

# Highway 14 Corridor

## Marshalltown, Iowa

Better Utilizing Investments to Leverage Development (BUILD) Grant Application  
May, 2020



Submitted by the City of Marshalltown, Iowa

**MARSHALLTOWN**  
IOWA



## Table of Contents

<b>I. Project Description .....</b>	<b>1</b>
A. Introduction .....	1
B. Project History .....	3
1. Existing Transportation Challenges .....	4
2. Addressing the Transportation Challenges .....	5
3. Technical Project Components .....	7
<b>II. Project Location .....</b>	<b>9</b>
<b>III. Grant Funds, Sources and Uses of All Project Funding.....</b>	<b>13</b>
A. Project Cost .....	13
B. Funding Sources .....	13
<b>IV. Selection Criteria.....</b>	<b>14</b>
A. Safety .....	14
1. Existing Data .....	14
2. Proposed Improvements.....	16
3. Predicted Crashes per year .....	16
B. State of Good Repair .....	17
C. Economic Competitiveness.....	20
D. Environmental Sustainability .....	22
E. Quality of Life .....	23
F. Innovation .....	24
G. Partnership.....	25
<b>V. Environmental Risk Review .....</b>	<b>25</b>
A. Project Schedule .....	25
B. Required Approvals.....	26
<b>VI. Benefit Cost Analysis .....</b>	<b>29</b>
A. Property Value .....	29
B. Results.....	30

## I. Project Description

### A. Introduction

The Highway 14 Corridor serves as one of the primary gateways into the City of Marshalltown. This major arterial roadway provides a key connection to the City's growing and thriving downtown and runs directly through the heart of the community. Vital to the utilization of this corridor is its proximity to Highway 30 and Highway 330/US 65, a heavily traveled route and the primary connection to Ames, Cedar Rapids and the Des Moines metropolitan area 45 minutes away. These two major road networks welcome residents and visitors alike to the City of Marshalltown. Furthermore, Highway 14 provides connections to large corporations within the community, including Emerson Process Management, Marshalltown Company, Lennox and JBS Swift & Company.

Over the years, the Highway 14 corridor has become an area of increasing concern with a deteriorating image, declining quality of housing and increasingly unsafe pedestrian and vehicular conditions. A mix of incompatible land uses, narrow Right-of-Way (ROW) conditions, lack of pedestrian accommodations and increasing tractor trailer traffic has plagued the corridor and caters to a negative image for the community. The revitalization of this primary thoroughfare has the potential to provide vast improvements for the community as a whole due to its location, use, and proximity to key businesses, landmarks, and destinations.

Highway 14 has long been the vehicular backbone of Marshalltown. Transecting the community from North to South, there are few residents and visitors who do not use this corridor as means of getting to or from their destination. Residents, patrons, business owners, delivery drivers, and visitors depend on Highway 14 as part of their daily routine. Like many arterial roads in the communities we live and work in, there comes a point where planning, reinvestment and a new vision become essential to ensuring the successful future of the corridor. In 2006, the City completed the [City Center Plan](#). This plan assessed Marshalltown's downtown and the various opportunities and constraints that would improve or potentially hinder a successful future for the downtown core and community as a whole. During this process it became evident that investing in Highway 14 was a priority. Establishing a multi-modal corridor, improving public safety and providing more opportunities for attractive and quality housing and retail/commercial space were vital to the success of downtown.

In 2007, the [IMAGINE 2011](#) grassroots initiative plan was executed with community members to continue the conversation of community betterment. The plan focused on engaging community members in a collaborative, community-wide visioning process to develop "7 Big Ideas" that will be implemented by 2011. The project committee selected 100 ideas (out of over 5,000) and through a collaborative refinement process, condensed that list down to seven. Among the "7 Big Ideas", five rely on reinvestment and revitalization of the Highway 14 Corridor:

- Revitalize and Strengthen Downtown
- Create a Pedestrian and Bicycle Friendly Community
- Develop the Linn Creek Riverwalk and Trail System
- Increased Beautification
- Develop Riverview Park and Beautify the North Entrance to the Community

In 2016, the Iowa Department of Transportation (DOT) allocated funding for Maintenance Resurfacing of Highway 14 through Marshalltown in FY2019. The scope of that project was to include a mill and overlay of the existing road surface and improve ADA pedestrian ramps at each intersection that is affected. Although those improvements would have a significant positive impact, the City officials knew they needed to explore greater potential for the corridor. This was the time to act and develop a plan for reimagining the Highway 14 Corridor, as it would be at minimum another 15 years before the opportunity would again be presented. It was decided that the Maintenance Resurfacing funding allocated for the project would be tabled. This would allow the City to conduct a study of the corridor and develop a plan that considers its full potential and leads to a more comprehensive project which promotes additional opportunities along the corridor.

As a result, in the fall of 2017, a joint effort between the Martha-Ellen Tye Foundation, Region 6 Resource Partners (fka Region 6 Planning Commission) and City of Marshalltown, the [Highway 14 Corridor Study](#) was conducted. A vision was developed to help re-energize the northern portion of the Highway 14 Corridor (approximately 1.9 miles of the 4.5 miles). From the standpoint of deteriorating pavement, poor public safety and degrading housing and commercial property, this was the area of greatest need along the length of the corridor. Improving the safety of the corridor for all users, increasing opportunities for economic development and incorporating beautification strategies were among the primary goals set forth by the project partners during the Highway 14 Corridor Study. With the completion of the study in May 2018, the outcomes were comprehensive, long-term, attainable and right-sized for the Marshalltown community. However, critical to the implementation of the opportunities resulting from the study, is the necessity for public/private partnerships, a diversity of funding sources and flexible solutions.

The outcomes of the Highway 14 Corridor Study include a range of improvement strategies that were derived from the input of the community. Some recommendations were intended to be immediate or near-term improvements, but many were developed with the understanding that they will take time and multiple phases to implement. The immediate and near-term improvements encompass improving the public ROW and providing the needed infrastructure to support a multi-modal corridor, that is attractive to development, promotes private investment and caters to a better quality of life for Marshalltown residents.

The Highway 14 Corridor is diverse, with a mix of land-uses and variable ROW widths. The character of the corridor is primarily utilitarian in nature. Few accommodations exist for pedestrians, inhibiting walkability. Existing road and sidewalk conditions have poor access, degrading pavement surfaces and lack of amenities is common throughout the corridor.

## **B. Project History**

The original roadway through the BUILD Grant Project Area was paved in the 1950's, with portions paved in brick. In the 1970's and 1980's, a series of resurfacing and widening projects were completed to transition the two-lane highway to a four-lane cross section. In 2003, a portion of the corridor from Nevada Street to Main Street was resurfaced through a mill and overlay maintenance project. In 2006, traffic signals were installed at the intersections of Linn, Church, Main and State Streets.

For the corridor, per the Iowa DOT Concept Design Statement (June 2016) for the approved maintenance resurfacing project, the crash rate is 406/HMVM which is greater than the statewide urban average of 263/HMVM. Of the crashes at this corridor, 28% are a result of Failure to Yield the Right-of-Way (FTYROW) on a left-hand turn and at a stop sign.

In the past 30 years, little to no other improvements have been made to the corridor, other than the previously identified paving and maintenance projects. Existing land use in the BUILD Grant Project Area varies from high density residential, single family residential, neighborhood commercial office park, light and heavy industrial. Increased semi-tractor trailer traffic through residential neighborhoods to access the local meat processing plant and other industrial sites, incompatible land uses adjacent to one another and poorly designed intersection alignments have catered to degrading living conditions within the corridor. To complicate the continued decline of property value, increase in crime, lack of pedestrian amenities and vehicular safety issues, Marshalltown was hit by a devastating EF-3 tornado in the summer of 2018.

On July 19, 2018, an EF-3 tornado struck the downtown core of Marshalltown and destroyed nearby neighborhoods, significantly causing damage to more than 2,000 properties. Iconic downtown architecture, including the County Courthouse, suffered incredible damage. Many properties in the downtown business district were damaged beyond repair, requiring immediate demolition. Major industrial sites such as JBS and most notably, Lennox, suffered extensive damage. The path of the tornado impacted a more than a one-half mile section of the Highway 14 Corridor, that is within the BUILD Grant Project Area. The damage and destruction however, impacted hundreds of residential properties along the corridor that had already been challenged for many years. The impact of the tornado was yet another setback on this area of the community, one that will take years to overcome.

**Figure 1: Damage to businesses and homes on Highway 14 in the aftermath of the July 2018 tornado**



In response to the 2018 tornado, the City executed the [Downtown Master Plan](#) project to develop a plan for providing recommendations and guidance for rebuilding downtown and the areas affected by the tornado. Included in the outcomes of that plan, three catalyst redevelopment sites located along Highway 14. Improved roadway conditions and the completion of the proposed Build Grant project will promote the successful implementation of the Downtown plan and kickstart the rebuilding process in the wake of the 2018 tornado.

