.dot.state.ia.us
800 Lincoln Way
Ames, IA 50010
(515) 239-1669

For any technical questions regarding issues discussed in this handbook, please contact:

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Investing in Trails

Cost-Effective Improvements—for Everyone

In tough economic times, governments have to make the most of every tax dollar spent. That's why trails stand out. With fewer federal dollars available, these projects can be completed at a low cost and return dividends in the form of improved mobility for active travelers, children, and seniors and increased access to healthy recreation opportunities for all.

Trails positively address areas of national interest including dependence on foreign oil, public health, air quality and safety. Trail investments are extremely cost-effective transportation infrastructure, especially for trips that are three miles or less (nearly half of all trips) and those one mile or less (more than one quarter of all trips).

Trails are essential elements of any active transportation system. Where trails have been prioritized, surrounding communities have benefited greatly from economic, quality of life, health, accessibility, and mobility improvements. In national surveys[1], consumers have repeatedly chosen trails and walkability as desired neighborhood amenities, boosting local real estate values.

Increased investment in trails, bicycling and walking means:

- **More jobs** per dollar: Design, engineering and construction of walking and bicycling facilities such as trails create more jobs per dollar than any other type of transportation infrastructure construction.[2]
- **Positive returns for the federal budget:** The federal government pays 28 percent of all health care costs in the United States[3], while expending billions annually on expensive transportation infrastructure. Investing in trails helps Americans safely incorporate exercise into their daily mobility, hitting the bottom line for both of these sectors.
- **Greater travel choices for the American public:** A bipartisan 2010 national poll[4] found that nearly three-quarters of Americans feel they "have no choice but to drive as much as" they do, and two-thirds "would like more transportation options."In a 2009 national survey[5], 88 percent of rural Americans said "pedestrian-friendly" transportation facilities were important.
- **Local economies:** Americans spend more on bicycling each year than they do on airline travel.[6] Trail-based tourism is a major economic driver in many small communities, supporting local small businesses through annual revenues of millions of dollars per trail in direct consumer spending in many cases.[7]
- **Reduced oil dependence:** Transportation is responsible for 71 percent of U.S. petroleum use.[8] Cutting miles driven—and reduced congestion with fewer cars on the road—is among the best ways to manage our oil-related economic, environmental and security vulnerabilities. Shifting short trips to bicycling and walking could save four to 10 billion gallons of fuel each year.

rails-to-trails conservancy

Rails-to-Trails Conservancy
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Trails: Economic Powerhouses

TRAIL TOWNS

The "Trail Towns" initiative along the Great Allegheny Passage promotes businesses aiming to capitalize off the 700,000 annual trips taken along the rural trail corridor between Cumberland, Md., and Pittsburgh, Pa. Direct annual spending by trail users exceeds $40 million. This economic infusion has enabled a resurgence of many towns that had declined with the loss of mining jobs and the original railroad. Trail-related businesses pay out $7.5 million in wages every year, and since 2007, 54 new or expanded businesses serving trail users have created 83 new jobs in eight small towns. (www.atatrail.org/au/impact.cfm)

BILLINGS, MONTANA

The Billings, Mont., Chamber of Commerce commits to the development of trails as a long-term strategic objective on its website, noting the numerous benefits that trails bring to a community: "Develop our trail system for the economic and healthy community benefits that result from active transportation (to work and school and for leisure). Communicate the quality of life and economic benefits to the business community and general public. Bring trail support groups and stakeholders together to find solutions to connect our trails and keep them clean and safe. Seek federal support through transportation and appropriations bills." (www.billingschamber.com/priorities/)

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MONON TRAIL

In Indianapolis, Ind., the Monon Trail is the crown jewel of the city's trail system. It has spurred significant business development along its corridor and has been credited with the revitalization of the Broad Ripple Village neighborhood. A 2004 study found that the amenity value of trails was associated with more than $140 million in increased property values in Marion County, which includes Indianapolis, Carmel, and other communities transformed by the Monon Trail. (Lindsey *et. al.* (2004), Property Values, Recreation Values, and Urban Greenways, Journal of Park and Recreation Administration, 22(3), pp. 69–90)

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2. http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36(103)_FR.pdf
3. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/tables.pdf, Table 5
4. http://t4america.org/resources/2010survey/
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6. http://www.outdoorindustry.org/research/economicimpact.php?action=detail&research_id=167
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8. http://www.eia.gov/energy_in_brief/article/major_energy_sources_and_users.cfm