

Granger Multi-use Trail

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September 2005



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Glossary



Near the Michigan border in northwestern Indiana, the residential community of Granger is settled among quiet neighborhoods and open spaces. The Granger Citizens Community Organization has proposed a multiuse trail within its twenty-six square mile area to create a more livable community by connecting neighborhoods with schools, churches, recreational areas, and other local points of interest.

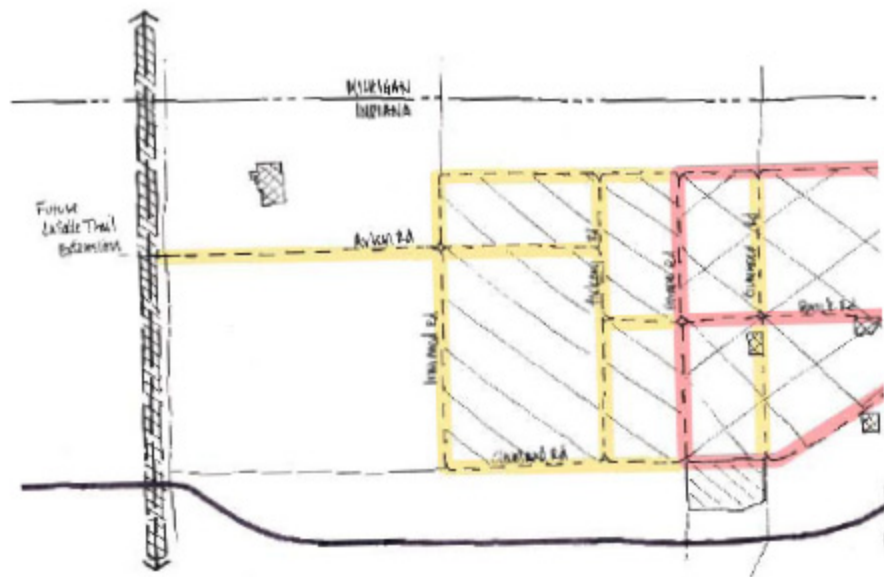
This document presents suggestions and concepts for the community to use in implementing this vision of community connection.

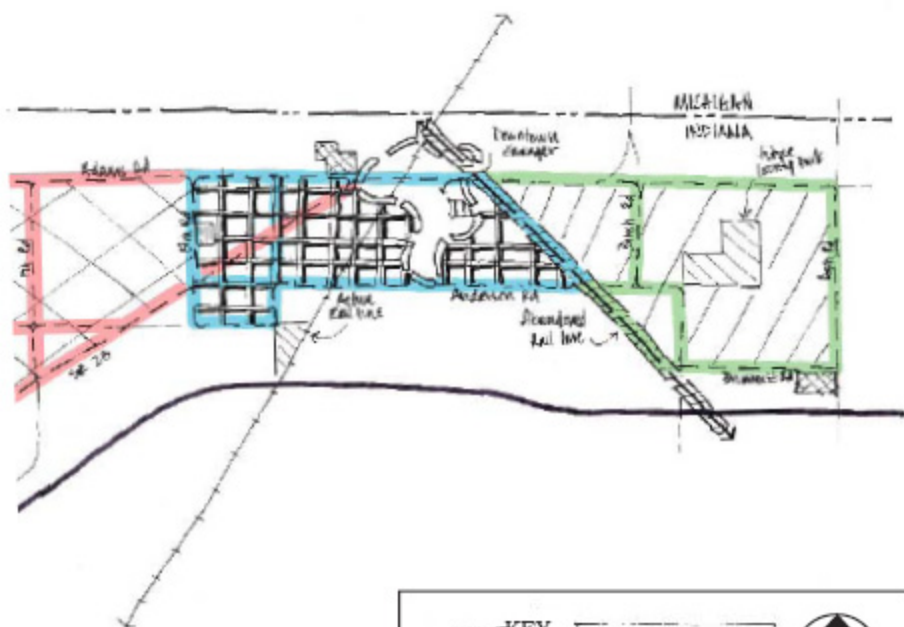
***“I thought of that
while riding on my
bike.”***