#### 1. Existing Transportation Challenges

As Highway 14 runs north to south for the length of the community, it is naturally a significant barrier for pedestrians on the east side of the community trying to access the western half of the community. Infrequent pedestrian crossings and inadequate sidewalks represent only a small part of the transportation challenges facing the BUILD Grant Project Area. The following is a list of additional challenges that impact the vehicular and pedestrian safety on Highway 14:

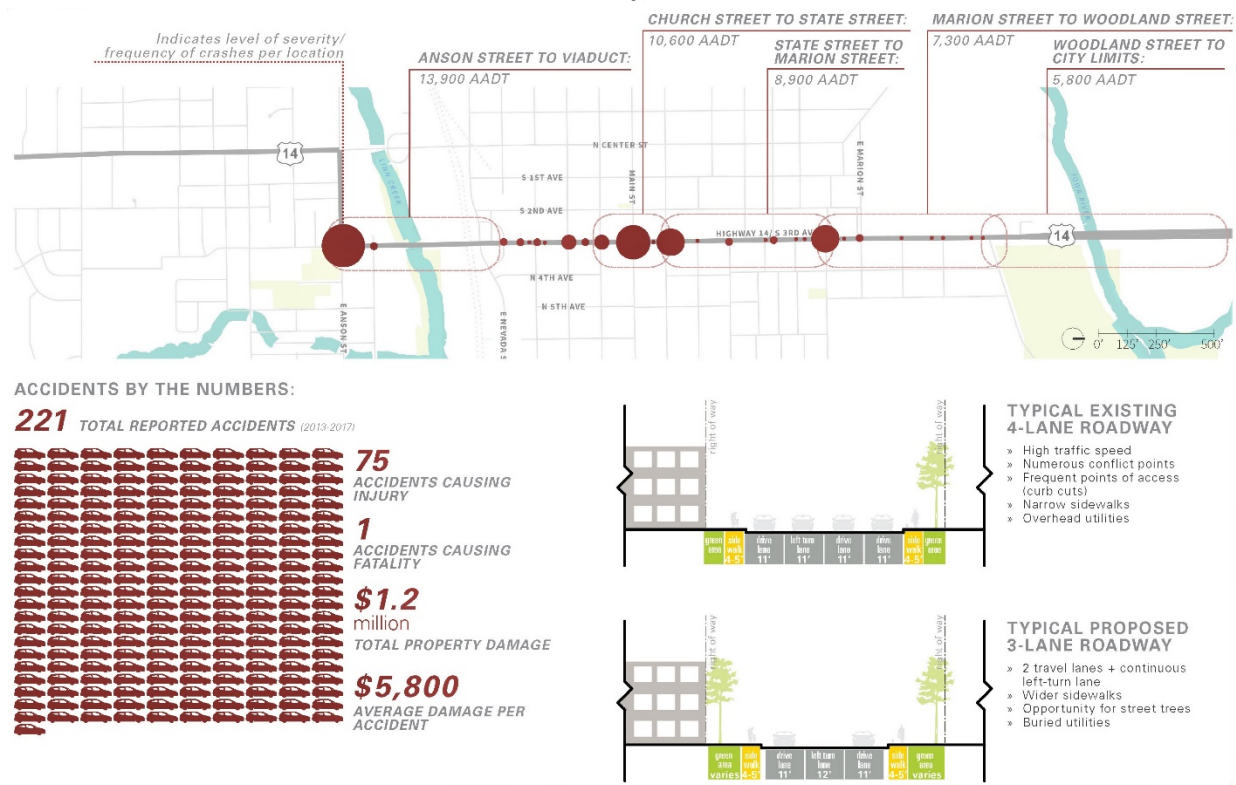
- Narrow ROW for significant portions of the BUILD Grant Project Area create very little separation between the roadway and sidewalks
- Poor and interrupted sight triangles at side street intersections impede adequate sight distance to oncoming traffic
- Excessive speeding and poor access management contribute to rear-end collisions resulting from sudden stops and sudden lane changes

- Poorly aligned or offset intersections
- Increased tractor trailer traffic and turning movements at poorly designed intersections with undersized turning radii
- Lack of pedestrian accommodations, narrow and deteriorating sidewalks, and poorly defined intersection crosswalks
- Non-compliant intersection pedestrian ramps
- Inadequate roadway lighting

Several intersections are prone to frequent accidents. Some are the result of higher traffic volumes and turning movements at the intersection, others such as Marion Street and Riverside Street are poorly aligned, have poor sight lines and/or are not designed to support proper vehicle turning radii.

A summary of the crash history data from the Highway 14 Corridor Study identifies the cumulative cost associated with traffic related accidents from 2013-2017 within the corridor is identified, as well as the cost per incident.

**Figure 2: Accidents by the Numbers (2013-2017 traffic accident data map from Highway 14 Corridor Study)**



## 2. Addressing the Transportation Challenges

To overcome the challenges that exist on the corridor, there must be a swiss army knife approach. It will take multiple tools and strategies to specifically address the needs of the different users and promote long-term growth potential of the corridor, while also maintaining the functionality of the roadway and those it serves

daily. The following is a summary of specific strategies proposed for addressing the transportation challenges of the BUILD Grant Project Area:

- Challenge: *Narrow Row, creating narrow sidewalks*
  - Solution: Utilize a road diet to reduce the overall pavement width of the roadway, creating additional space for wider sidewalks and wider buffers between vehicles and pedestrians.
- Challenge: *Poor intersection visibility*
  - Solution: At the Swayze intersection, an existing building impedes the sight triangle and limits ability to see south bound traffic. By reducing the roadway width, vehicles stopped on Swayze will be pulled out from the blind spot the building creates and allow a better vantage-point to on-coming traffic. Side street intersection bumpouts at the downtown intersections will allow pedestrians to move from being hid by parked cars and improve visibility to on-coming traffic. This will also allow motorists to spot pedestrians more easily at crosswalks.
- Challenge: *Access management*
  - Solution: Large, uninterrupted, and frequent curb-cuts and driveways greatly increase the number of conflict points along the corridor. During the Traffic Study, multiple driveways were identified to be removed or reduced. Through an extensive public outreach process involving individual meetings with property owners, consensus was built to reduce and/or eliminate many of the driveways previously identified. Reducing the frequency of vehicles turning will have a significant positive impact on the corridor, from both a vehicular safety and pedestrian safety standpoint.
- Challenge: *Poorly aligned intersections*
  - Solution: At the Riverside Street intersection, Riverside street is divided into a boulevard for only one block. This creates a poorly aligned intersection which creates poor visibility for vehicles turning onto Highway 14 but also often leads to vehicles stopping in the middle of the intersection. Abandoning the boulevard on Riverside, not only creates a great opportunity for streetscape amenities, but also properly aligns the intersection so travel lanes are uninterrupted and don't lead into on-coming traffic.
- Challenge: *Semi traffic at undersized intersections*
  - Solution: The Marion Street intersection, which handles more than 250 semi-trucks (this is the quantity heading to and from JBS daily alone) on a daily basis, is also the location of a fatality caused when a semi-truck hit a motorcycle in 2017. The existing intersection has a tight turning radius that results on semis turning into oncoming



traffic, while the trailer rides over the curb and sidewalk along Highway 14. The proposed intersection design includes a wider turning radius and will be properly designed to accommodate the vehicles that will use it daily.

- Challenge: *Lack of pedestrian accommodations*
  - Solution: Wider sidewalks along Highway 14 will promote more walkability along the corridor and create a safer space for pedestrians to be. ADA compliant sidewalks and compliant pedestrian ramps will give the mobility impaired a useable pavement surface. Increased walkability will create connectivity to Riverview Park, Anson Park, the Downtown Business District, and the Linn Creek Trail. This combined, will promote an increase in ridership for the Marshalltown Transit system, which will reduce daily vehicle trips.
- Challenge: *Inadequate lighting*
  - Solution: Although some of the current roadway lights have been upgraded to LED, many of the lights are poorly spaced and nearly every pole is immediately behind the back of curb, without any kind of breakaway base. As a result of the tornado, many lights were damaged and have yet to be replaced. Additionally, the existing lights are fed by overhead electric which was also damaged. Replacing the existing lighting with new poles, bases and fixtures will create more even distribution of lighting along the corridor. Undergrounding the electric feed will also provide a more consistent power source, while reducing clutter along the corridor. Cumulatively, this will allow more setback from the roadway and breakaway bases; in the event a vehicle would happen to leave the roadway. Improving the lighting along the roadway will improve vehicular, pedestrian and overall public safety by creating a more well-lit space.

