

RAISE Capital Grant: Project Description



Project Description

Dyersville, a rural midwestern town of roughly 4,500 people, sits in the heart of northeast lowa along US-20. Dyersville is divided into three distinct sections by the convergence of two waterways, Bear Creek and the Maguoketa River's North Fork,

which have a combined drainage area of 118 square miles. Flash flooding is a continual concern and the City has spent decades working to manage the impact of flooding on the community.

Dyersville, Iowa, seeks **Rebuilding American** Infrastructure with Sustainability and Equity (RAISE) Grant funds to support the Enhancing Multimodal Connections in Dyersville Project. The proposed project will enhance the quality of life,



improve resiliency, and increase safety by building connections for vehicles, pedestrians, and cyclists. This project involves four phases, including bridges that cross the Maguoketa River's North Fork and Bear Creek, an overpass that eliminates an atgrade Canadian National (CN) Railway crossing, miles of wide, accessible trails that connect neighborhoods and parks with commercial hubs and the installation of electric vehicle (EV) charging stations in the heart of town.

Project Background and History

Figure 2: Recorded Flood Events – Dyersville, Iowa



In 2002, the City of Dyersville requested assistance from the U.S. Army Corps of Engineers to evaluate flood reduction alternatives. The 2004 "Initial Assessment Report for Flood Damage Reduction" (CWIS No. 179046) concluded that "Neither a reservoir project, nor a levee system is economically increasing the need for flood resiliency in the city. justified." If controlling flooding isn't feasible, then

Recorded Flood Events in Dyersville have increased in frequency over the last 20 years,

minimizing flood impacts is the solution that remains.

The report recommended Dyersville pursue raising roads, constructing larger drainage structures, implementing a flood-warning system, developing a watershed management plan, encouraging citizens to move out of the floodplain, and utilizing floodplain areas for recreational amenities. Since this report, Dyersville has invested in implementing all these suggestions as flood frequency and severity have continued to increase (See Figure 2). The most recent flooding to occur in Dyersville was on February 27, 2023, after a rainfall event.

Dyersville

Enhancing Multimodal Connections in Dyersville | Project Description

Dyersville's planning efforts have grown beyond flood mitigation and include hazard mitigation plan (2011), visioning and transportation plans (2011, 2012), regional and local comprehensive plans (2013, 2018), housing study (2017), watershed vision plan (2021) as well as numerous smaller traffic, structural, environmental, economic development and tourism studies and reports. These plans have identified critical flood mitigation projects (included in this project) as top priorities. In addition, these efforts revealed additional opportunities to support community growth and development. The 2018 Comprehensive Plan was the catalyst for Dyersville's investment in preliminary design of critical road and bridge projects and acquisition of necessary right-of-way.

"The comprehensive plan is a summary document representing the will of the engaged citizens of Dyersville as seen through the lens of demographic and economic factors. As the plan is intended to help shape the community for future generations, the public is one of the most important constituents."

(Dyersville Comprehensive Plan, 2018).

The Enhancing Multimodal Connections in Dyersville Project is the culmination of more than 12 years of research and planning. The project components are the foundational elements necessary for Dyersville to provide consistent, reliable, equitable, and sustainable multimodal connections and access to services and opportunities. "A network of streets, trails, and pedestrian paths should provide safe, efficient connectivity throughout the community. Transportation systems should accommodate a diverse set of mobility needs and preferences. Although not every street can or will accommodate all modes of transportation, Dyersville residents want to see more bike and pedestrian options.



(Dyersville Comprehensive Plan, 2018).

Key Transportation Challenges & Project Component Solutions

Dyersville is split into three areas by Bear Creek and the Maquoketa River's North Fork. The CN railroad line through town creates multiple railroad conflict locations. The nearest grade-separated crossing is 5 miles west of Dyersville. There is no infrastructure available for electric vehicles. Emergency services do not have direct secondary routes throughout the community. Floods and railroad closures force long detours. Flood events have increased, and some areas of Dyersville become inaccessible during these events. Lack of bicycle and pedestrian facilities and connections limits safe multimodal transportation options.

East-West Connection

East-West Connection (13th Ave SE to 12th Ave SW)

The new East-West Connection is a critical flood resilience project identified during planning work. This corridor will create a multimodal link between the southwest

2

Enhancing Multimodal Connections in Dyersville | Project Description

neighborhoods and the rest of Dyersville, even during flood events. Preliminary design

is complete and right-of-way has been purchased.

Dyersville

This new corridor connects 13th Avenue SE and 12th Avenue SW. over the Maquoketa River's North Fork and includes:

- 525-foot-long, multi-span, prestressed concrete beam (PPCB) primary bridge
- 235-foot-long PPCB secondary bridge
- 34-foot roadway with 12-foot-wide multi-use trail
- New storm sewer infrastructure, and subdrains for stormwater management

Figure 3: Primary Bridge over Maquoketa River's North Fork



Primary East-West bridge design over the Maquoketa River's North Fork

EV Charging Station

The proposed EV charging station is planned to match the site and electrical load capacity requirements in the Iowa Department of Transportation's statewide electric vehicle plan and National Electric Vehicle Infrastructure (NEVI) regulations. The proposed improvements include two 150w DC fast chargers with ADA compliant facilities. These chargers will be located at Candy Cane Park, less than one mile from US-20, in anticipation that highway becomes a designated Alternative Fuel Corridor (AFC). The City of Dyersville has a dedicated operation and maintenance budget allocated to service the chargers at this location.

