2022 APA Iowa Planning Conference

A Vision of Hope for Mills & Fremont Counties Post 2019 Historic Flooding

Alexsis Fleener, AICP / Kevin Nordmeyer, AIA

10.14.22

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Pacific Junction

Highway 34

Hamburg

Highway 2

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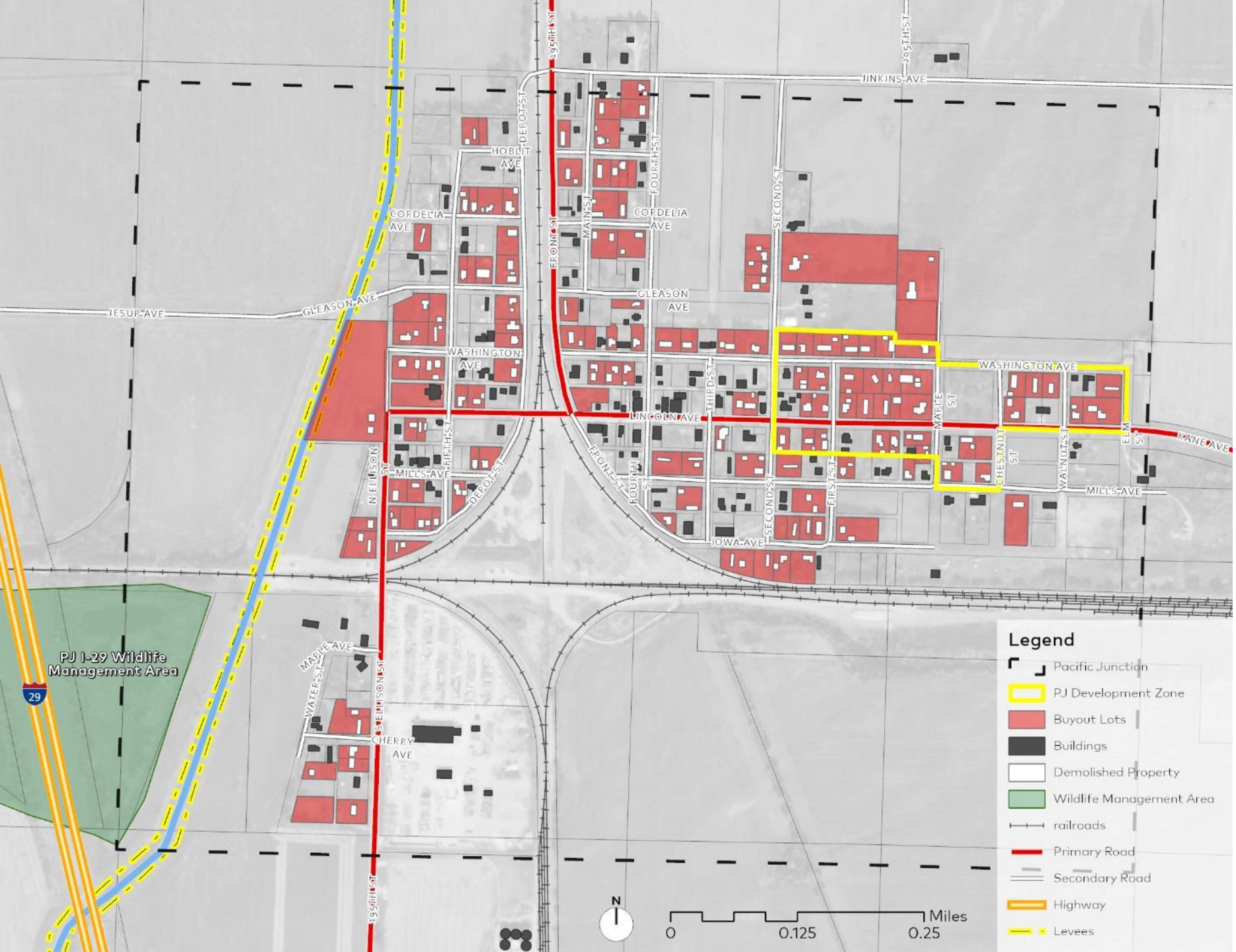

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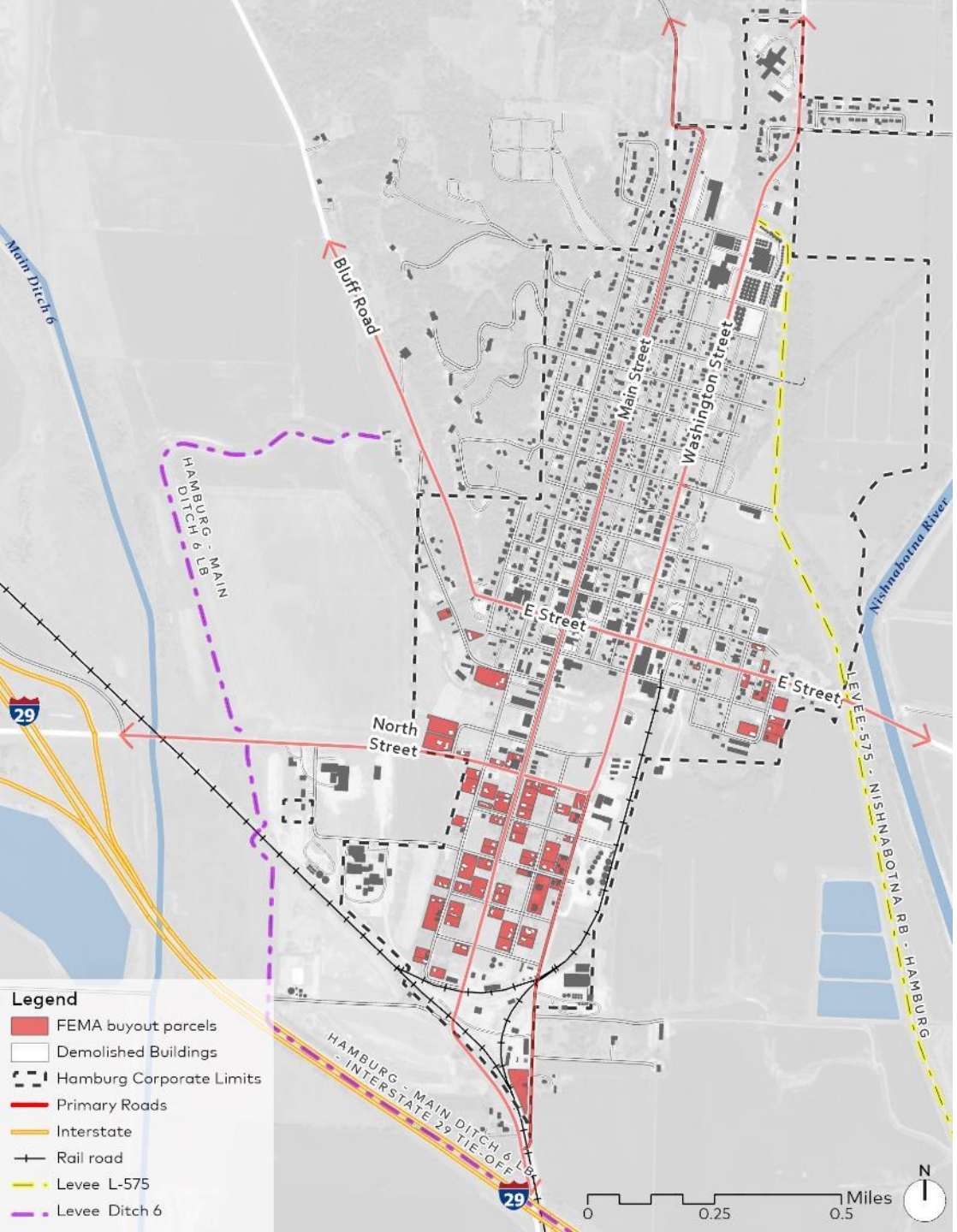
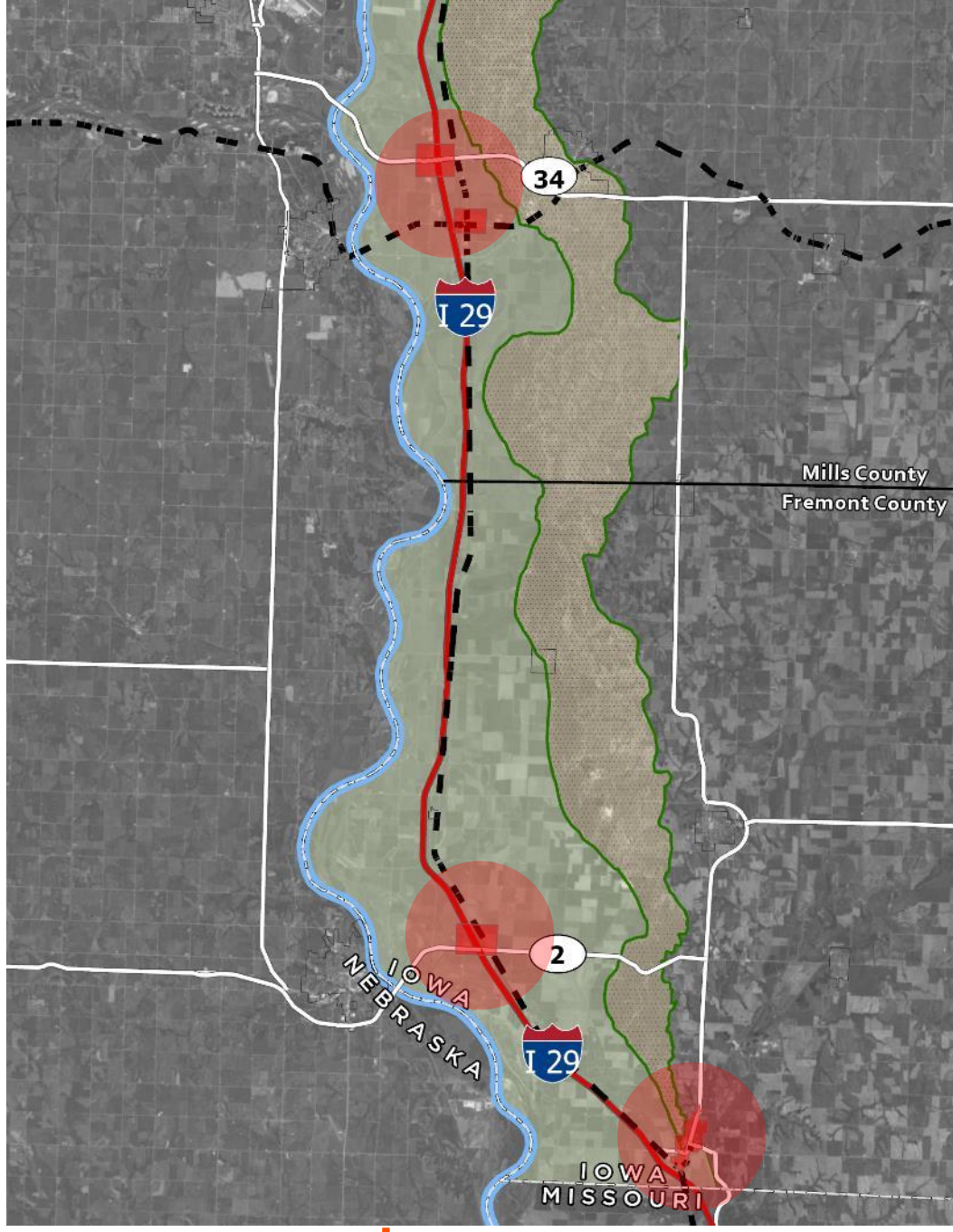