--Albert Einstein on his
Theory of Relativity





Proposed Trail System








KEY

 Phase One- "The Core"

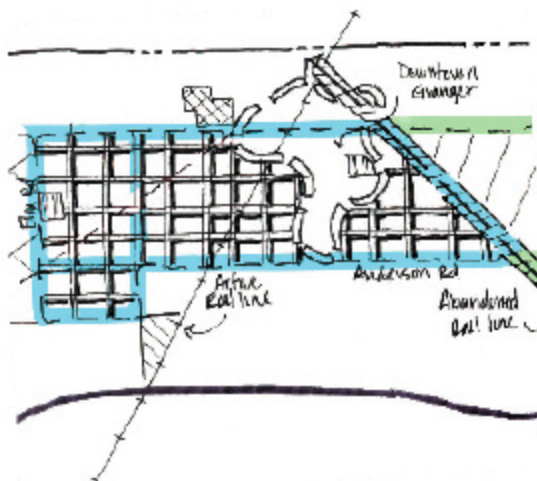
 Phase Two- "Ash Road Loop"

 Phase Three- "Country Club Connection"

 Phase Four- "LaSalle Trail Connection"



The Core



Phase One: "The Core"

This section of trail will run along Adams Road from Elm Road to the abandoned railroad tracks, just past Bittersweet Road. Cutting across the countryside on this natural corridor, the path will take users on a scenic trail southeast connecting to Anderson Road. The trail will then turn westward towards the baseball diamonds on Brick Road. Here the trail will reconnect with the Elm Road section making a six mile loop connecting subdivisions to many of the areas attractions including shopping, recreational areas, schools, the library, and historic sites.



The use of an underpass is a possible solution for separating railroad traffic from vehicular and pedestrian traffic, increasing safe and efficient travel.

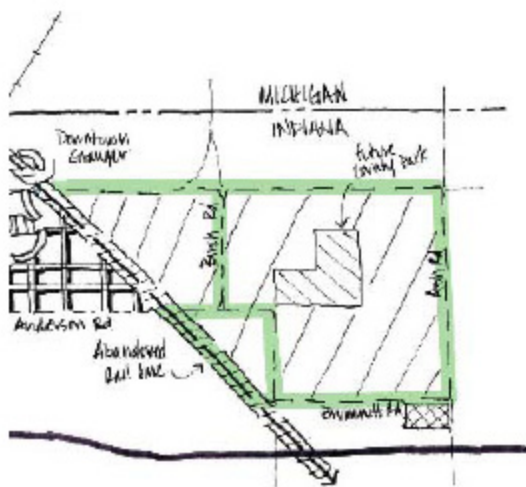


Above: A slight widening of the road at rail-road crossings allow cyclists to cross tracks perpendicularly which is much safer for a bicycle's narrow tires. The same applies for a multi-use trail, where a slight curve in the trail is also recommended.



Above: This exemplary site, completed in 2004, shows where traffic once halted for train traffic. The area was flat, but has now been changed so vehicular and pedestrian traffic is not influenced by the railroad. These changes have created a site that is more functional and aesthetic.

Ash Road Loop



Phase Two: "Ash Road Loop"

Just east of "The Core," this six-mile loop links additional subdivisions with a newly constructed park and schools. This section of the trail extends along Adams Road to the edge of the county and then turns south along Ash Road. The loop runs along Brummitt Road and north on Beech to the site of the future community park. Additionally, this section of the trail will connect with the abandoned railroad corridor running directly back to the center of the community.