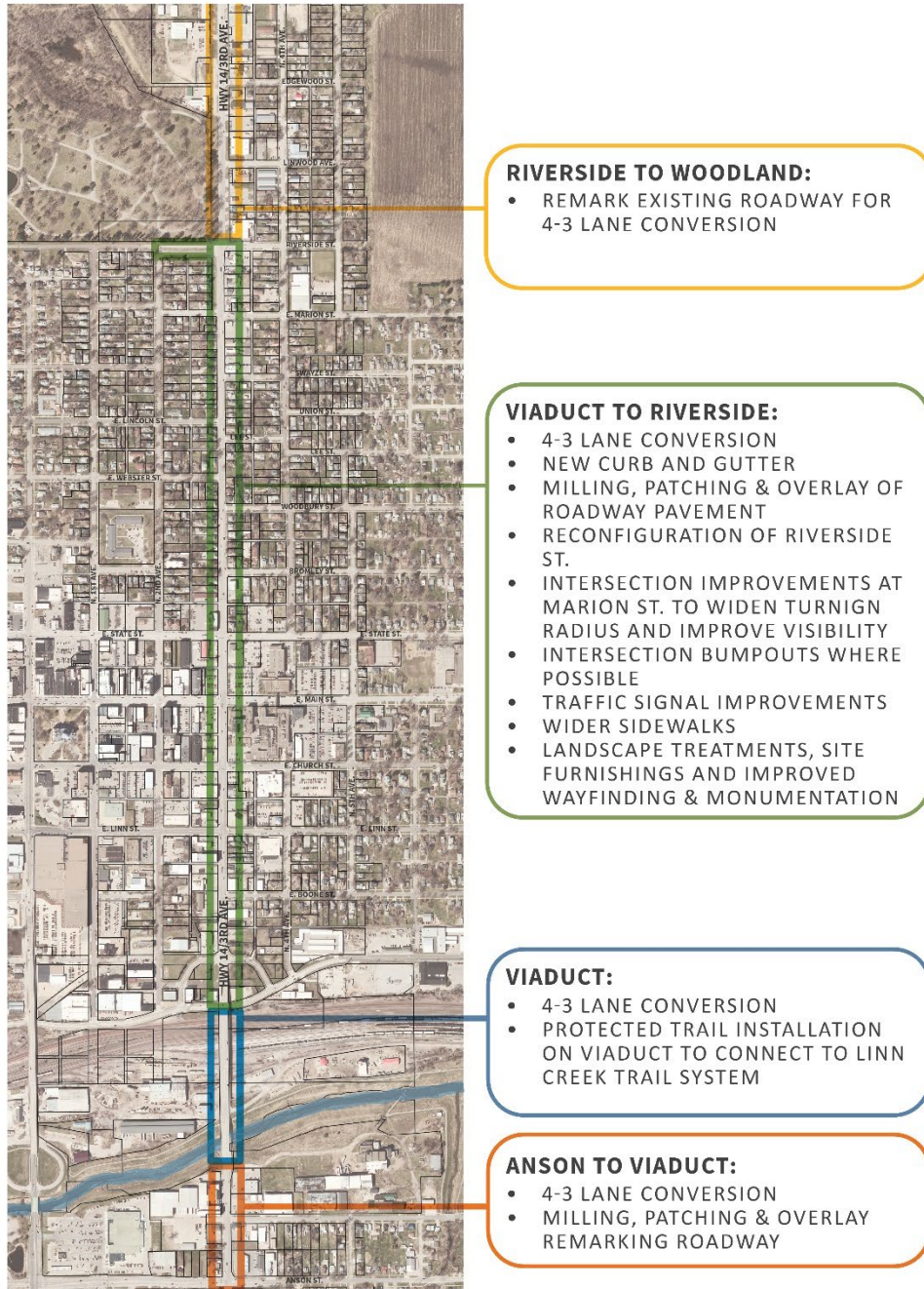
### 3. Technical Project Components

Proposed improvements for the BUILD Grant Project Area represent years of critical study, sound transportation planning principles and are rooted in the public input that has guided every previous planning study. The improvements included herein will address transportation safety issues, create long-needed pedestrian connectivity solutions, improve property access, create safer intersections and provide a corridor that is more attractive and well suited for private investment, redevelopment and increased property values. Specific project elements include:

- Four-to-three-lane conversion for the entire project site
- Pavement rehabilitation to extend life of the pavement

- Improved / increased pedestrian accommodations including wider sidewalks, adequate site furnishings, unobstructed intersection sight triangles, delineated crosswalks and opportunities for decorative sidewalk pavement and landscaping
- New traffic signals with pedestrian friendly crossings

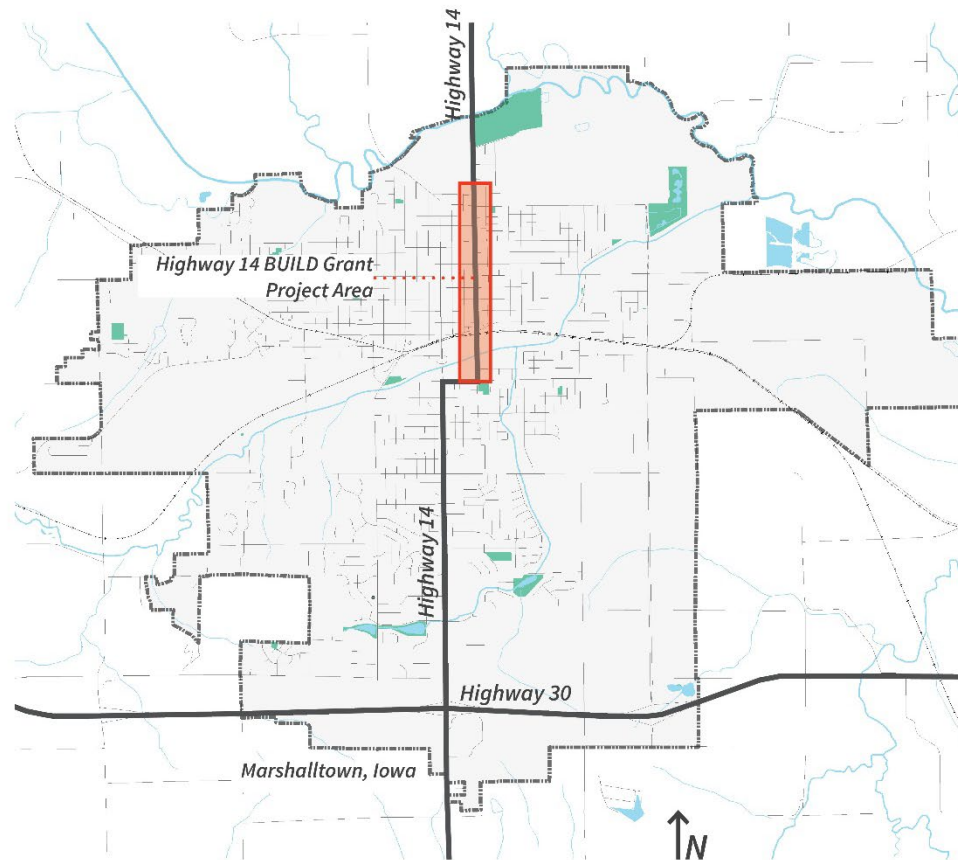
**Figure 3: Corridor Improvement Map**



## II. Project Location

The proposed BUILD Grant Project Area described herein includes 1.9 miles of State Highway 14/3<sup>rd</sup> Ave in Marshalltown, Iowa, from Riverside St on the north end (including reconfiguration of Riverside St from N 2<sup>nd</sup> Ave to N 3<sup>rd</sup> Ave) to Anson St on the south end.

**Figure 4: Project Context Map**



Marshalltown is the county seat of Marshall County. Highway 14 connects many rural central Iowa communities to larger urban communities including Ames, Waterloo, Cedar Rapids and Des Moines. Marshalltown is a 45-minute drive to the Des Moines metropolitan area.

The BUILD Grant Project Area is anchored on both ends by two of Marshalltown's most popular public parks, Anson Park on the south end at Anson Street and Riverview Park on Woodland Street at the north end. Anson Park is in the heart of the community. It is nearby to Marshalltown public schools, has close proximity to the Linn Creek trail and several commercial/retail amenities. Riverview Park has immediate access to Marshalltown's trail network, has abundant recreational amenities and is the city's largest public open space.

Between these two parks are numerous community amenities, the Downtown Central Business District and the Linn Creek Trail System. As illustrated on the Marshalltown Parks Plan, there exists a gap in the areas served by existing parks and open space. This presents an opportunity for filling that void and providing public open space to residents who need it. In the near term, there presents a need to establish safe connections to the established open spaces and the Linn Creek Trail system.

Home to several large, regionally and globally significant manufacturing and engineering corporations, Marshalltown is mix of white collar, blue collar and service-oriented industries. The community is an incredibly hard-working and tight-knit community, which is attractive to emerging professionals and young families.

The community saw considerable growth in the 1960's – 1980's. In the past 20 years the population has grown approximately 4%. The population of Marshalltown was estimated at 27,068 in 2018. The BUILD Grant Project Area is one of increasing traffic related issues that needs urban renewal and presents specific challenges. This area of Marshalltown (which includes census tract 9505) has a much more diverse population and a dramatic increase of the population living in poverty, as compared to the overall community.

One of the unique challenges facing the community, is the stark difference in the demographics of the BUILD Grant Project Area and the broader community. The following is a comparison of demographic data for the overall Marshalltown community, compared to the BUILD Grant Project Area:

- Population:
  - Community-wide = 27,068
  - Project Study Area = 2,116
- Ethnicity
  - Community-wide = 62% White/Caucasian, 30% Hispanic or Latino
  - Project Study Area = 47% White/Caucasian, 42% Hispanic or Latino
- Median Home Value
  - Community-wide = \$95,500
  - Project Study Area = \$74,000
- Median Household Income
  - Community-wide = \$50,612
  - Project study Area = \$32,068
- Employment Type (white collar: professional/managerial/administrative, blue collar: skilled and unskilled labor/industrial/manufacturing, services: retail/distribution/food and other service-related industries)
  - Community-wide = 53% White Collar, 34% Blue Collar, 14% Services
  - Project Study Area = 40% White Collar, 51% Blue Collar, 19% Services
- Unemployment Rate
  - Community-wide = 5.0%

- Project Study Area = 5.7%
- Education Level
  - Community-wide = 21% No High School Diploma
  - Project Study Area = 35% No High School Diploma
- Poverty Level (as defined by the US Census Bureau)
  - Community-wide = 13%
  - Project Study Area = 30%

\*Source: ESRI Business Analyst & US Census Bureau

In an effort to identify opportunities for adding housing that might appeal to developers and cater to the demographic currently residing in the area, the corridor was studied by specific areas to better define specific needs and opportunities. For the purpose of the study, the corridor was divided into five distinct study areas:

- Anson Street to Linn Creek
- East Madison Street to East Linn Street (Viaduct Area)
- East Linn Street to E State Street (Downtown)
- Bromley Street to Riverside Street (North Residential Transition Area)
- East Marion Street to the River (North Gateway)

The housing analysis illustrated the percentage of owner-occupied units, renter-occupied units, and vacant housing units (vacant units include both for-sale and for-rent units). This data is shown as a comparison of the five study areas along with the City of Marshalltown and the geographic areas within a 30-minute drive from downtown Marshalltown.