Main Ditch 6
Bluff Road
Main Street
Washington Street
HAMBURG - MAIN DITCH 6 LB
E Street
E Street
North Street
Nishnabotna River
LEVEE 575 - NISHNABOTNA RB - HAMBURG
29
HAMBURG - MAIN DITCH 6 LB - INTERSTATE 29 TIE-OFF
29
Legend
FEMA buyout parcels
Demolished Buildings
Hamburg Corporate Limits
Primary Roads
Interstate
Rail road
Levee L-575
Levee Ditch 6
0
0.25
0.5
Miles
N

IEDA Recovery Focus



STATE AGENCY - GRANT ADMINISTRATOR

Iowa Economic Development Authority
- Ann Schmid
- Jeff Geerts
- Steven Stransky
- Makaria Kirianov

PLANNING TEAM

BNIM - Team Leader
- Kevin Nordmeyer, AIA, LEED AP
- Laura Lesniewski, FAIA, LEED AP
- Aaron Hauptmann
- Alejandro Marin
- Natalie Gaydar

Solutions in the Land (SITL)
- David Yocca, FASLA
- Ron Doetch

Environmental Consulting & Technology (ECT)
- Tom Price, PE

Jim Schwab Consulting, LLC
- James Schwab, FAICP

The Bill Menner Group
- Bill Menner

Dave Swenson - Economist
- Dave Swenson

PROJECT PARTNERS

The Iowa Flood Center (IFC)
- Larry Weber
- Witold Krajewski
- Daniel Gilles
- Kate Giannini
- Breanna Shea
- Nathan Young
- Nicolas Velasquez Giron

Iowa Department of Agriculture and Land Stewardship (IDALS)
- Jacob Hansen

Iowa Department of Natural Resources (IDNR)
- Tim Hall

Iowa Department of Transportation
- Stuart Andersen
- Crag Markley

Safeguard Iowa Partnership (SIP)
- Jeff Ritzman

Metropolitan Area Planning Agency (MAPA)
- Don Gross
- Shawnna Silvius

Mills County Economic Development (MCED)
- Marco Floreani

Southwest Iowa Planning Council (SWIPCO)
- Alexsis Fleener
- Leslie Wright

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STAKEHOLDER STEERING COMMITTEE

in addition to Partners above

City of Hamburg
- Cathy Crain - Mayor
- Sheryl Owen - City Clerk
- Alan Dovel - Public Works

City of Pacific Junction
- Andy Young - Mayor
- Korrena Neppl - City Clerk

City of Glenwood
- Ron Kohn - Mayor
- Angie Winquist

Fremont County Board of Supervisors
- Chris Clark
- Terry Graham

Mills County Board of Supervisors
- Lonny Mayberry

Golden Hills RCD
- Michelle Franks
- Cara Marker-Morgan & Nishnabotna Watershed Project

Mills County Economic Development Foundation & Glenwood State Bank
- Larry Winum

Shenandoah Chamber & Industry Assoc.
- Gregg Connell

OTHER PROJECT CONTRIBUTORS

either participated in topical meetings during the project or contributed information

Iowa Department of Natural Resources (IDNR)
- Bill Cappuccio

US Army Corps of Engineers
- Tony Krause, PE
- Bradley Hoefer
- Ginger Niemann-Harper

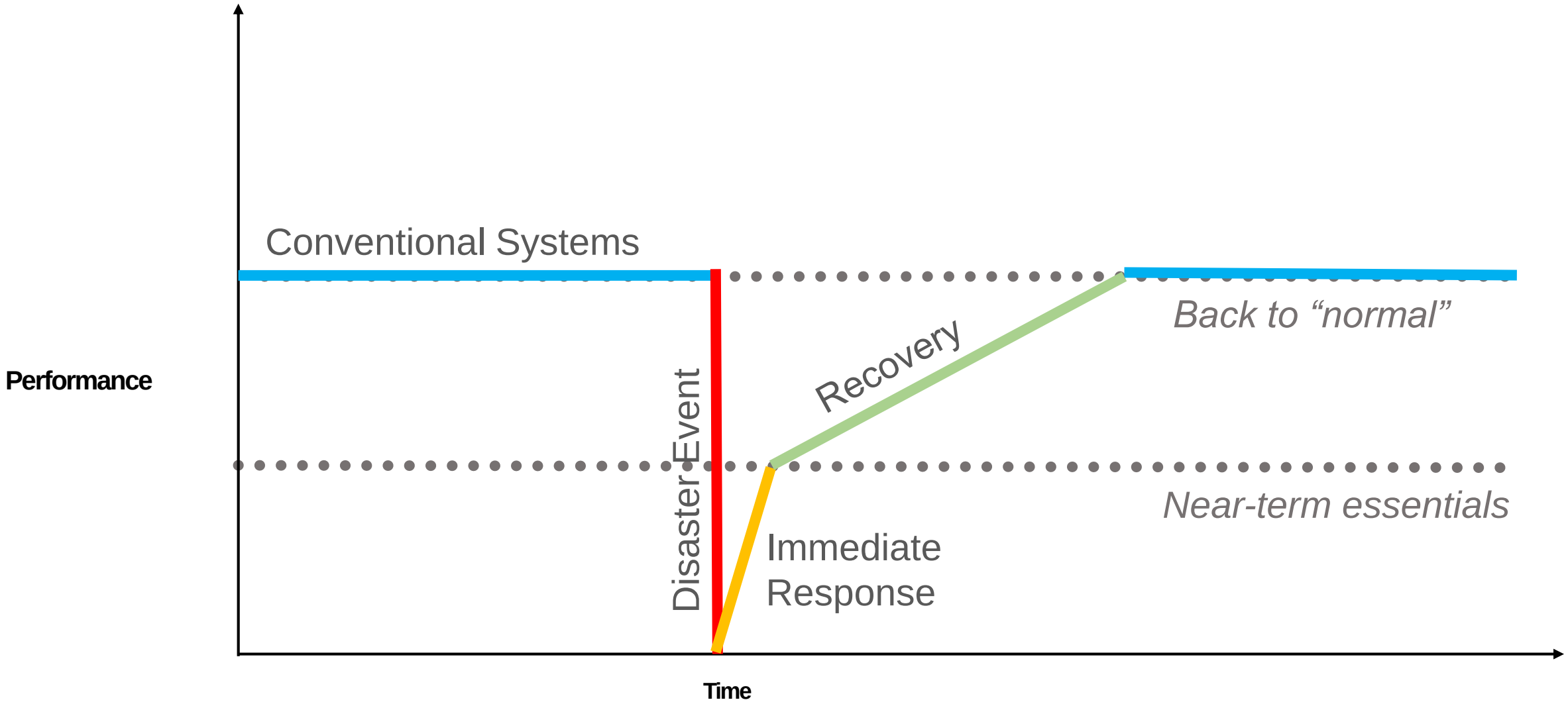
Mills County Emergency Management
- Larry Hurst