North-South Connection

North-South Connection (7th Street SW to 1st Ave W, Beltline Road Overpass)

The new North-South Connection is the second critical flood resilience project corridor. The corridor involves a new bridge, road, and trail over Bear Creek that aligns with the existing 7th St SW, a new road and trail overpass that eliminates an at-grade crossing of Beltline Road and the CN Railway, and a roundabout to ease mobility and connect 7th St SW, 1st Ave W and Beltline Road Overpass.

Enhancing Multimodal Connections in Dyersville | Project Description



Benefits include:

- Linking the southwest neighborhood to the northside neighborhood and industrial area, even during flood events
- Creating a secondary north-south route in case of accidents or train blockage of US-52
- Providing access to areas of Dyersville that have been completely cut off from emergency services during flood events (See Figure 1)
- Creating the first, and only, grade-separated railroad crossing within 5 miles of Dyersville
- Connecting Dyersville's trail system to the 30-mile-long regional Heritage trail extending all the way to the Mississippi River
 - Connection elements include:
- 518-foot-long, multi-span prestressed concrete beam (PPCB) bridge including some channel realignment of Bear Creek
- 32-foot-wide roadway with 12-foot-wide multi-use trail
- New roundabout to raise and realign the intersection of 7th St SW, 1st Ave W and Beltline Road
- 110-foot-long, single span, steel girder bridge over CN railroad

Bicycle and Pedestrian Connections

Future Connected Trail Network

This project will fill in major gaps in Dyersville's existing bicycle and pedestrian network, Planning efforts have consistently identified the need for a cohesive multimodal network. In 2018, 52% of the Dyersville community identified "Improving and Increasing Active Transportation" as a plan priority (2018 Comprehensive Plan). The biggest gaps in the trail network are addressed in this project. The addition of wayfinding signage will encourage these alternate travel methods and allow for accessible, easy-to-navigate transportation options in town.



• An additional 2.5 miles of trails, wide sidewalks, and buffered bike lanes will be added at key areas to complete both north-south and east-west connections across

Third street was closed several times, with the flooding of Bear Creek, in the past several weeks. That means the fire department or ambulances have to go out on the highway to get [to the west side of Dyersville]. That delay could cost lives.

Verna Fangman, Dyersville resident, describing the aftermath of October 2018 flooding



Dyersville

town and will include crosswalks, accessible ramps and some pedestrian signals. This additional 2.5 miles of dedicated path will build out the transportation network, unlocking unrestricted access to an additional 30+ miles of regional trails. These areas, outlined in Figure 3, include:

- 13th Avenue SE, between 6th Street SE and the east end of the new East-West Connector bridge. Pedestrian traffic control signals at the US-52 intersection to include ADA compliant ramps.
- Dyersville Park Trail, a new segment from the west end of the East-West Connector bridge along the river, terminating at Candy Cane Park and the existing trail network.
- 12th Avenue SW, from the west end of the East-West Connector along 12th Avenue SW
- 7th Street SW, including bike lanes painted between 12th Avenue SW and the south end of the proposed bridge over Bear Creek and sidewalks to fill in gaps between 9th Avenue SW and the south end of the Bear Creek Bridge.
- Beltline Segment, a new trail along Beltline Road, connecting to 2nd Street NE.

Broader Context

The improvements constructed as a part of this project build resilient, sustainable infrastructure that will support all community members residents of this small town and the additional 275,000 tourists that visit it each year. The completed trail network in Dyersville will also connect to the 30-mile regional Heritage Trail. Roadway and pedestrian facility improvements will support tourism related to the Field of Dreams site. The City of Dyersville is currently implementing \$55 million of improvements in the next 24 months, which will further increase tourism traffic.

Project Location

The Enhancing Multimodal Connections in Dyersville project is in Dyersville, Iowa, a rural city located in eastern Delaware County and Western Dubuque County, which have a combined population of 116,228. The project has components in both counties. A project location KMZ file is included as a project file attachment.

Area of Persistent Poverty / Historically Disadvantaged Community / Urban Area

While many rural communities are shrinking, Dyersville's population grew by 10% from 2010 to 2020 (from 4,000 to 4,500 citizens). More significantly, Dyersville's demographics continue to change. Census data shows the minority population has tripled in the last 10 years (from 2.4% to 7.6%) and nearly 20% of Dyersville's population is over the age of 65. Providing equitable access to community resources, emergency services, housing and job options, schools, recreational activities and regional trails will allow Dyersville to grow in a manner that supports all groups in the community. The project location is not a part of an Area or Persistent Poverty, a Historically Disadvantaged Community, or a Census-Designated Urban Area as designated by USDOT.