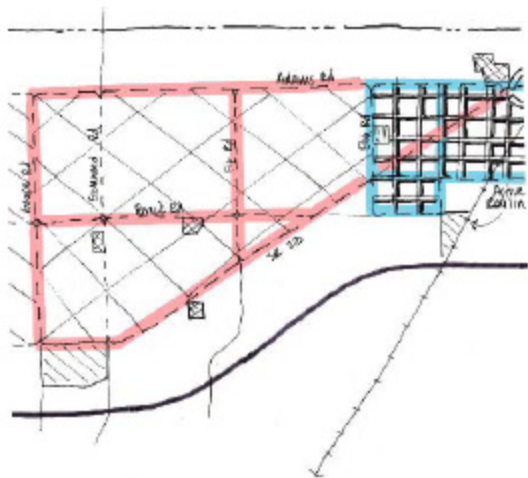


Placing rest nodes in strategic locations along the trail increases the function of the trail for all groups of people and provides a greater variety of potential activities.



Rather than cluttering busy intersections with additional signage for the multi-use trail, signage could be placed on the trail itself.

Country Club Connection



Phase Three: "Country Club Connection"

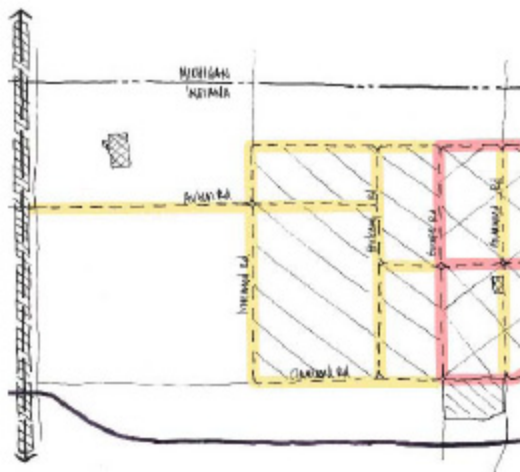
Phase three begins to connect Granger with the greater surrounding community. It stretches down US 23 to the St. Joseph Valley Memorial Park, north on Grape Road to the Knollwood Country Club and then returns to the core along Adams Road. Many smaller additional routes will be constructed inside this large eight mile loop to connect the many subdivisions, schools, and open space enveloped by this section of the trail.



Incorporating textured crossings and abundant vegetation in the commercial district gives a human scale to the area and provides a much more pedestrian friendly environment.



La Salle Trail Connection



Phase Four: "La Salle Trail Connection"

The fourth and final phase of this project will extend to the western edge of the community of Granger, terminating into the future site of the north-south La Salle Trail. This trail will allow connection to Michigan as well as South Bend and many other communities to the south. This eight and a half mile looping trail runs west on Cleveland Road from the St. Joseph Valley Memorial Park, then turns north along Ironwood Road finally connecting to Adams Road. An additional arm of this trail runs along Auten Road, crossing SR 933 and connecting to the La Salle Trail. Inside this loop, many smaller sections of the trail connect subdivisions, schools, and historic sites.



Making neighborhood connections to the trail increases the likelihood of use and safety of all users.

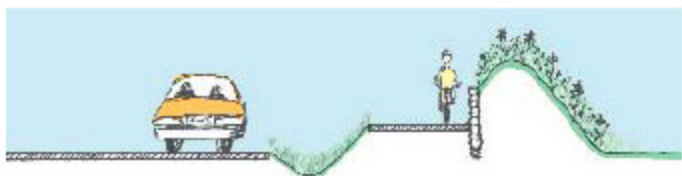


Easy to follow and aesthetically pleasing wayfinding examples and signage will make the trail more user friendly and enjoyable.

Road to Trail Alignment



Current solution Granger has affectively connected a residential neighborhood with Prairie Vista Elementary School. The path bisects a berm that separates Brick Road from the adjacent subdivision. This berm maximizes safety to pedestrians by creating a barrier from automobiles while still preserving character.



Integrating the multi-use trail and current landforms Berms are a common separation between roads and neighborhoods. This diagram shows another way to integrate trails while maintaining the privacy of residential areas.



Grass swale separation Roadside ditch preserves community character and decreases infrastructure costs. This solution also provides a safe pedestrian and vehicle separation.