Fremont County Emergency Management
- Mike Crecelius

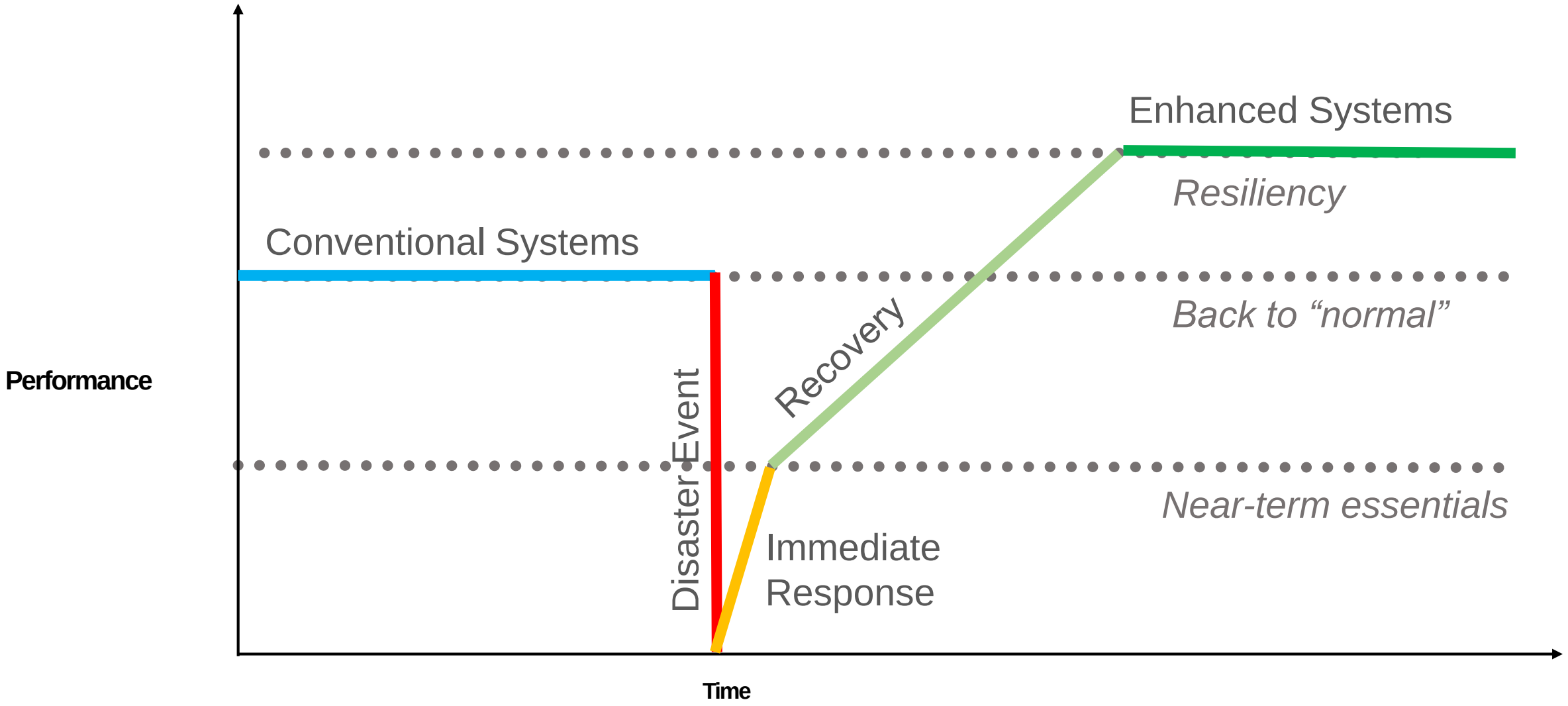
Iowa Homeland Security and Emergency Management
- Jonathan Pogones

Burlington Northern Santa Fe Railroad (BNSF)
- Christopher Danos
- Blaine Bilderback

Sustainable Iowa Land Trust (SILT)
- Suzan Erem



Standard Approach



Resilient Approach

Projects as of 11-2-20

Levee:
Construction Agreement
Award Contract? ✓
Construction/Completion?
Archeological Rpt? ✓
Construction Plans ✓
Bid let ✓
Pick Contractor 3/11/21 ✓
Wire funds ✓

Water Wells
Engineer ✓
Design ✓
Contractor – Bids out 4-8-21
Complete
DNR approval ✓
Tribe approval ✓

Main Street
Begin Construction – May-June
New Hotel-Negotiations (ongoing)
Urban Renewal + Rivitalization Plans (Started)

HED.
New housing-
1st 1909 main > Start Construction March SOLD
2nd 1910 main
Basements both houses ✓
Construction – in process 4-7-21

IEDA: Downtown Catalyst
1106 main Upstairs Apt > In Progress
1111 main Golf Club

Buy Outs:
Title Company-hired ✓
Abstract Co-hired ✓
Asbesto Testing-hired ✓
Lawyer-hired ✓
Asbesto Removal Co-hired ✓
Demo Contractor-hired ✓
Closings – tentatively-April begin

FEMA
Lagoons/Lift Stations/Walls
Rotary/Hero/City Park
Clayton Sports Complex
North Streets
South Streets
Electrical Panel (Ball Field)
Sewers
Concession Stand
Berm Removal

ALL Time Extensions Written & approved by fema

HUD
Current Low Rent Housing
Future Low Rent Housing

2-10 Acre Housing Dev.
1- North Golden Acres –
2- North FB Field-
Council letter of support ✓
Brurow Construction

Rural Housing Assessment Program:
Will start having Zoom meetings.

City Planners
✓2 Subdivisions
✓2 Public Mtgs
✓Future Zoom Mtgs
> On going

New Business:
New Business with high paying jobs
Rural Water

Retail:
Accountant
Attorney
Dentist
Dr. Larger replacement
Butcher Shop/meat market ✓
Hardware Store
Florist
Barber
Hair Salon
Laundromat
Restaurant
News Paper
Buildings on Main St.

Infrastructure:
Levee
High Speed Internet
In town Signage plan
Interstate Signage Plan

South Harbors
walking/bike paths
RV Park
amps-theater
low maintenance

#HamburgStrong

COLONIAL

PACIFIC JUNCTION
FIRE & RESCUE

Stability/
Predictability
Community/
Uniqueness
Health/
Connectedness
RESILIENCY
Education/
Demonstration
Opportunity/
Prosperity
Guiding Principles

Guiding Principles

Elevate connections to food production, processing, and agriculture while reinforcing connections to the region's rich natural amenities are essential components of this Vision of Hope for Hamburg, Pacific Junction and the Mills/Fremont County Region.

- **Community/Uniqueness**
- **Health/Connectedness**
- **Stability/Predictability**
- **Opportunity/Prosperity**
- **Education/Demonstration**

GUIDING PRINCIPLE 1

Community / Uniqueness
This acknowledges aspects of community identity that residents do not believe they would find anywhere else, at least not in the same context, and which make living there special.

Vision: Continue to provide and expand unique qualities and amenities combined with a strong sense of community values and neighborliness.

- Protect and foster multi-generational neighbor interaction / community lifestyle
- Identify, maintain, and build upon what is unique and special about Hamburg and Pacific Junction
- Integrate related uses in each town / interchange: transportation-oriented retail / services / lodging
- Build and renovate structures within the community to elevate and support existing systems and businesses – that reinforce community
- Balance local enterprises that offer unique qualities and experiences with national corporate chains/franchises (at interchanges)
- Support local destination restaurants, camping, lodging
- Provide lifestyle not offered in regional urban areas: friendly small-town setting, on the grid, and connected to natural beauty of the valley/ Loess Hills
- Ensure all new land uses / developments are compatible for context: some uses better-suited for in-town, some better-suited for highway/ railway corridors and interchanges

Figure 4.1-2. Old school building, Pacific Junction.

Figure 4.1-3. Store on Main Street, Hamburg.

Figure 4.1-4. Mural, Hamburg.

Figure 4.1-5. Mural and memorial, Pacific Junction.

GUIDING PRINCIPLE 2

Health / Connectedness
A community is more than its buildings; it is its people, their wellness, and their connection to the land and environment around them, and how health and the land reinforce each other.

Vision: Offers a healthy lifestyle that connects people with each other and their place.

- Create or enhance opportunities to connect to the land/outdoors
- Create or enhance opportunities to connect with each other
- Create or enhance recreational opportunities: hunting, fishing, hiking, cycling, walking
- Restore / re-create local farms/food gardens adjacent to towns (convert buy-out properties to "eco-food parks" that generate revenue, restore ecology, and provide recreation) to support a healthy local food culture
- Rebuild main streets to be more walkable / bikeable
- Build and renovate structures that support improved health and wellness
- Develop and support activities /events to draw people from the region
- Provide access to a local food culture by "urban" communities within and visitors to the region

Figure 4.1-6. Paved cycling trails.

Figure 4.1-7. Community gardening.

Figure 4.1-8. Streetscapes..

Figure 4.1-9. Camping.

GUIDING PRINCIPLE 3

Stability/Predictability
There are enduring aspects of life in a community that give people confidence about putting down roots and believing in the community's durability and resilience, but it is important to identify them.

Vision: Rebuild with best available technological and environmental practices for long-term resiliency.

- Support the restoration and stewardship of the local ecology and natural processes to be more in harmony with nature including restoring lost trees and natural landscapes (i.e., green stormwater infrastructure, naturalized drainageways, reinstatement of controlled burning in Loess Hills slopes, etc.)
- Determine/establish base flood elevations and build in level of safety to accommodate future events
- Develop resilient infrastructure that is adapted to change and can accommodate more unpredictable weather patterns, storm events, etc.
- Focus on and invest in long-term solutions and strategies (i.e., avoid spending resources on short-term or temporary measures; instill a sense of permanence and reliability)
- Provide for all generations: Seniors AND Youth (engage both in the process to rebuild/renovate)
- Develop infrastructure that is district-scale, green, and resilient (water, energy, communication, high-speed internet, micro-grids)
- Build in stability through high-performance strategies such as energy-efficiency and renewable energy, water conservation, green infrastructure systems, etc.
- Strengthen relationships with all employers in town and in the region
- Improve communications through proactive, regular informational sessions with the Corps of Engineers, Iowa Flood Center, IEDA, and others who share latest real-time information on status of flood plains, funding, etc.