The City of Marshalltown and the areas within a 30-minute drive of downtown Marshalltown show very similar numbers for the different housing categories. If these geographies are used as a benchmark, then, in general, the five housing study areas provide opportunity to reduce vacancy and increase owner-occupied units. See Figure 5: Corridor Housing Analysis at [www.highway14corridorBUILDgrant.com/figures](http://www.highway14corridorBUILDgrant.com/figures).

The study area from Anson Street to Linn Creek shows similar owner-occupied housing units as the benchmark however, the vacancy rate is one of the highest of the study areas at 18.6 percent.

The downtown study area shows the lowest owner occupancy at 26.8% and a high vacancy rate at 16.5%. Investors and developers could consider this an opportunity to integrate more for-sale housing such as condominiums and townhouses. Additional amenities in downtown such as a drug store, greenspaces, and other daily needs stores could increase the appeal of downtown living and also contribute to reducing the vacancy rate. All the study areas have an opportunity to reduce vacancy rates. By achieving a reduced vacancy rate along the Highway 14 Corridor, the total vacancy rate of the City of Marshalltown could also decrease.

Another way to analyze the communities in the five Study Areas in terms of quality of life and opportunity, is evaluating the number of households receiving food assistance. Similar to the vacancy rate and the owner-occupied housing units, the City of Marshalltown and the geographic areas within a 30-minute drive of downtown provide a benchmark. In these areas, the percentage of households receiving food assistance are about 15% of the population. The other Study Areas show increased numbers from the North Gateway area at 24% to the Nevada Street area at 43%.

Understanding the housing needs and considering the type of services and businesses that often pair well with downtown living, was a critical success factor during the Highway 14 Corridor Study. The plan needed to be appealing to developers and accommodate the type of businesses and services that might make sense for this area of Marshalltown. Addressing the existing challenges along the corridor such as pedestrian safety, walkability, adequate lighting, beautification and appropriate zoning would encourage such essential growth.

The Highway 14 Corridor Study recommended the development and adoption of a new type of zoning that could accommodate a more modern zoning district classification that would allow a variety of uses while providing a pedestrian friendly and aesthetically pleasing environment. The City has initiated the process of creating the new classification for use in the corridor. The district will allow for a variety of uses while considering the form and layout of each site. The standards provide the opportunity for flexibility in redevelopment scenarios while maintaining quality development standards.

The flexibility of site design and combination of uses allow for development to occur in a more modern pattern, better accommodating mixed use projects that are designed to encourage pedestrian activity and provide the opportunity for service and retail type businesses and housing to be developed cohesively. This type of development is not easily accommodated without the new district classification. The district allows simple changes like accommodating and prioritizing more space for outdoor seating, gathering places and moving parking and service entries off the street. It allows and encourages shared access points to the corridor street to reduce the number of driveway locations on the corridor over time.

The Highway 14 Corridor passes through the traditional downtown area that has also been studied for redevelopment and enhancement purposes. One of the implementation strategies of the downtown plan is the development of design guidelines. The City has initiated the design guidelines development. The guidelines will specifically address many site related issues similar to the mixed-use zoning district. The topics to be addressed in the guidelines will include building placement on the site, off-street parking, landscaping, lighting and the historically appropriate treatment of buildings located within the historic district.

The BUILD Grant Project Area passes through an Opportunity Zone. Previous planning efforts undertaken by the City identify the area as having several vacant and/or

underutilized properties that have redevelopment potential. The Opportunity Zone makes additional tax benefits possible and adds to the feasibility of attracting projects to the area by leveraging private sector investment.

### III. Grant Funds, Sources and Uses of All Project Funding

#### A. Project Cost

The Highway 14 Corridor project is estimated to cost \$8,161,627.00 to complete. These costs will take the project from design through construction including all of the required reports, testing, permits, and a Construction Representative on site full time to ensure it is being built properly. The full Opinion of Probable Costs with construction bid items can be found at [www.highway14corridorBUILDgrant.com/supporting\\_docs](http://www.highway14corridorBUILDgrant.com/supporting_docs).

Figure 6: Preconstruction Phase Costs, shows the costs associated with items in the preconstruction phase of the project.

Figure 6: Preconstruction Costs		
Description	Estimated Cost	% of Total Cost
Preliminary Engineering Report	\$68,000.00	1%
Route Survey and Geotechnical Testing	\$68,000.00	1%
Site Design, Final Plans, and Bidding Documents	\$546,000.00	6.5%
Grant Administration	\$40,000.00	.5%
Land Acquisition (Permanent & Temporary)	\$45,000.00	.5%
<b>Total Pre-Construction Cost</b>	<b>\$767,000.00</b>	<b>9.5%</b>

The majority of the project cost will be incurred during the Construction phase of the project. All the items associated with the Construction phase are outlined Figure 7: Construction Costs.

Figure 7: Construction Costs		
Description	Estimated Cost	% of Total Cost
Construction Items (w/20% Contingency)	\$6,820,627.00	83.5%
Construction Contract Administration	\$102,000.00	1%
Resident Project Representative – Full Time	\$512,000.00	6%
<b>Total Construction Cost</b>	<b>\$7,434,627.00</b>	<b>90.5%</b>

#### B. Funding Sources

The Iowa DOT understands the value in this project and has committed to funding \$1,000,000 towards the Highway 14 Corridor project. During the Study phase of this project, the Iowa DOT identified this corridor as a candidate for a 4-to-3 lane conversion so they have and will continue to provide insight to the City and it’s engineer as they work to make this transition happen on the corridor. A Letter of Support from the Iowa DOT can be found at [www.highway14corridorBUILDgrant.com/support](http://www.highway14corridorBUILDgrant.com/support). The City will be requesting the remaining amount (\$7,201,627.00) be covered by the BUILD Grant. Per the Cost Sharing

Requirements for the BUILD Grant, the City of Marshalltown is deemed a rural community and can apply for 100% of the total project cost, up to \$25 million. All project funds provided by Iowa DOT and BUILD grant, will be used to cover all of the pre-construction and construction phase costs. None of the project costs will be restricted from being covered by either funding source. Figure 8, identifies the funding sources that are anticipated to be utilized for this project:

Figure 8: Funding Sources			
Funding Source	Category	Estimated Cost	% of Total Cost
Iowa DOT	Non-Federal	\$1,000,000.00	12%
US Department of Transportation Request	BUILD	\$7,161,627.00	88%
<b>Total Project Cost</b>		<b>\$8,201,627.00</b>	<b>100%</b>

## IV. Selection Criteria

### A. Safety

Residents and visitors don't like to spend time in places they don't feel safe. This applies to both pedestrians and motorists. As referred to in the project description, Highway 14 has increasing concerns with a deteriorating image, declining quality of housing and increasingly unsafe pedestrian and vehicular conditions. A mix of incompatible land uses, narrow ROW conditions, lack of pedestrian accommodations and increasing tractor trailer traffic plague the corridor and lead to an unsafe roadway.

In April 2017, the Iowa DOT released a review of 4-lane undivided roadways for their Statewide Screening for Potential Lane Reconfiguration Study. The study reviewed basic data such as Annual Average Daily Traffic (AADT), current lane configurations, medians and two-way traffic to determine the candidate roadway segments. The segments were then filtered by traffic volume and length to further narrow down the candidate roadway segments. Highway 14 from Main Street to the north city limits was identified as a candidate roadway segment. This roadway segment needs maintenance or reconstruction depending on sub segments, so the Iowa DOT initiated a planned redevelopment project for a 3-lane corridor.

The City of Marshalltown in a joint effort with the Iowa DOT hired a consultant to study the Highway 14/3rd Avenue undivided 4-lane corridor from the south end at Anson Street to the north city limits for feasibility of a 3-lane roadway and access management needs. The study was completed in early 2019.