Raised multi-use trail with curb
A raised trail bed can provide some protection from vehicles.

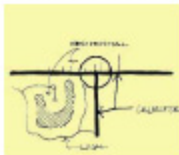


Separated road and trail A buffer strip of vegetation creates a physical separation of automobiles and pedestrians.



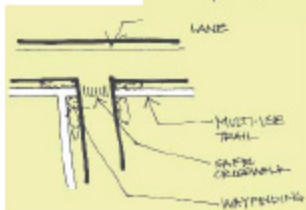
On-road bike lanes and multi-use trail should not be designed adjacent to one another. This situation creates confusion and anxiety to motorists by encouraging the bicyclists to ride in the wrong direction of traffic, and cross onto the bike lane from the trail.

Trail Connections



An example of a T-intersection at two collector roads.

In situations where many users will access the path, road crossings should be minimized to avoid confusing motorists. Notice the plantings that buffer the multi-use trails from the road.



Proper alignment of on-road bike lanes and off-road multi-use paths places these features on opposite sides of the road to avoid confusion for

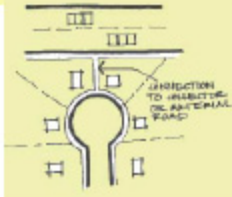
motorists and pedestrians. The multi-use trail uses crosswalks on smaller roads, allowing access on and off of the trail. The on-road bike path allows access only at specified junctions and is designed for faster moving bicycle traffic.



<http://www.bendbikeimages.org/bsarchitect.com>

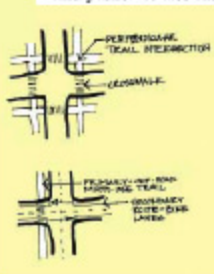
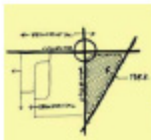
An example of the interface between a residential road and a collector road.

Emerging from the end of a cul-de-sac, this pathway would quickly connect pedestrians to a collector road without stopping the pedestrian or the vehicle on the roadway. Now rather than requiring a pedestrian to travel to the front of a subdivision, pedestrian access in and out of the residential areas can be made at several places.



An example of a 4-way collector intersection surrounded by residential areas.

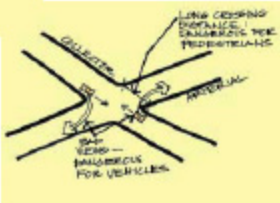
The first sketch presents the ideal four-way intersection of roads and paths. It also illustrates multi-directional connection while emphasizing pedestrian crosswalks. The second sketch shows how intersections between on-road and off-road bike paths could be addressed. In this situation, striped on road bike lanes are distinguished from additional vehicular traffic. In these lanes, cyclists need to obey traffic laws, stopping and alternating like the vehicles that they share the road with. The primary, multi-use trail should cross the road perpendicularly at crosswalks.



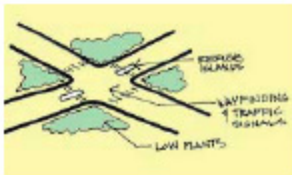


An example of an intersection between an arterial road and a collector road.

This sketch explains some of the dangers presented by intersections at odd angles.



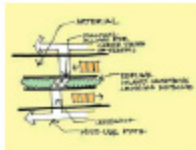
Not only does this situation create a longer, more dangerous pedestrian crossing, motorists have poor views of oncoming traffic and crossing pedestrians.



Where roads with different traffic volumes intersect (collector and arterial), different treatments should be expected. Here, the

arterial road features refuge islands to allow pedestrians a chance to stop and look for traffic before crossing. The collector road (with lower traffic volumes) only features crosswalks. Plantings are low growing plants to allow an ample view of the road and all of its users.

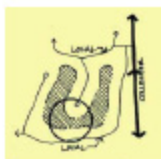
Crossing major roads, is a safety concern for pedestrians. In these situations, allowing pedestrians to cross half of the road at a time is desirable. A refuge island is a safe rest spot for pedestrians and bicyclists. These islands allow pedestrians to stop



and negotiate vehicular traffic from different directions. Furthermore, a diagonal crosswalk within this island ensures that pedestrians have a clear view of oncoming traffic.