Figure 4.1-10. Green roofs.

Figure 4.1-11. Photovoltaic panels on roof.

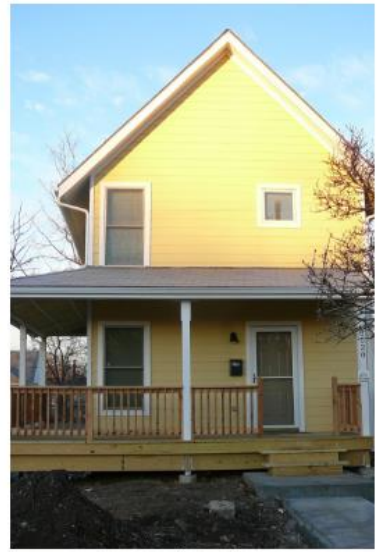


Figure 4.1-12. High-performance affordable housing.

GUIDING PRINCIPLE 5

Education/Demonstration
If the community is to embrace and celebrate a plan for recovery, it must find creative ways to share that information, illustrate key points, engage in creative outreach, and educate people on the strategies needed and how success will be measured.

Vision: Empower citizens through educational opportunities and provide an inspirational demonstration of sustainable living for the state/region.

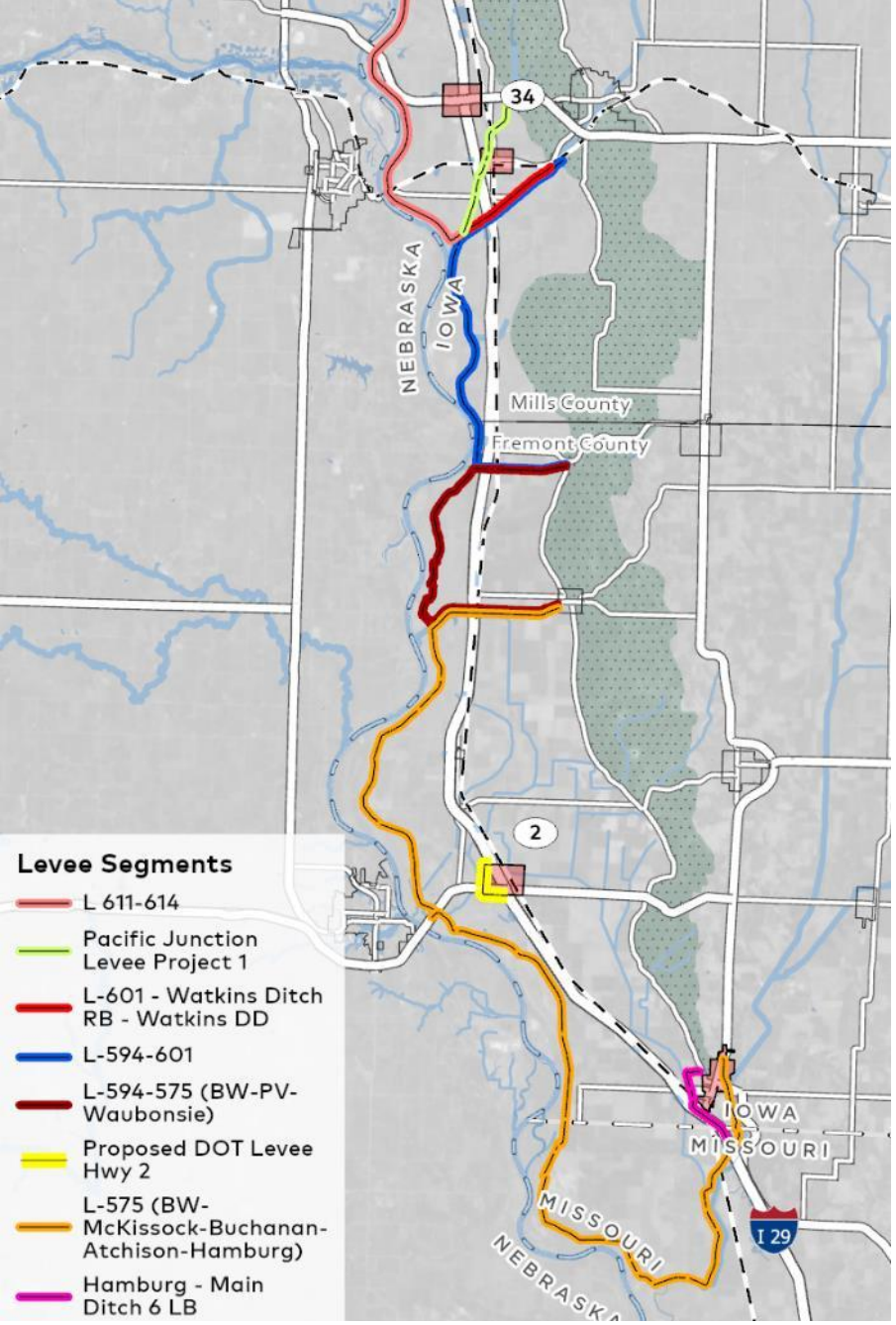
- Utilize the completed community redevelopment plan for the region as a living document that guides and informs land use/development decisions and fosters community dialogue.
- Host regular events that are both social and informational (regarding planning and rebuilding efforts)
- Identify pilot/catalyst projects that demonstrate best practices
- Equip elected officials, teachers, and community leaders with knowledge and access to resources to help implement vision over time (capacity building)
- Support local trade schools and high school programs – engage students in the future planning of their community
- Monitor and report progress based upon shared objectives, values, and metrics – develop on-going communication strategies

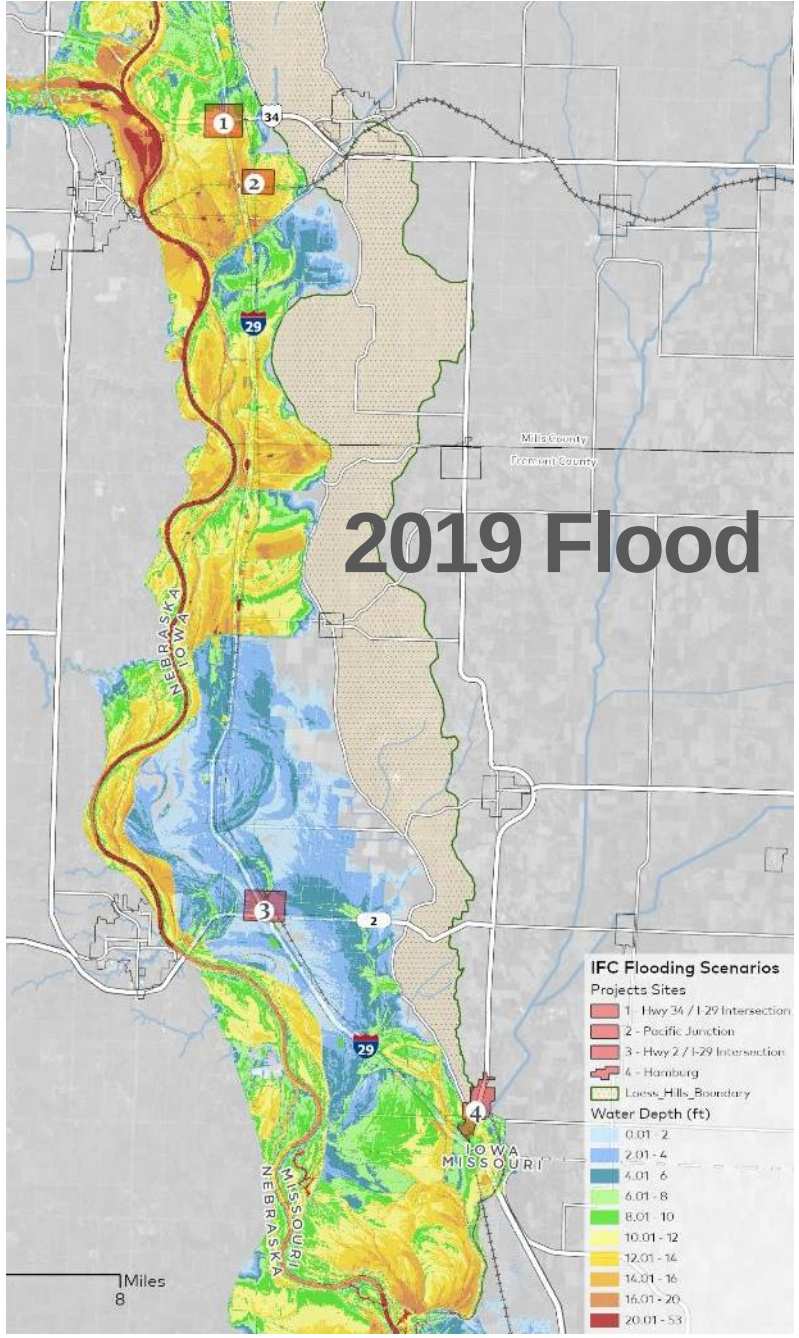
Figure 4.1-17. Environmental education.