#### 1. Existing Data

Highway 14, also referred to locally as 3<sup>rd</sup> Avenue, runs from the north city limits to Anson Street, where it turns west on Anson Street. It is an undivided 4-lane roadway with two lanes in each direction and a left turn lane for southbound at



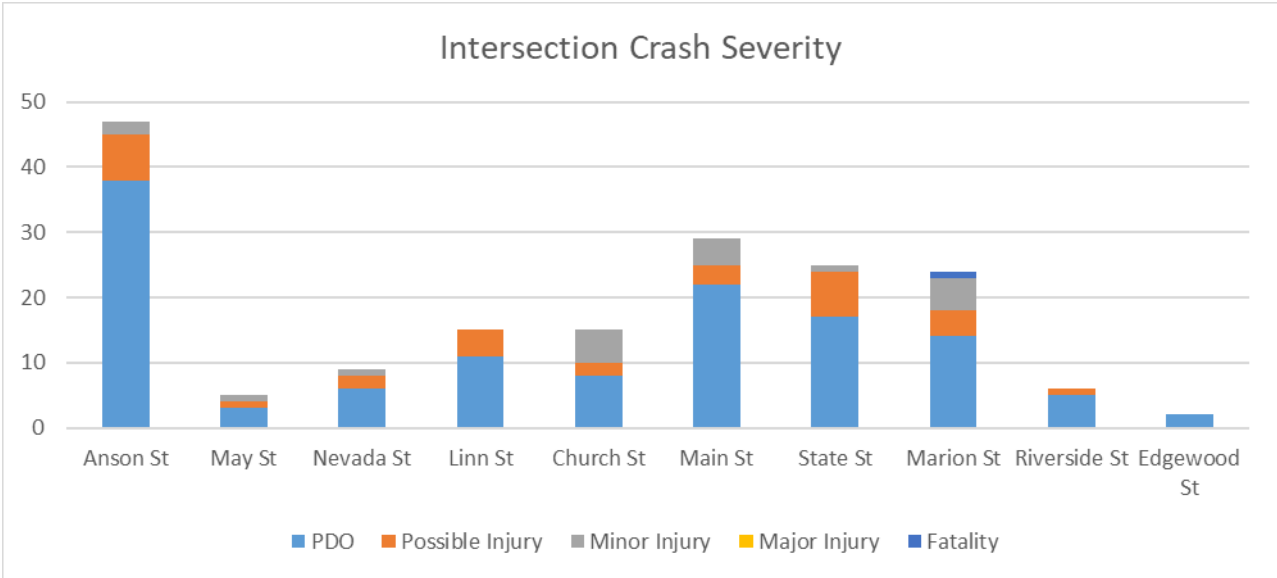
Anson Street, otherwise there are no turn lanes present. Highway 14 is functionally classified as a major arterial roadway.

The previous 10 years' worth of crash data was analyzed along the corridor. The crash history of the roadways adjacent to the site was completed using the crash data available through the Iowa DOT for January 1, 2008 through December 31, 2017. There were 177 reported crashes at the study intersections and 59 reported crashes along the segments between the study intersections for a total of 236 crashes along the corridor during this 10-year period. A breakdown of the crash severity by intersection is shown in Figure 9 and crash type by intersection in Figure 10.

There was one fatal crash on the corridor, which happened at the intersection at Marion Street. It was an angle, oncoming left turn crash. This crash involved a motorcycle driving northbound and a Semi-Truck southbound that turned left to collide with the motorcycle. There were two major injury crashes on the corridor. One was between May Street and Nevada Street that involved a bicyclist at a driveway. The other was between State Street and Marion Street at the intersection of Swayze Street with Highway 14. It involved a vehicle turning right, while driving too fast for snowy roadway conditions leaving the roadway and hit a sign.

Of the remaining 236 crashes along the corridor, there were 19 minor injury crashes at study intersections with four between intersections, 31 possible injury crashes at study intersections with seven between intersections, and 126 property damage only crashes at study intersections with 46 between intersections.

**Figure 9: Intersection Crash Severity 2008-2017**



**Figure 10: Intersection Crash Types 2008-2017**

Intersection	Crash Type							
	Rear End	Right Angle	Sideswipe	Left Turn	Head On	Run Off Road	Other	Total
Highway 14 at Anson St	11	9	5	14	3	0	5	47
Highway 14 at May St	1	3	1	0	0	0	0	5
Highway 14 at Nevada St	3	3	3	0	0	0	0	9
Highway 14 at Linn St	2	7	2	0	0	1	3	15
Highway 14 at Church St	3	9	1	0	0	0	2	15
Highway 14 at Main St	3	11	6	5	0	0	4	29
Highway 14 at State St	4	11	0	10	0	0	0	25
Highway 14 at Marion St	4	12	2	3	1	0	2	24
Highway 14 at Riverside St	0	2	3	0	0	0	1	6
Highway 14 at Edgewood St	0	0	1	0	0	0	1	2

**2. Proposed Improvements**

The proposed corridor improvements were analyzed and evaluated to determine the impact/changes to the proposed corridor. The improvements included the following items:

- Road Diet (4-to-3-lane)
- Reduced Access Points
  - Based on public meeting and property owner discussions there are up to 49 access points out of the existing 112 that could be eliminated or combined. This is a 44% reduction in access points.
- Added bike facilities in conjunction with the relocated pedestrian facilities

**3. Predicted Crashes Per Year**

With the proposed crash modification factors from the proposed improvements, there is a predicted reduction in crashes per year. The following Figure 11 highlights the existing and predicted crashes and severity per year. The data shows a potential reduction of severe crashes by almost 50% and potential reduction of all crashes by 30%.

**Figure 11: Existing & Predicted Crashes w/Severity**

Severity	Description	2020		2040	
		No-Build	Build	No-Build	Build
K	Fatal	0.100	0.050	0.103	0.052
A	suspected Major Injury	0.200	0.103	0.206	0.106
B	Suspected Minor Injury	2.300	1.567	2.370	1.615
C	Possible Injury	3.800	2.679	3.915	2.760
O	Property Damage Only	17.200	12.113	17.722	12.481
Sum		23.60	16.51	24.32	17.01

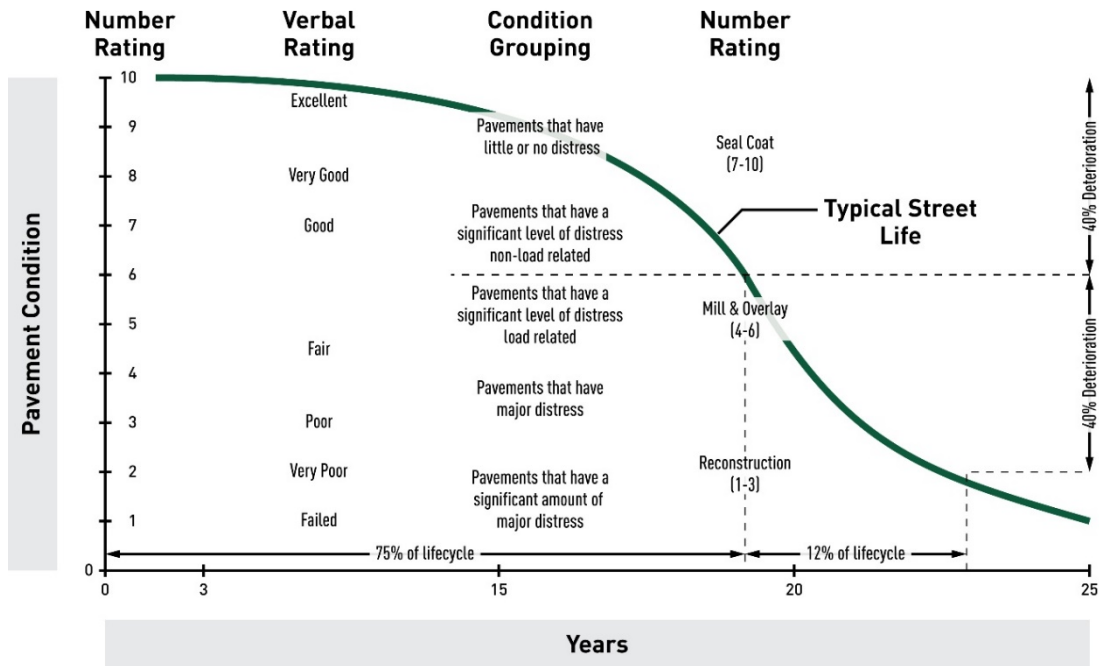
**B. State of Good Repair**

Highway 14 has seen a lot of changes and growth since first being paved in the 1950’s. It has grown from a 2-lane roadway to a 4-lane urban arterial corridor that serves the entire community.

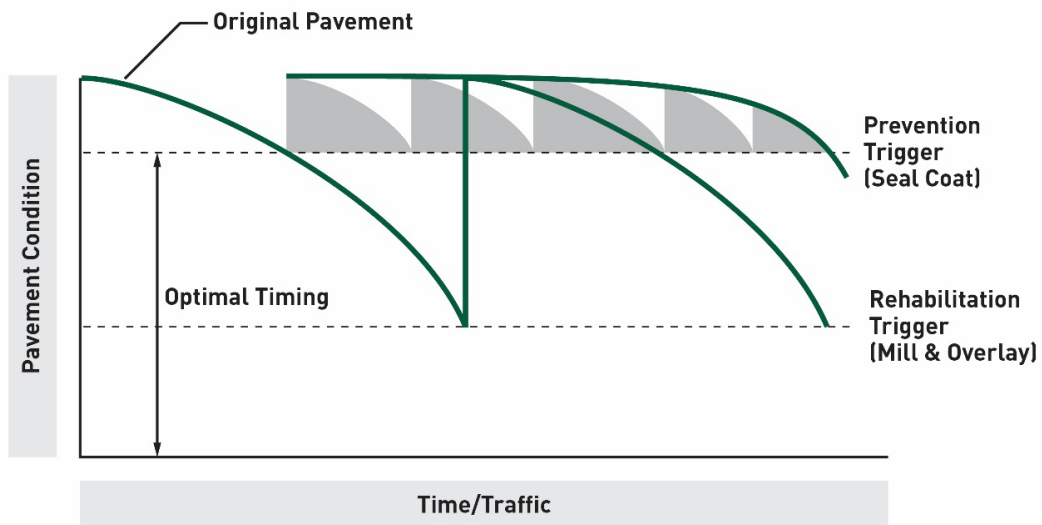
Roadway pavement starts to deteriorate the day after it is put in place. The deterioration for both concrete and asphalt pavement follow a lifecycle curve as shown in Figure 12: Typical Pavement Lifecycle. If left alone and no maintenance is completed, all pavement will eventually fail. As a pavement moves along the typical street life curve the types of recommended repairs change based the pavement condition. If the pavement is neglected too long, the only option remaining is a full reconstruction. If the pavement is addressed before this point, the repairs can help extend the life of the existing pavement. Refer to Figure 13: Extended Pavement Lifecycle for repair types and extending the life of pavements. By doing smaller preventative maintenance and rehabilitation the life of a pavement is able to be extended beyond that of a pavement which no maintenance is completed.