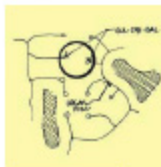
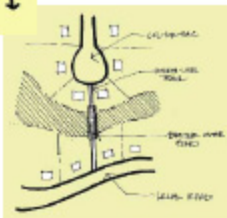


<http://www.boston.gov.org/searchResult.cfm>



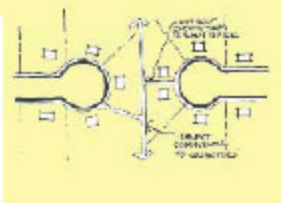
An example of an inter-neighborhood connection from a local road to a cul-de-sac.

This sketch shows how the multi-use trail could be routed along property line easements to connect local roads to residential subdivisions. Retention ponds could be bridged to make a more exciting trail. Special features like bridges, tunnels, and other on-trail amenities create an interesting and well-used trail system by creating points of interest.



An example of inter-neighborhood connection via cul-de-sacs.

To decrease the distance that pedestrians must travel to get to a neighboring subdivision, the multi-use trail could connect these residential areas. Rather than traveling along a multitude of collector and local roads, a multi-use trail could connect these places while greatly reducing the distance that one must travel. Two subdivisions could be easily joined by utilizing property line easements. This facilitates pedestrian movement without slowing vehicular traffic.

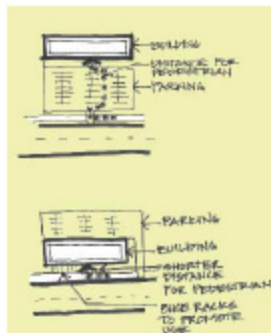




Currently, pedestrians are forced to take long routes to destinations that are only a short distance away. The existing layout of subdivisions requires pedestrians to travel along many roads when the shortest and safest trip would utilize property line easements and a "back door" into the subdivision.



Source: <http://www.landdotmaps.org/www/files/060606>



The top image shows the existing condition for many commercial properties in Granger. These properties show what happens when ordinances specify that the building must be set back from the road by at least x feet. Minimum setbacks allow large parking lots to be built in front of commercial buildings, causing long, uninspired walks for pedestrians and bicyclists.

Conversely, maximum building setbacks (limiting the distance to the door from the road) as shown in the second sketch, result in a more pedestrian friendly environment, decrease the amount of parking in front of the building, and promote walking/bicycling with shorter distances to destinations from the street.



As the community of Granger continues to grow, much of the open farm land and many forested plots of land could be transformed into additional subdivisions or commercial areas. Identification and preservation of this land is critical if the community wishes to establish a sense of place here. These areas could be set aside as future parks or open space or preserved in their current state.

Case Studies

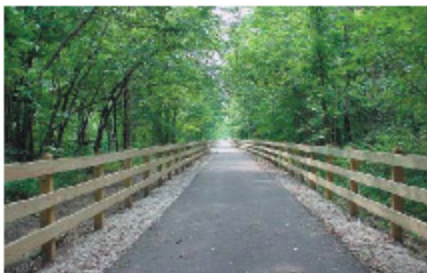


Image source of Maricopa Trail Information: www.railogproject.org

Maricopa County Regional Trail System

The Maricopa Regional Trail System was a natural step in the County's regional planning process. The elements of focus are responsible land use, efficient and effective transportation, environmental awareness and sensitivity, and economic development. The trail system seeks to connect the county park system, link recreational corridors around the valley, and help preserve open space in the community.