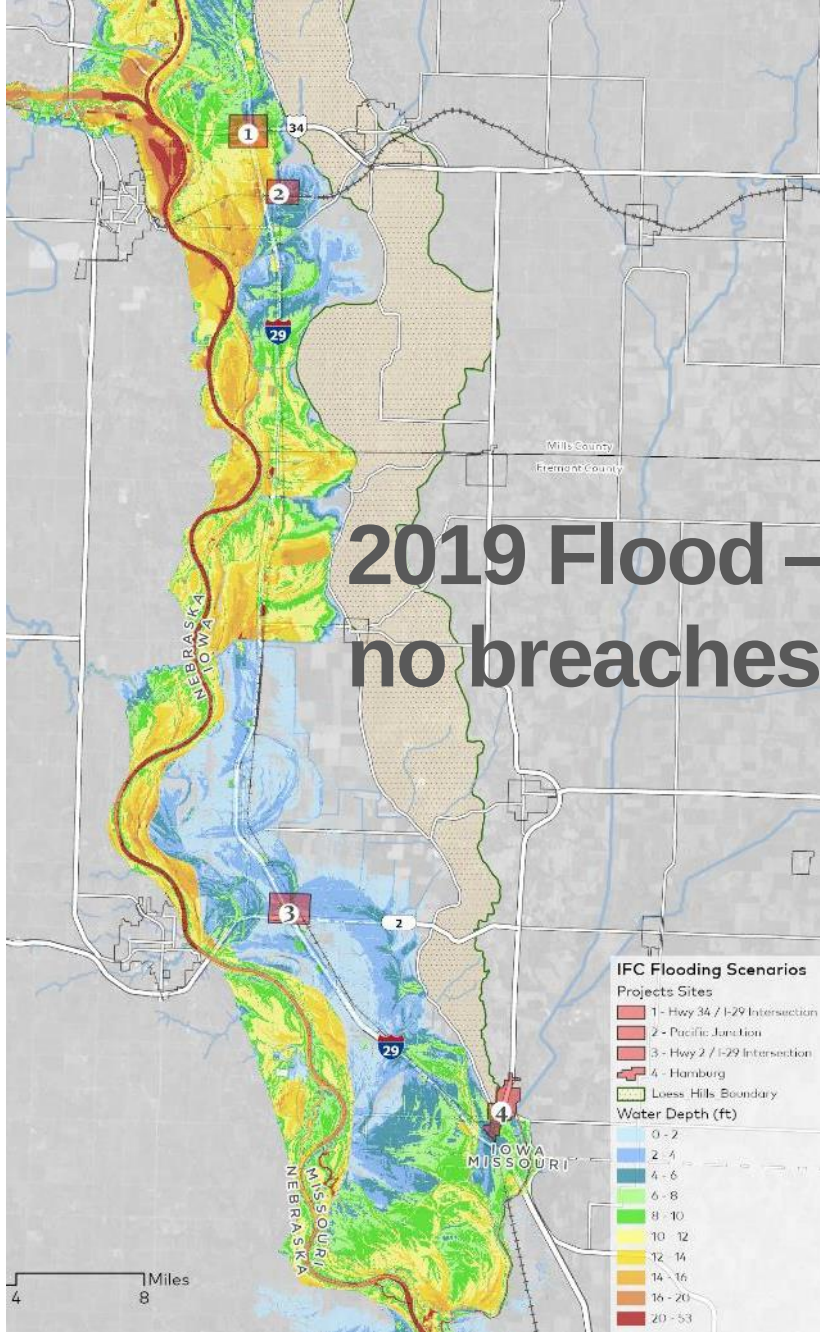
Figure 4.1-18. Agricultural education.

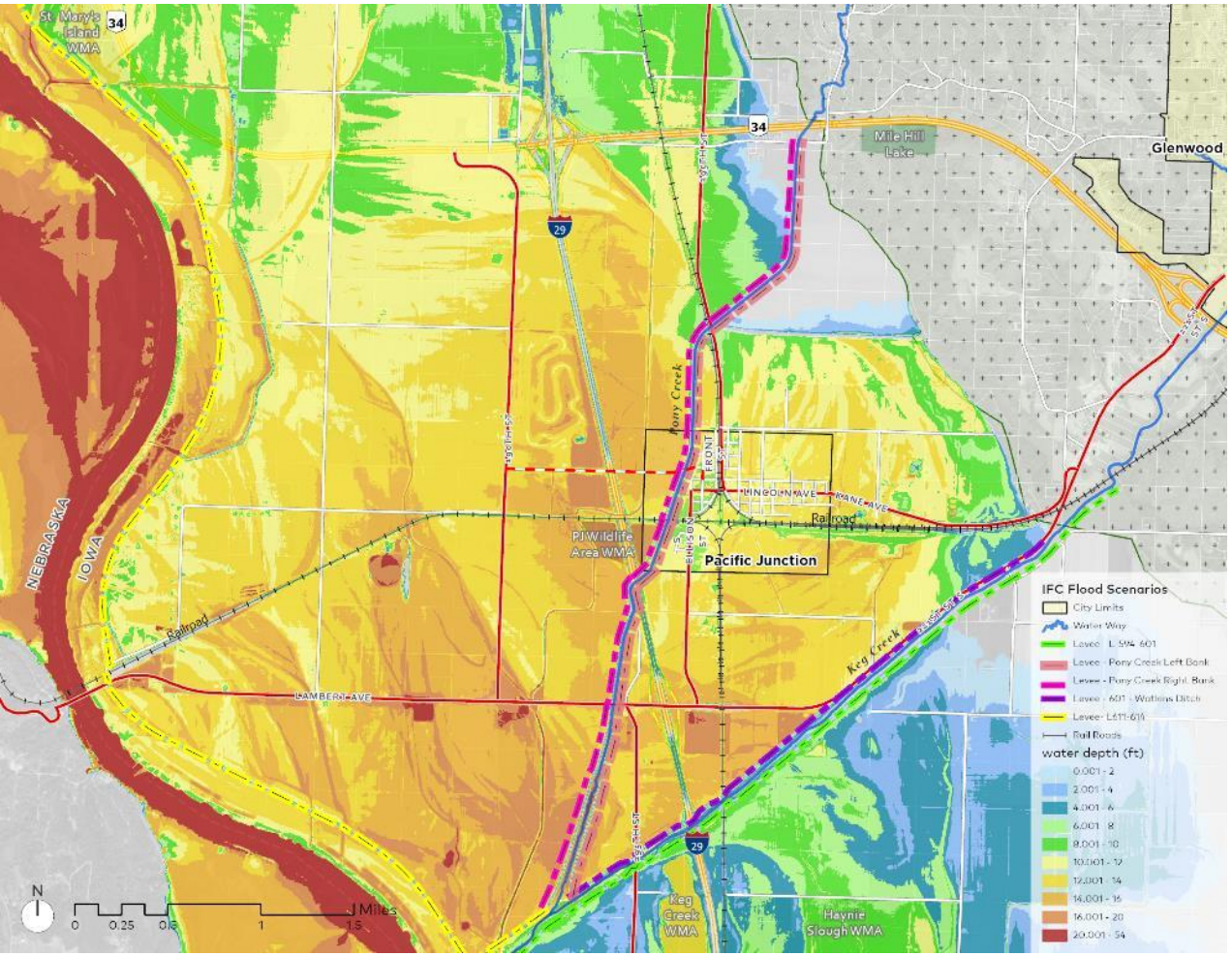
Figure 4.1-19. Classroom education.

Figure 4.1-20. Public presentations.