The Highway 14 corridor pavement is at a point where a rehabilitation, patching and mill and overlay is needed. The rehabilitation will be less expensive than a full reconstruction and will extend the life of the existing pavement for years to come. This approach to pavement management is able to reduce long term life cycle costs for a roadway. The rehabilitation will be paired with a 4-to-3-lane conversion, pedestrian improvements, streetscape elements and increased accessibility along the entire corridor to provide a revitalized ROW.

**Figure 12: Typical Pavement Lifecycle**  
**Typical Pavement Lifecycle**



**Figure 13: Extended Pavement Lifecycle**  
**Extended Pavement Lifecycle**



The proposed project approach of rehabilitation will meet the selection criteria for a state of good repair based on the following information.

1. The proposed project is consistent with the existing plans to maintain the roadway and ensure it's in a good state of repair. In 2016 the Iowa DOT allocated funding to resurface all of Highway 14 through Marshalltown including a 4-to-3-lane conversion for the North

portion of the roadway. As discussed in the project description the North half of Highway 14 from Anson Street to the Iowa River was removed from the Iowa DOT's surface improvement project in order to allow for the City of Marshalltown to evaluate the corridor and establish a vision for the northern portion of Highway 14. Between 2016 and 2020 the City has completed the previously discussed Highway 14 Corridor Study and the Downtown Master Plan. Both of these studies when put together create a unique vision for the Highway 14 corridor which helps outline a goal for the future. The proposed project aligns with the previous Iowa DOT improvement plans while addressing the current vulnerabilities along the corridor.

The City of Marshalltown also completed an ADA Transition Plan in December of 2019. As part of the transition plan all of the City's sidewalks, ADA ramps, traffic signals and pedestrian crossing were analyzed for ADA compliance. The data collected shows that 68% of the ADA ramps in the corridor are non-accessible while 50% of the sidewalks are inaccessible or have barriers to accessibility present. The proposed improvement will bring the entire project corridor into ADA compliance and help meet the goals of the recently approved ADA Transition Plan.

2. If the roadway improvements are not completed, the roadway will continue to deteriorate to a point of disrepair. This would lead to increased yearly maintenance costs, possible increase in pavement condition related crashes and continued hardship to an already blighted area of town. The first step of a much larger vision is the rehabilitation of Highway 14. This rehabilitation will help spur development and revitalize the northern end of Marshalltown.
3. As part of both the Highway 14 Corridor Study and the Downtown Master Plan the City developed preliminary costs for the roadway improvements and possible redevelopment in the area. The rehabilitation of Highway 14 will help spur the redevelopment as referred to in the economic competitiveness portion of the narrative. The initial cost to improve the roadway will provide long term benefits for the entire corridor including reducing long term maintenance costs, improving pedestrian access and increasing economic redevelopment in the area.

The Iowa DOT will be partnering with the City of Marshalltown for the project. The Iowa DOT has committed to provide \$1,000,000 to the project to help cover roadway pavement related costs. The BUILD Grant will help provide funding for these portions of the roadway. Once completed the investment in the roadway will help play a much larger role in the redevelopment and economic growth in the northern portion of Marshalltown.

4. Once the project is completed, the aspect of long-term maintenance also needs to be addressed. The City of Marshalltown has a maintenance agreement with the Iowa DOT for Highway 14 through the City limits (which can be viewed at [www.highway14corridorBUILDgrant.com/supporting\\_docs](http://www.highway14corridorBUILDgrant.com/supporting_docs)) Marshalltown is responsible for minor maintenance along the roadway including pothole filling, partial depth patching, pavement marking, signage and any maintenance outside of the travel lanes. The Iowa DOT is responsible for all other maintenance required for the travel lanes. The City required maintenance along the corridor will be funding as part of the normal operating budget for the City of Marshalltown. Their current budget has allocations for street repairs, ADA improvements and pavement marking. These allocations along with the Iowa DOT funds will help cover any future pavement maintenance costs along the corridor.

The City has both sanitary sewer and storm sewer utility fees in place to help cover costs of future improvements needed. These utility fees will provide any future funding needed for utility improvements along the corridor. The City is in the final stages of a community wide sanitary sewer improvement program. As part of the improvement the sanitary sewer along the corridor was lined with curing in place pipe lining. The lining helps reduce I/I and extend the life of the existing pipe. No major sanitary sewer improvements are anticipated along the corridor for an extended period of time. The proposed project will address the storm sewer and repair/replace any damaged storm sewer and reducing future maintenance costs. The watermain is owned by Marshalltown Water Works and any future improvements or maintenance, is their responsibility.

### **C. Economic Competitiveness**

As the main thoroughfare from the Marshalltown airport into downtown, Highway 14 is a disservice to the downtown business district. When hosting meetings or inviting clients to Marshalltown, some of the leading businesses / industry leaders in town have reported to purposefully avoid this corridor, to not put a negative image in their client's minds. It is not appealing, it is a negative first impression and does not represent the value that Marshalltown has in its businesses, its people and its opportunities.

As a primary entrance to the community and a major corridor for visitors and residents alike, this area is considered by many to be so unsafe to walk and drive that people avoid it. Faced with issues that foster poor economic and social conditions, community pride and public safety have become at risk. These are not easy issues to overcome. The opportunity to implement the Highway 14 Corridor Study, in an encouraging boost to an area of Marshalltown that needs it most.

Development is encouraged by action and speculation. Commitment to improving public infrastructure and doing so to promote similar development is intriguing to developers.

Simply continuing the status quo with pavement maintenance projects do little to entice developers and promote reinvestment. Improving access management, creating a walkable corridor, undertaking intersection improvements, zoning and land use compatibility and beautification on this corridor shows commitment from the City. The kind of commitment that will allow developers, businesses and property owners to trust that the City also sees value in this area of town. That commitment is what the City can use to leverage the public investment.

With the requested BUILD Grant funding, the City can set in motion the pivotal improvements that will align the concepts derived in the Highway 14 Corridor Study. This encourages the type of private investment and redevelopment that can add to Marshalltown's tax base, add desperately needed affordable housing and potentially increase the type of neighborhood retail/commercial businesses that will cater to not only this area of Marshalltown but the entire community. Given the post tornado condition of the BUILD Grant Project Area, funding this project could not come at a more opportune time. Completion of this project will breathe life back into this community and help Marshalltown to have a more competitive and sustainable future. Specific project factors that will contribute to local and/or regional economic competitiveness include:

- **Decreased transportation costs and improved access** – Improving signal timing, reducing the quantity and frequency of driveway accesses, and a dedicated left-turn lane will improve circulation of freight trucks and shorten travel times for corridor users.
- **Improve long-term efficiency in the movement of workers or goods** – The proposed project will improve key intersections that are currently inadequately designed for the numerous semi-trucks (the Marion Street intersection alone carries over 250 trucks daily) that use them on a daily basis. Existing intersections lack pedestrian crossings, have poor visibility and inadequate turning radii.
- **Increase the economic productivity of land, capital, or labor** – Numerous vacant and underutilized properties within the study area, will be better positioned for redevelopment and/or more highly utilized. Potential property consolidation, higher residential density and mixed development will contribute to higher economic productivity of the land.
- **Result in long-term job creation and other economic opportunities** – Improved public infrastructure coupled with complete streets design principles, will make existing properties which are currently vacant or underutilized, attractive for redevelopment. Better connectivity to the downtown business district will promote better exposure for existing businesses and create an attractive scenario for potential businesses.

- **Help the United States compete in a global economy by facilitating efficient and reliable freight movement** – This corridor is home to several well-established and global, industrial leaders including Emerson, Lennox and JBS. JBS is one of the nation’s leading pork producers. Companies like these are the life-blood of many rural Iowa communities and hundreds of pork producers across the Midwest. Improving the conditions of the Highway 14 Corridor and providing a more sustainable future for Marshalltown, will help to ensure that these essential businesses remain competitive. The proposed project will encourage a higher quality of life for an established work force and provide the infrastructure required for these companies to continue to be competitive and operate efficiently.