To give the proposed routing phases a start, the project utilized existing right-of-ways such as canals, parks, utility corridors, and flood control projects. Then, the commission developed community partnerships to make the program a reality, beginning with a pilot project centered on Lake Pleasant Regional Park. Their task was to identify the best trail corridors linking White Tank Mountain Regional Park, Lake Pleasant Regional Park, Spur Cross Ranch Conservation Area, and Cave Creek Recreation Area. This area was selected for the first phase of the study because the majority of the corridor is in unincorporated Maricopa County and it contains significant property owned by the Flood Control District (FCDMC).



Image from *Leaded Bike website* www.leadedbike.com

Branford, Connecticut Trail System

Branford is a model for small towns hoping to bring their community together and connect with the larger context of the surrounding region. Like many small towns, Branford does not lack in potential and open space, with much of their open space bordering the adjacent shoreline. Connection of these spaces will provide a viable natural, recreational and educational resource for the immediate community, along with twenty-eight miles of linkage to five other shoreline communities. Every home in Branford is now within a fifteen minute walk of the trail system.

Community advocacy groups, like those partnerships formed in Branford, represent a simplistic approach to initiating a trail project for a small community with limited resources. Long range plans include finishing the proposal of the twenty-eight mile trail surrounding the town, with each of the eight segments comprising the loop beginning and ending at a public road with space for parking.

Regional Trail Connections

http://www.indianatrails.org/East_Bank_Trail.htm

South Bend, IN

Description: Runs from the South Bend Dam and Raceway downtown to Angela Boulevard on the north end, and continues informally through Holy Cross College and St. Mary's College to Douglas Road at SR 933.

Towns: South Bend

Counties: St. Joseph

Length: Approximately 3 miles

Activities: Walking, biking

Manager: South Bend Parks Department

Contact: Betsy Harrison

Address: 301 S. St. Louis Blvd. South Bend, IN 46617

Phone: 574-235-9414

Elkhart Trails

Description: Trail system connects downtown area and several parks. Some on-road portions are included in the route. Attractive trail bridges are plentiful in this northern city of streams and lakes.

Endpoints: North: downtown area; South: Lusher Ave.

Cities: Elkhart

Counties: Elkhart

Length: 4 miles total, not all contiguous

Activities: Walking, biking, rollerblading

Manager: Elkhart Parks & Recreation

Contact: Elkhart Park and Recreation Department Office

Address: 131 Tyler Street - Elkhart, IN 46516

Phone: (574) 295-7275

Pumpkinvine Trail

Description: Runs along Rock Run Creek and Abshire Park. Tall, leaning trees form a pleasant, shady canopy over the path and make this one of the best rural rail-trails in the state.

Towns: Goshen

Counties: Elkhart, LaGrange

Length: 3 miles (goal 16 miles)

Activities: Walking, mountain biking, cross-country skiing

Manager: City of Goshen

Sponsor: Friends of the Pumpkinvine Nature Trail

Contact: friends@pumpkinvine.org

Address: P.O. Box 392 Goshen, IN 46527

Phone: (574)533-5710

Website: <http://www.pumpkinvine.org>

Glossary

Arterial Street

Roadways intended to serve as primary connectors between residential and other types of development. Generally, these are state and county roadways.

Collector Street

A street designed to accommodate traffic within residential neighborhoods with their primary purpose of collecting and distributing traffic to and from the major arterials.

Local Street

A residential street that provides direct access to abutting properties, the primary purpose of a local street is serving only those residential lots which are adjacent.

Bikeway

A path system designed and intended specifically for bicycle use.

Multi-use Path

A path system intended and designed for a variety of simultaneous uses.

Pathway

A predefined route constructed for a specific use.

Local Materials

Locally harvested building materials used in order to reflect the natural color, texture, and identity of a site.

Bike Lane

A specifically designated section of road intended exclusively for bicycle traffic.

Travel Lane

The portion of road designated for vehicular travel.

Community

A group of individuals unified through common interests and concerns.

Wayfinding

A system of signs and markers.

Buffer

The distance between the edge of the pavement and the edge of a sidewalk. It is commonly used for landscaping.

Barriers

Vertical screening placed in buffers, commonly trees and shrubs, concrete (Jersey) barriers, etc.