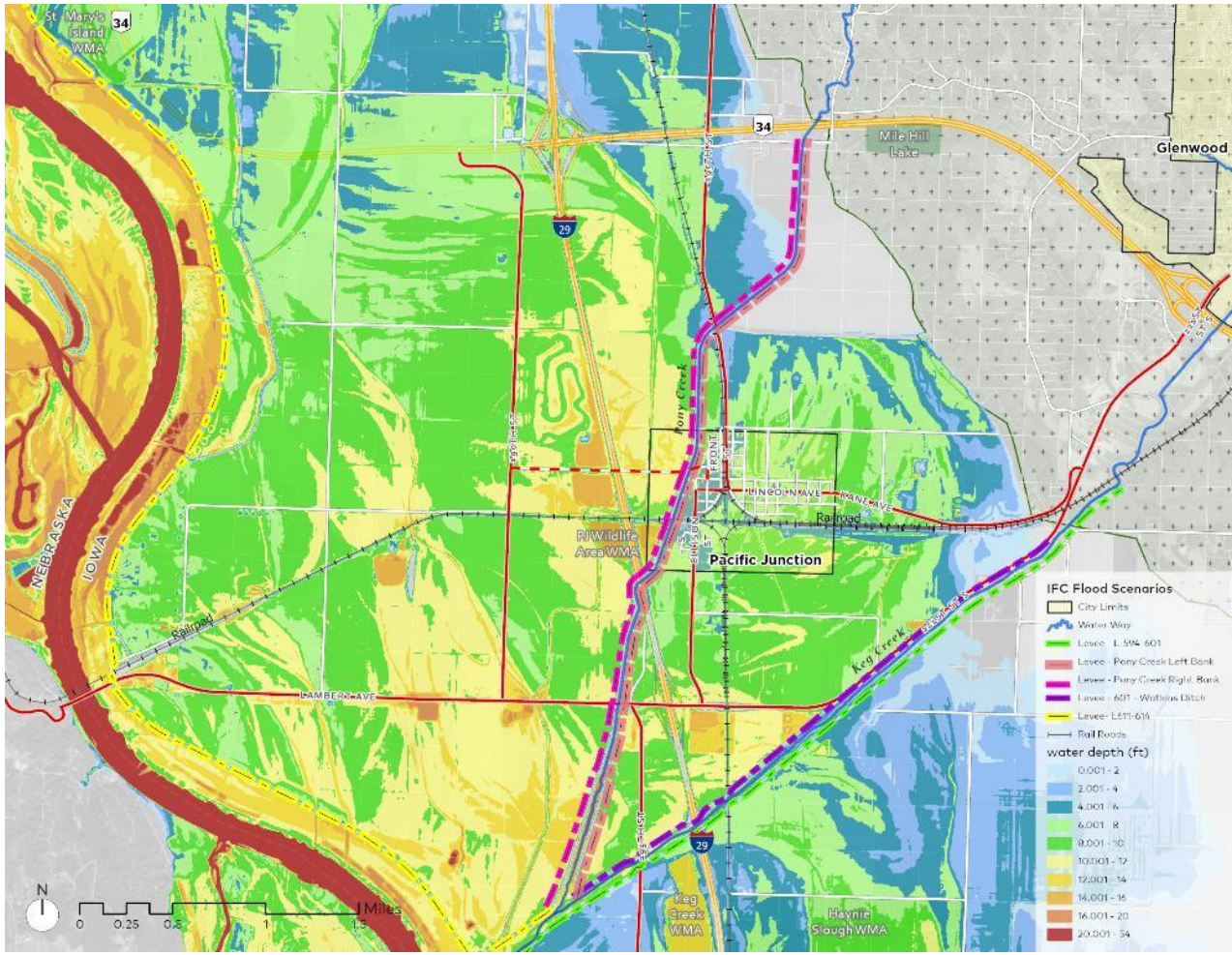

Levee Segments
L 611-614
Pacific Junction Levee Project 1
L-601 - Watkins Ditch RB - Watkins DD
L-594-601
L-594-575 (BW-PV-Waubonsie)
Proposed DOT Levee Hwy 2
L-575 (BW-McKissock-Buchanan-Atchison-Hamburg)
Hamburg - Main Ditch 6 LB
NEBRASKA
IOWA
Mills County
Fremont County
MISSOURI
I 29


2019 Flood
IFC Flooding Scenarios
Projects Sites
1 - Hwy 34 / I 29 Intersection
2 - Pacific Junction
3 - Hwy 2 / I-29 Intersection
4 - Hamburg
Loess_Hills_Boundary
Water Depth (ft)
0.01 - 2
2.01 - 4
4.01 - 6
6.01 - 8
8.01 - 10
10.01 - 12
12.01 - 14
14.01 - 16
16.01 - 20
20.01 - 53
Miles
8


2019 Flood – no breaches
IFC Flooding Scenarios
Projects Sites
1 - Hwy 34 / I-29 Intersection
2 - Pacific Junction
3 - Hwy 2 / I-29 Intersection
4 - Hamburg
Loess Hills Boundary
Water Depth (ft)
0 - 2
2 - 4
4 - 6
6 - 8
8 - 10
10 - 12
12 - 14
14 - 16
16 - 20
20 - 53
Miles
4
8



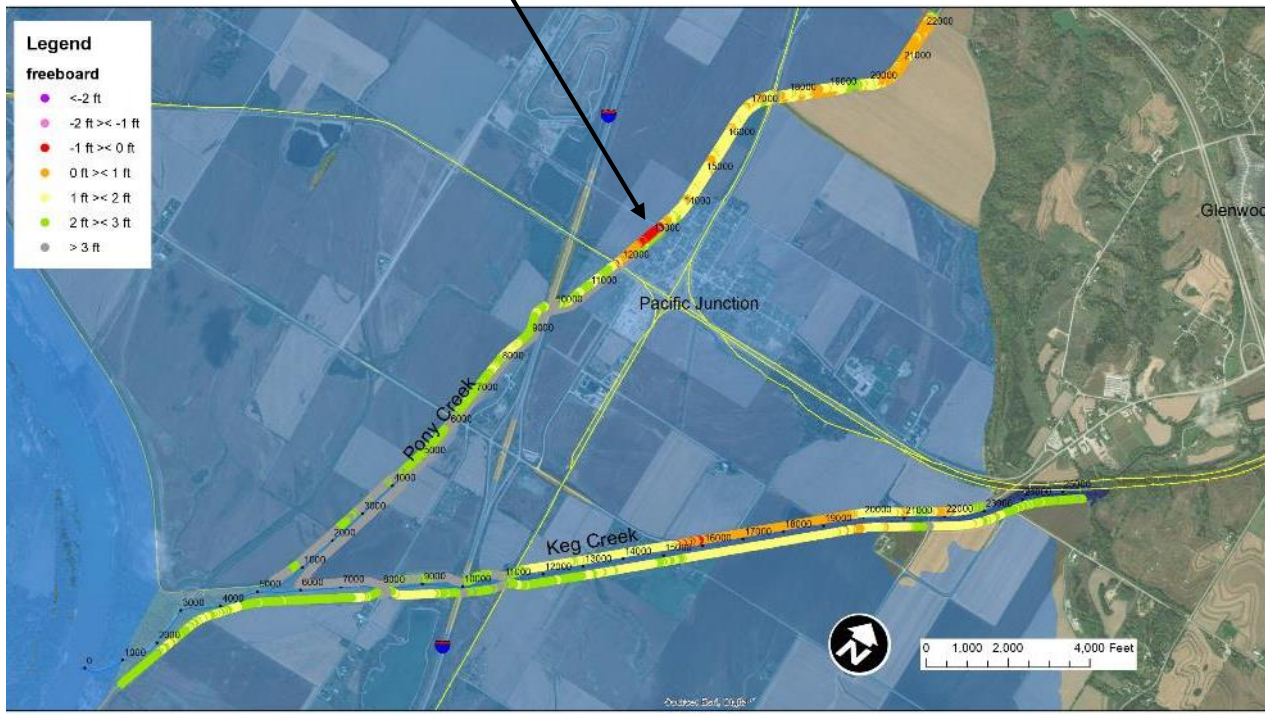
2019 Flood – PJ and Hwy 34



2019 Flood – no breaches

Pony and Keg Creek– 100yr flow with no overtopping allowed

Corresponding inundation w/ Pony Cr right levee overtop at water surface elev. =965.25 ft