#### **D. Environmental Sustainability**

The proposed improvements to the Highway 14 Corridor in Marshalltown improve energy efficiency by allowing for smoother flow of vehicles through the corridor, creating intersections that allow smoother truck turning movements, and fostering design improvements that favor bicycle and pedestrian movements as alternative modes of transportation. Any time a road system design can lesson idling vehicles, starting, and stopping, or need for acceleration the amount of fuel used by those vehicles is less and the air pollutant emissions are less. These energy efficient and air pollutant reduction conditions would be the case following construction of the proposed Highway 14 Corridor. Additionally, decorative LED streetlights will greatly improve energy efficiency.

With a 10-foot protected trail across the existing viaduct, improved pedestrian sidewalks and handicap accessibility along with added bike trail connections, a noticeable shift in modes of transportation would occur as people walk, bike, and utilize newer electric devices like scooters along the corridor. Less motor vehicles also translates to greater energy efficiency, reduced dependence on oil, reduced congestion-related emissions and a healthier community. Less vehicle travel lanes (4-to-3-lane) tree plantings, permeable widened boulevard space, and other green street elements where practical including stormwater best management practices will contribute to reduced stormwater runoff and improved water quality. The proposed project would not impact wetland or endangered species.

Finally, a key element of this project rests with the ability of the enhanced roadway to serve as a redevelopment catalyst for the extensive number of brownfields along and near the roadway. While the nature of the proposed improvements would not exacerbate contaminant conditions or present issues during construction, they currently contribute to reduced property values and blighted conditions along the roadway. Throughout Iowa, highway improvements such as that proposed for Highway 14 have shown to be an impetus to attracting sustainable redevelopment. Improved access, improved aesthetics, rezoning by the City of Marshalltown, State of Iowa Brownfields Program assessment and cleanup funding, Iowa redevelopment tax credit opportunities and enhanced recreational trail



connections will undoubtedly increase redevelopment interest. Add the ability for Opportunity Zone Fund investment in the southern part of the corridor to capitalize on the dynamic and diverse nature of this resilient Midwest community and the opportunity for brownfields redevelopment success is unprecedented.

A truly sustainable project involves consideration and improvement of environment resources, enhanced community wellbeing, and improved financial or economic conditions. As demonstrated above, this project clearly benefits the environment over baseline conditions, offers the opportunity to enhance the health and quality of life of those in the community through healthy transportation and recreational alternatives, and clearly would serve as a catalyst for brownfield redevelopment thereby enhancing employment opportunities and tax base.

### **E. Quality of Life**

Highway 14 passes through the downtown business district and provides connectivity between adjacent residential neighborhoods. Many of the immediately surrounding residential neighborhoods are distressed and are below the low/moderate income threshold established by HUD. Many residents rely on the Highway 14 corridor.

The proposed project provides wider sidewalks throughout the entire BUILD Grant Project Area. The wider, ADA compliant sidewalks will promote connectivity along the corridor also providing connectivity to significant destinations adjacent to Highway 14, including parks, schools, major employers, and essential service providers.

Establishing a protected bike lane across the highway viaduct will allow trail users to access downtown safely and efficiently, Riverview park and Anson Park, and other community amenities/destinations. The proposed improvements will also encourage more usage of the public transit system by creating safer pedestrian access to transit stops.

A mobility study conducted in partnership between the City and Iowa State University examined mobility issues within the BUILD Grant Project Area. Preliminary findings indicated that many households in residential neighborhoods located in the north portion of the corridor, and within ¼-mile of existing transit stops, were between 51-81% Low/Moderate Income. The study further considered households within ¼-mile of the transit stops that did not have a vehicle. The statistics ranged by individual bus stop area, but generally found that between 5-31 households (within each bus stop service area) did not have a vehicle. The preliminary findings of the study reinforce the importance of the corridor for multi-modal transportation. With a significant portion of households in close proximity being low/moderate income with limited access to vehicles it is important to provide safe pedestrian access routes to, and throughout the Highway 14 corridor for accessing goods, services, places of employment, but also to transit stops for trips outside of the corridor. It is equally important to increase the safety as a vehicular corridor for those traveling to employment, commercial and service areas, Highway 30 interchange, and

to destinations on the southern end of the community including the community college and Unity Point Hospital.

Additionally, as previously stated the main health care system located in the community is accessible by Highway 14. The highway functions as a significant commercial corridor for many goods and services including groceries, retail goods, dental services, banking services, repair services and many restaurant options.

The roadway needs improvement to continue to provide safe, desirable service to the community. Deteriorating infrastructure is often a precursor to declining property values as businesses and investors choose to expand in other places within the community. Improvements are needed to the corridor to ensure that existing daily services can be retained in the corridor while attracting new investment in the form of redevelopment.

#### **F. Innovation**

The proposed Marshalltown Highway 14 improvement project employs several approaches that have and will improve the efficiency and effectiveness of the environmental permitting process. First, the community has invested heavily in early planning, both conceptual and environmental. All readily available information on resources in the corridor has been documented, catalogued into a GIS database, and mapped (See Environmental Resource Maps at [www.highway14corridorBUILDgrant.com/supporting\\_docs](http://www.highway14corridorBUILDgrant.com/supporting_docs)). As a result, to the understanding of environmental resources a corridor improvement concept has been developed that avoids impacts to wetlands, threatened and endangered species habitat, historic architectural sites, and Land and Water Conservation Act 6(f) resources. For categorically excluded projects of this nature, Iowa DOT and FHWA utilize a programmatic agreement that allows the Iowa DOT to sign off on a proposed federal action without corresponding FHWA review or signature. This streamlined process shaves months off the NEPA environmental review and decision-making process. Additionally, the Iowa DOT along with the FHWA utilize a different programmatic agreement with the State Historical Society of Iowa (SHPO) for projects of this nature with anticipated not adverse effect to cultural resources. This Iowa DOT/FHWA and SHPO Programmatic Agreement assigns the decision-making for adverse effects solely to the Iowa DOT Cultural Resources Section and as a result, several months of outside agency review and consultation are removed from the project planning process. So, with early environmental planning and concept design coordination, Programmatic Categorical Exclusion classification, and use of a Programmatic Agreement for final determination of cultural resource impacts makes this project is about as streamlined and efficient as it can be in Iowa and will assure efficient and timely project delivery in the context of a comprehensive understanding of corridor resources and socioeconomic conditions.

## **G. Partnership**

The City of Marshalltown has many stakeholders for the Highway 14 Corridor project identified through multiple studies and numerous public engagement opportunities. All of this support is crucial to making a project of this size successful in a rural community. Support is shown by many local and state representatives, local businesses, Iowa DOT and residents. Representatives from all of these key stakeholders have provided letters of support showing their buy-in for the project. All of these letters can be found at [www.highway14corridorBUILDgrant.com/support/](http://www.highway14corridorBUILDgrant.com/support/). In addition to letters of support, the Iowa DOT is showing their support by contributing \$1,000,000 to ensure this project's completion. The City of Marshalltown's City Council is also showing their support through a Resolution that they passed on May 11, 2020 to apply for the BUILD grant. The Resolution can be found at [www.highway14corridorBUILDgrant.com/support/](http://www.highway14corridorBUILDgrant.com/support/).

## **V. Environmental Risk Review**

Based on a detailed review of the engineering concept for improving the Highway 14 Corridor in relation to potentially affected environmental and socioeconomic resources, the proposed project would be reasonably expected to begin construction in a timely manner. All resources have been evaluated with respect to the project concept. The analysis of potential impacts show that this proposed project presents minimal risk.

The proposed project would only acquire a few partial parcels in the worst-case scenario. Temporary construction easements will be needed for some parcels. The ROW acquisition is a minor component and will not affect the schedule. Because only small pieces of some parcels near intersections would be required condemnation would be an unlikely scenario. If condemnation were necessary, the design would likely be revised if condemnation would be expected to affect the project schedule.

The City of Marshalltown and consultant team will work with the Iowa DOT and Iowa Department of Natural Resources through the planning and designing phase of this project. The project's anticipated Programmatic Categorical Exclusion (PCE) will be complete in about three months after a BUILD Grant is awarded. If any unknowns surface during further engineering and evaluation of resources, this will be evaluated, addressed, and incorporated into the existing project schedule not affecting planning bid letting and construction. If more significant unknowns were to develop the proposed project design would be altered to mitigate any potential schedule impacts.

### **A. Project Schedule**

A project schedule that identifies all major project milestones is identified in Figure 14.

Figure 14: Project Schedule

Quarter	2020				2021				2022				2023	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
BUILD Grant Submittal														
BUILD Grant Award														
Project Kickoff														
Design Survey														
Preliminary Design														
NEPA Decision Document														
Public Outreach														
Final Design														
Bidding														
Construction														

The anticipated NEPA classification of this proposed action would be PCE. The PCE would be completed in approximately three months from the BUILD Grant award date. As the proposed project would not extend beyond the existing Highway 14 ROW with the exception of small areas at intersections to improve turn radii (e.g., East Marion Street intersection), environmental permitting approvals that would extend the environmental planning and permitting process beyond three months are not anticipated. All environmental planning, review, and permitting activities will be complete to allow BUILD Transportation grant funds to be obligated sufficiently in advance of the statutory deadline (September 30, 2022 for FY 2020 funds), and the project would be able to begin construction quickly upon obligation of BUILD Grant funds and those funds will be spent expeditiously once construction starts, with all funds expended by the required deadline of September 30, 2027. All real property and ROW acquisition will be completed in a timely manner in accordance with 49 CFR part 24, 23 CFR part 710, and other applicable legal requirements

**B. Required Approvals**

1. Environmental Permits and Reviews.

A thorough review of baseline resources along the project corridor has been completed and Geographic Information System (GIS) data and mapping has been developed. Thus, data for NEPA classification and resource impact analyses is well underway with SHPO Section 106 consultation and 30-day review period being the greatest variably affecting duration of the NEPA clearance.

*i. Information about the NEPA status of the project*

The NEPA status of this proposed project is no decision document has been issued as there has not been a federal action that would invoke NEPA or NHPA Section 106 Consultation. However, as stated in above, baseline documentation of resources and GIS mapping relative to the proposed project concept has been completed and all resources have been analyzed for the potential for impacts. Based on the

proposed Highway 14 Corridor improvements, need for ROW acquisition or lack thereof, and projected impacts this proposed project is expected to obtain NEPA classification as a PCE. Given the nature of the corridor improvements this project would be expected to be classified as a “retrofit” Type II action or project and as such the determination of additional cultural resource investigation and potential impacts beyond the completed Phase IA analysis could rest with the Iowa DOT Cultural Resources Section under the DOT/FHWA Programmatic Agreement with the Iowa SHPO. As such the NHPA Section 106 consultation process would likely occur over a period of less than 30 days with an outside chance the DOT may request a Phase I Archaeological Survey which could extend the cultural resource analysis and approvals out to around 60 days. Regardless, the entire PCE process and NEPA clearance could still be completed in approximately three months with minimal to no other resource impacts or changes to the proposed concept.

*ii. Information on reviews, approvals, and permits by other agencies.*

Wetland or stream impact permits would not be required. DOT Act Section 4(f) resources would not be adversely affected. Land and Water Conservation Act Section 6(f) resources would not be adversely affected. Threatened and endangered species or their habitat would not be impacted. A Phase 1A cultural resource survey has been completed which identified numerous older structures along the corridor and little potential for discovery of archeological resources. Old streetcar rails may exist under the existing roadway which the State Historic Preservation Office may request preservation in place or other mitigation. Therefore, should this project become a Federal project with the award of BUILD Grant funds, the National Historic Preservation Act Section 106 Consultation would be the most length environmental review process associated with environmental permits and reviews.

*iii. Environmental studies or other documents*

Documentation of baseline environmental resources in the Highway 14 Corridor can be found at [www.highway14corridorBUILDgrant.com/supporting\\_docs](http://www.highway14corridorBUILDgrant.com/supporting_docs) along with a checklist providing conclusionary analysis of potential impacts along the corridor. The cultural resource Phase 1A Study can also be found at this same link.

*iv. A description of discussions with the appropriate DOT operating administration field or headquarters office regarding the project’s compliance with NEPA and other applicable Federal environmental reviews and approvals.*

The Project Team has corresponded with the Iowa DOT Office of Location and Environment, National Environmental Policy Act (NEPA) Section. After providing the DOT NEPA Section with a description of the proposed action, the preliminary analysis of potential impacts to resources, and the Phase 1A cultural resources

investigation, the Section Director concluded that, should this become a Federal Action requiring a Federal Decision as a result of BUILD Grant funding, the proposed action would likely be classified as PCE.

- v. *A description of public engagement about the project that has occurred, including details on the degree to which public comments and commitments have been integrated into project development and design.*

In addition to two public open house events, the planning for proposed corridor improvements included a final public presentation was held May 2, 2018 and the plan was formally presented to the City Council May 29, 2018 for acceptance. The public also was afforded the opportunity to complete a survey regarding preferences for improving the project corridor. The survey had 580 responses which were aggregated and incorporated into concept design components along the corridor. Goal for improving the corridor were directly derived from public input as well as the creation of specific objectives including: 1) Vacant and rundown buildings; 2) Condition of the commercial and retail properties; 3) Vehicular traffic safety; 4) Beautification along the roadway; and 5) Condition of residential properties. As a result of the public input specific safety and beautification components of the roadway project have been developed and a rezoning process is under way that addresses land use, inappropriate mixed use, and rundown and vacant properties along the corridor.

## 2. State and Local Approvals.

The applicant should demonstrate receipt of State and local approvals on which the project depends, such as State and Projects that may impact protected resources such as wetlands, species habitat, cultural or historic resources require review and approval by Federal and State agencies with jurisdiction over those resources.

The project will require two approvals, NEPA and NHPA Section 106 Consultation with SHPO. NEPA classification, impact analysis documentation, and a decision document would be required from Iowa DOT and FHWA. For this particular project, a PCE is expected and through the PCE agreement between DOT and FHWA, signature by an FHWA representative would not be required. This project is also expected to be declared a Type II or retrofit project and therefore through another "Programmatic" agreement between DOT and Iowa SHPO, the DOT would make a determination of effect on cultural resources without SHPO consultation. Both of these "Programmatic" agreements greatly shorten the timeframe for NEPA and Section 106 approvals. Wetlands, floodplain, Endangered Species Action Section 7, DOT Action Section 4(f), or LAWCON Section 6(f) approvals or permits would not be required for this project.

### 3. Federal Transportation Requirements Affecting State and Local Planning.

The proposed project is in the process of being included in the Iowa Region 6 Regional Planning Area (RPA) Agency Transportation Improvement Program (TIP). The Region 6 Planning Commission is headquartered out of Marshalltown and is familiar with the extensive corridor improvement planning work that has been completed as well as projected funding needs for the proposed corridor improvement project. The proposed project is in an attainment area for all criteria air pollutant and therefore, the project does not require inclusion in a conformity transportation plan or TIP.

## VI. Benefit Cost Analysis

### A. Property Value

Property value information was analyzed using the existing valuation of the parcels in the corridor, according to the Marshall County Assessor information. The base value of property including land, structures and dwellings located in the corridor is \$43,118,376. There are many vacant and/or property tax exempt properties located within the corridor. Decades of history of brownfields redevelopment in Iowa has shown parcels and property will advance to the highest and best use following traffic, safety, accessibility and aesthetic improvements to the adjoining transportation corridor.

One soon to be vacant site with a prime location on the corridor, is the location of the current medical campus which includes approx. 13 acres between Church St and State St on the east side of Highway 14. The campus was recently purchased and new ownership has elected to construct a new facility on the south edge of Marshalltown. The current medical campus site located in downtown was identified as a catalytic redevelopment site in the Highway 14 Corridor Plan and studied in further detail during the Downtown Master Plan. The estimated new value of these sites was determined by estimating the square foot of each type of new land use development identified in the concept plan and then assigning a value per square foot for each type of use. The value of the land was not adjusted, only the value of structures and/or dwellings as appropriate. The net total change was determined by the estimated value following redevelopment within the corridor. This project, which could be phased over the 20-year life of the project is estimated to be valued at \$32,341,000 and contributes a positive net change to the overall corridor valuation by \$18,516,800.

This redevelopment scenario is just one example that has the potential to have a significant positive impact on the increase in land value along Highway 14. Similar reinvestments, at varying scales including likely multimillion-dollar improvements in the Opportunity Zone section of the corridor will be much more attractive to investors following completion of the Highway 14 corridor improvements.

## B. Results

The purpose of a benefit-cost analysis is to express the effects of an initial investment into a common measure, base-year dollars. This accounts for benefits occurring over long periods of time, while most of the costs are incurred with an initial investment. Under this approach, a project with monetized benefits greater than costs has a benefit-to-cost ratio greater than one and should be considered an economically beneficial endeavor.

The monetary benefit for this project is quantified in terms of either a reduction or increase in vehicle miles traveled (VMT), vehicle hours traveled (VHT), BUILD Grant Project Area collisions, vehicle emissions, and roadway maintenance. The costs considered for the project include surfacing, subbase/base, grading and drainage, signal and lighting construction, right-of-way acquisition, as well as engineering and design.

A detailed Benefit-Cost Analysis was created to provide the information used to determine the benefits and cost included for the project, and can be found at [www.highway14corridorBUILDgrant.com/benefit-cost-analysis](http://www.highway14corridorBUILDgrant.com/benefit-cost-analysis). A summary memorandum for all of the information collected in the Benefit Cost Analysis is detailed in [Figure 15](#) at [www.highway14corridorBUILDgrant.com/figures](http://www.highway14corridorBUILDgrant.com/figures). As shown in Figure 16, the analysis indicates that the build option has a benefit-cost ratio greater than 1.0, meaning that it is an economically beneficial project. The benefits of the project are estimated to be higher than the costs associated with the construction of the project.

**Figure 16: Benefit-Cost Analysis Summary**

Item	PV (7% Discount Rate)
Travel Time Benefit	\$ (3,858,000.00)
Collision Reduction Benefit	\$ 7,092,000.00
Operation and Maintenance Benefit	\$ 2,632,000.00
Emissions Benefit	\$ -
Vehicle Operating Benefit	\$ -
Property Value Benefit	\$ 11,546,000.00
<b>PV Total Benefit</b>	<b>\$ 17,412,000.00</b>
<b>PV Total Cost</b>	<b>\$ 8,542,000.00</b>
PV Salvage Value	\$ 270,000.00
<b>(PV Total Cost - Salvage Value)</b>	<b>\$ 8,272,000.00</b>
<b>Benefit-Cost Ratio</b>	<b>2.105</b>