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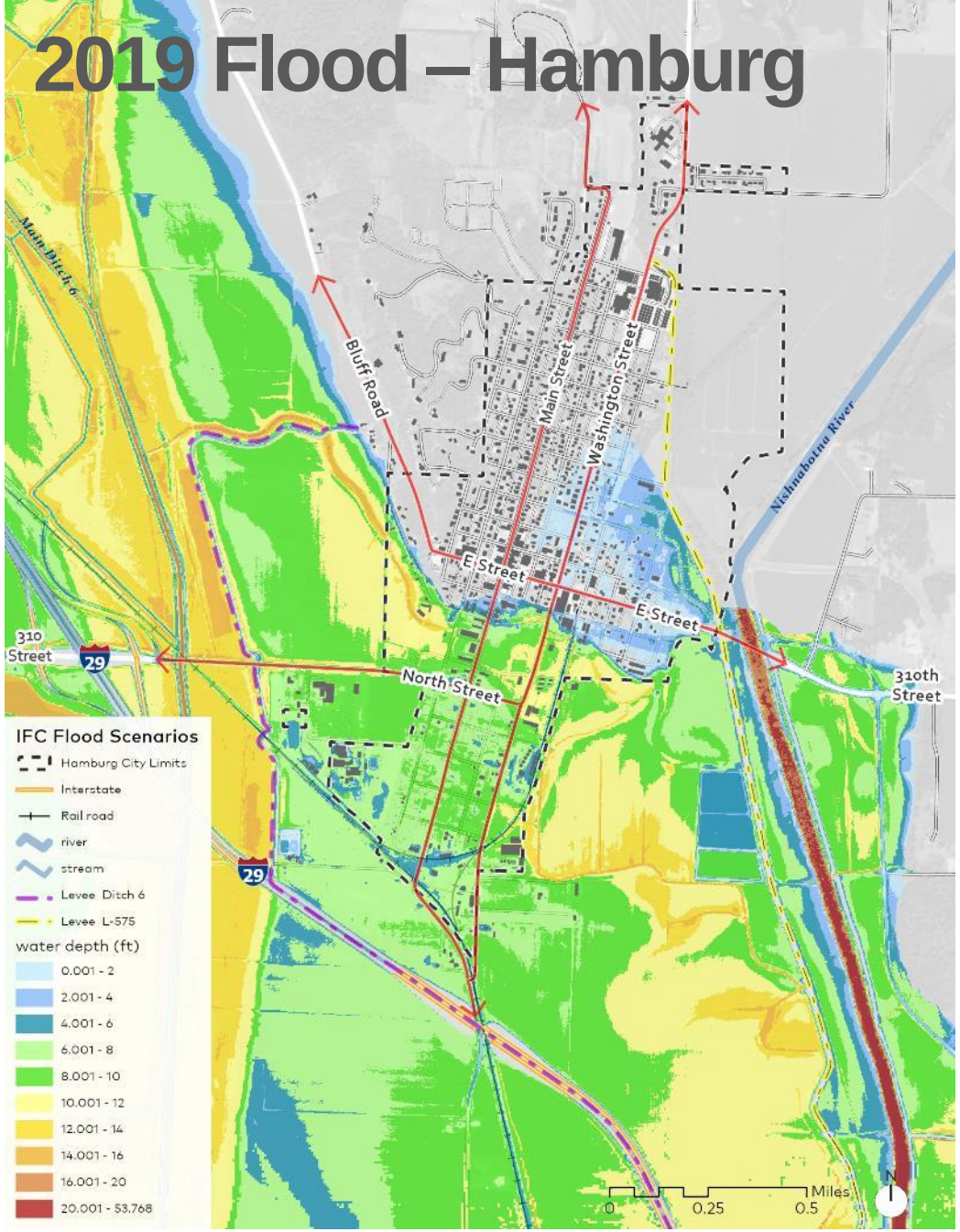
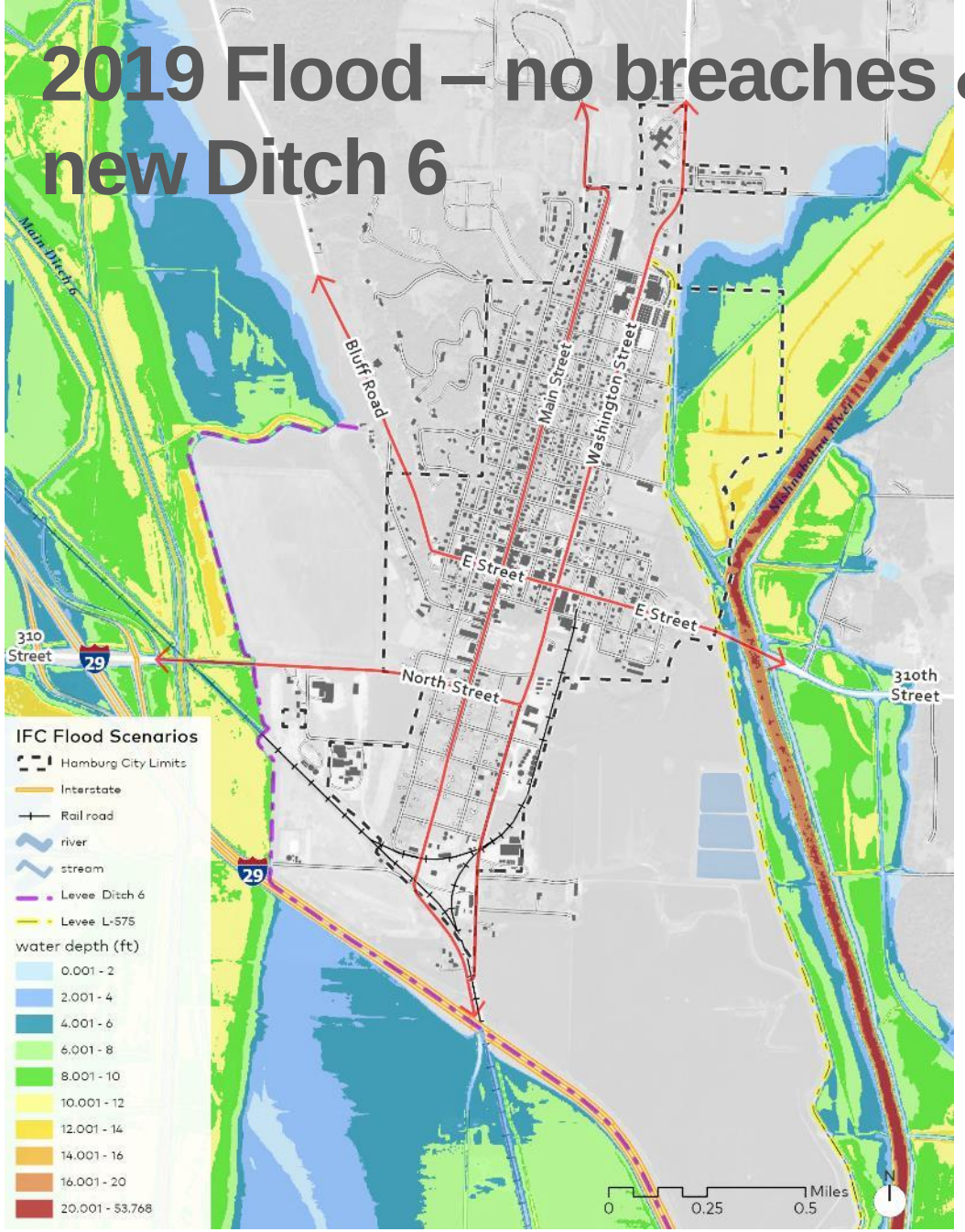
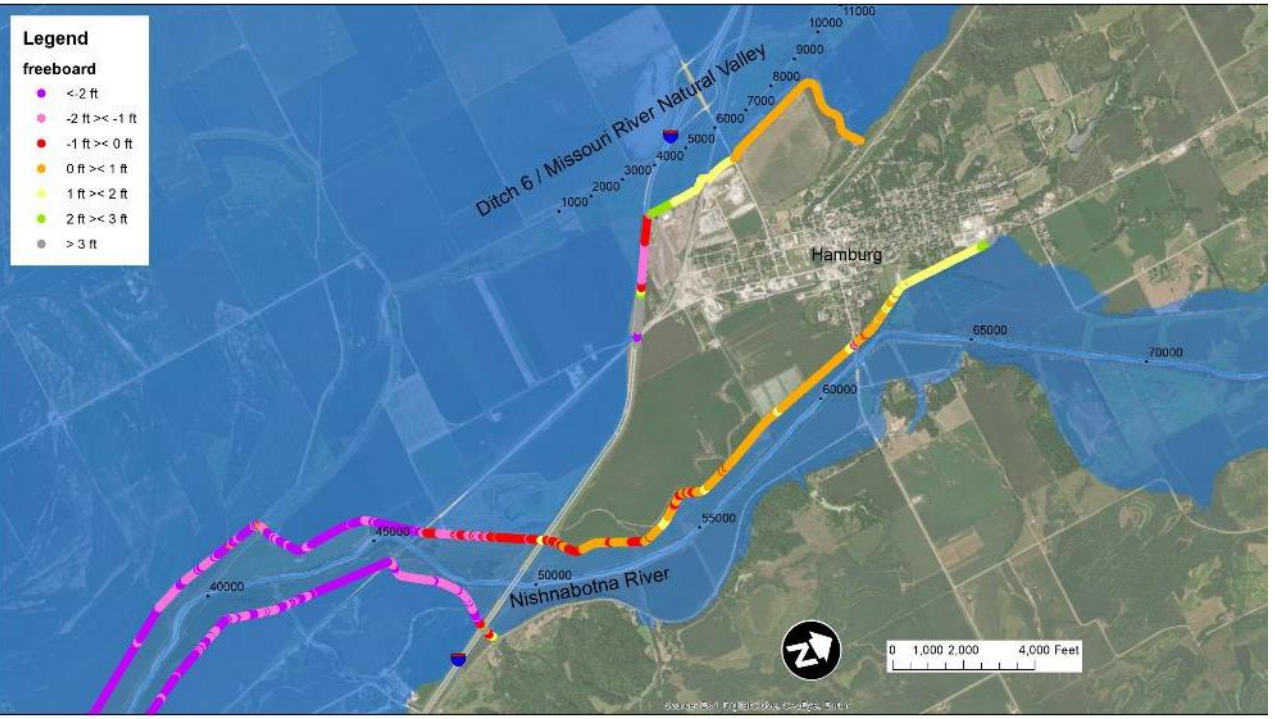
2019 Flood – Hamburg



2019 Flood – no breaches & new Ditch 6



corresponding inundation w/o I-29 closure
water surface elev. = 916.4 ft



Ditch 6 & Missouri River (Natural Valley) – 100yr with no Ditch 6 levee overtopping allowed

Nishnabotna River – 100yr flow with no overtopping allowed

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Regional Objectives

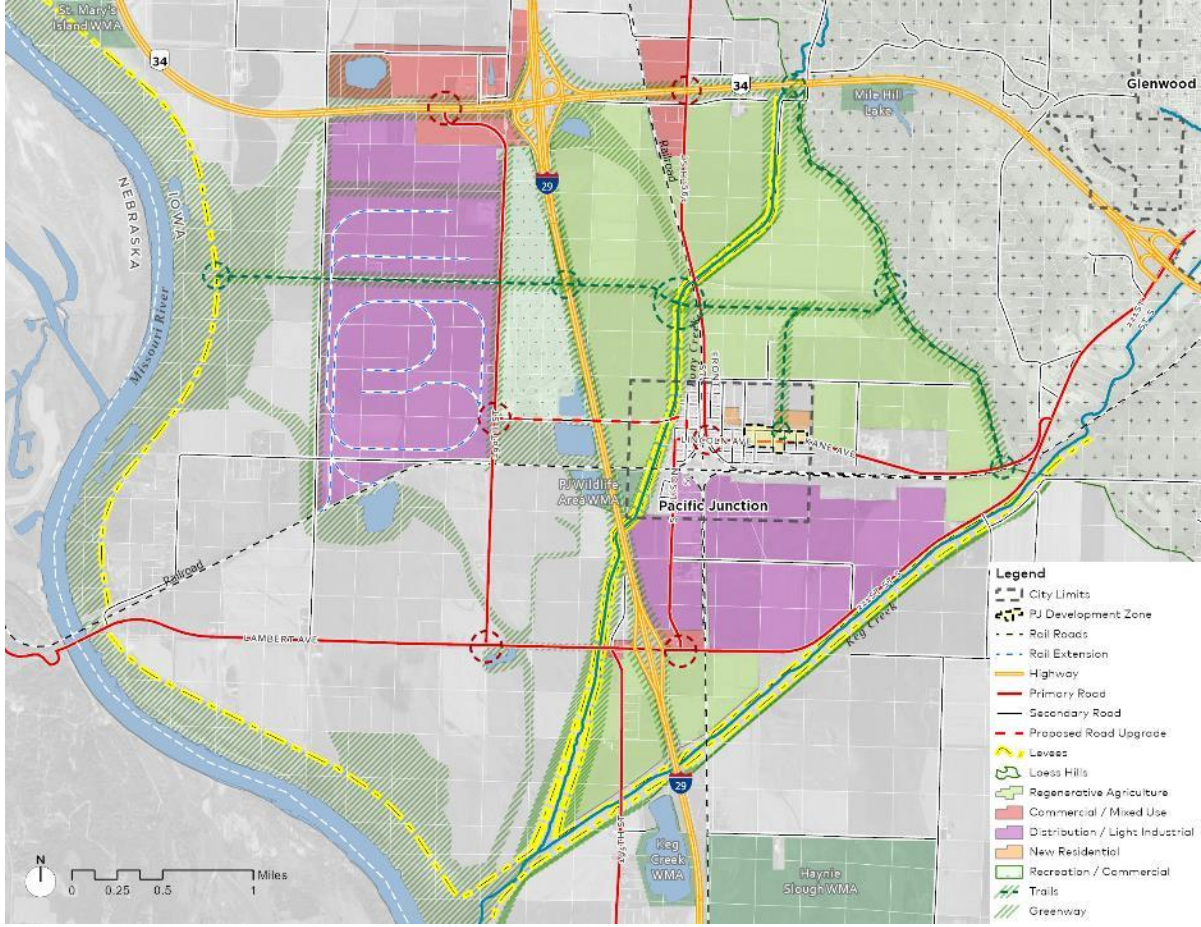
- Build Upon Regional Transportation Network
- Capitalize on Growing Markets
- Support / Facilitate Tourism
- Protect / Restore Regional Ecology
- Coordinate Efforts Regionally
- Coordinate Concurrent Efforts
  - IDNR / USACE 4 States Study
  - L-611/614 Levee Accreditation Study
  - HSEMD 2022 Levee Study

Regional Recommendations

- Create Recovery Coordinator Position
  - IEDA is filling 2 Disaster Recovery Project Manager Positions – Statewide
- Create Farmer Advisory Entity
- Create Levee District Coordination Entity
- Coordinate with BNSF on Regional Development Strategies
- Message / Market Around Regional Agricultural Business and Agri-tourism
- Secure Dedicated Funding for IFC Flood Information System
  - ($125,000 annually)

Pacific Junction / Hwy 34 Int. Recommendations:

- Levee Accreditation Study –
  - $500,000 approx. Keg/Pony Creeks
  - Evaluate current L611-614 Study
- Buyout Properties – Food Production
- Infrastructure Detailed Projects
  - Streets
  - Sewer / Water
  - Green Infrastructure
    - Stormwater bumpouts ($350,000)
- Replacement Housing
  - High performance
- Leverage prior Hwy 34 Interchange work
  - Collaborate with BNSF
  - Certified Sites Process



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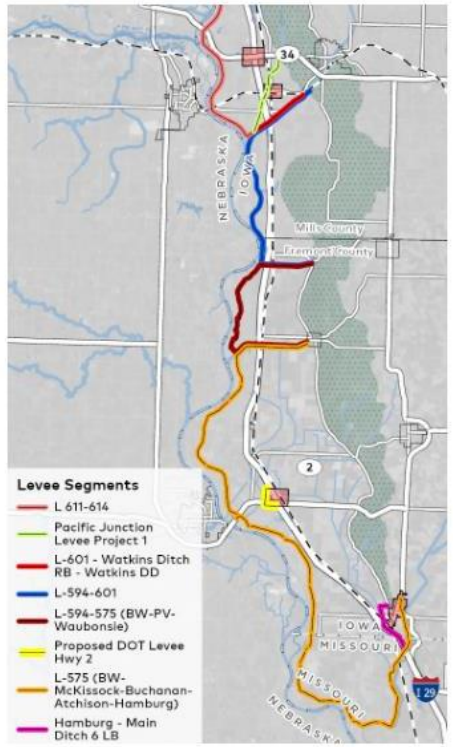
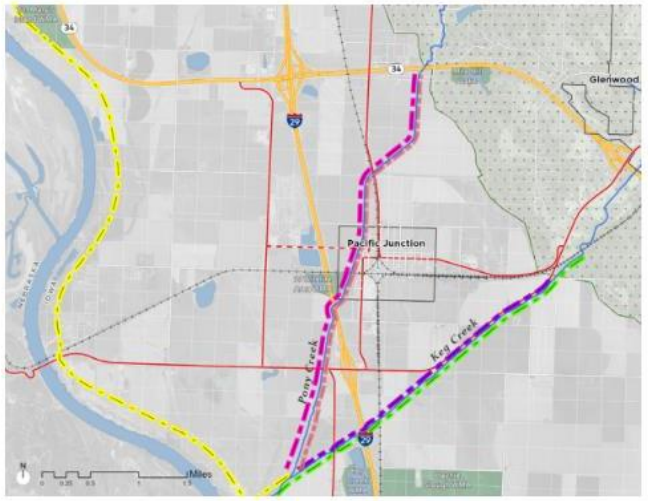


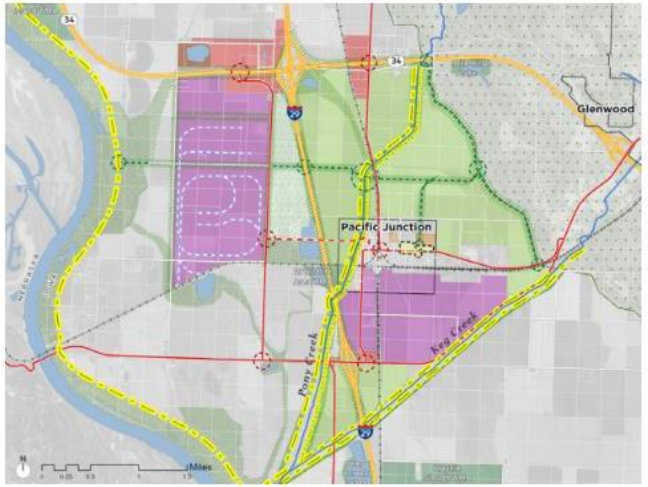
Levee configuration for study area

Bike trail plan



Levee - L611-614
Levee - 601 - Watkins Ditch
Levee - Pony Creek Right Bank
Levee - L-594-601
Levee - Pony Creek Right Bank

Levees Protecting Highway 34 Interchange and Pacific Junction



Primary roads
Proposed Road Upgrade
Railway
Proposed Railway Loop
Levees
Trails
Greenways
PJ Redevelopment Zone
Distribution/Light Industrial
Commercial / Mixed Use
Regenerative Agriculture
New Residential Areas

Land-use plan for Pacific Junction and Hwy 34 Interchange

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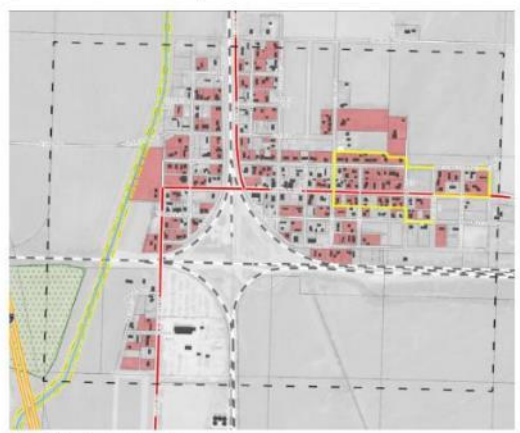
FOOD AND SEED PRODUCTION ON BUYOUT PROPERTIES

View looking southeast of buyout property utilized for food production

Buyout properties



Pacific Junction buyout map

Festivals

Farmer's market

Urban vinyard

Food production

Teaching health and nutrition

Bird's eye view of Pacific Junction

Native landscape buffer between community residential and adjacent farming

Green infrastructure concept for community

Pervious alley in new residential

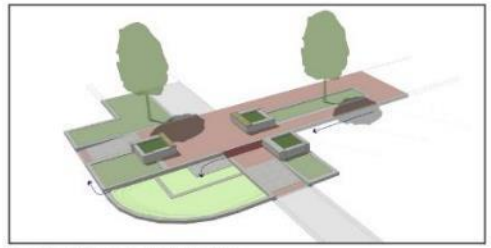
Bioswale under construction

Bioswale

Examples of green infrastructure bioswales denoted by green lines on map above

Pacific Junction Main Street Improvements

Bumpout design with bioswale



Typical bumpout design

Extension of streetscape west towards school

Bumpout stormwater management

Streetscape improvements and storm water management

Concept of pop-up restaurant or retail in renovated railcar and renovated downtown buildings

Example of stormwater bumpout

Examples of local businesses for pop-up restaurants

Pacific Junction - Bird's Eye View

Concept for residential layout on unrestricted properties owned by city; creation of a walkable neighborhood

Existing Lincoln Avenue streetscape

Proposed streetscape / stormwater drainage

Unrestricted city-owned properties (yellow outline)

Native landscape and trail connections

Bioswale

High-performance, walkable neighborhood with porches in front yard and garages in back.

High-performance home

Pervious paver alley

Residential rain garden

BEAUTIFICATION OF RAILROAD WYE

Pacific Junction concept view of the wye

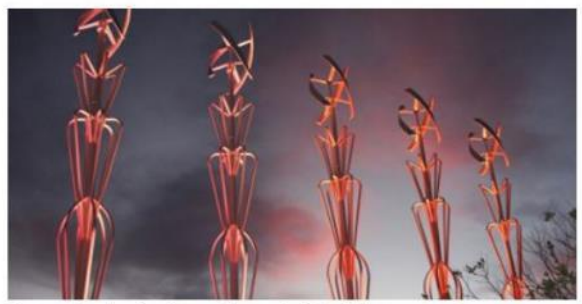
Drone image of railway wye

Native prairie

Opportunity for prairie volunteers and education

Small scale wind turbine

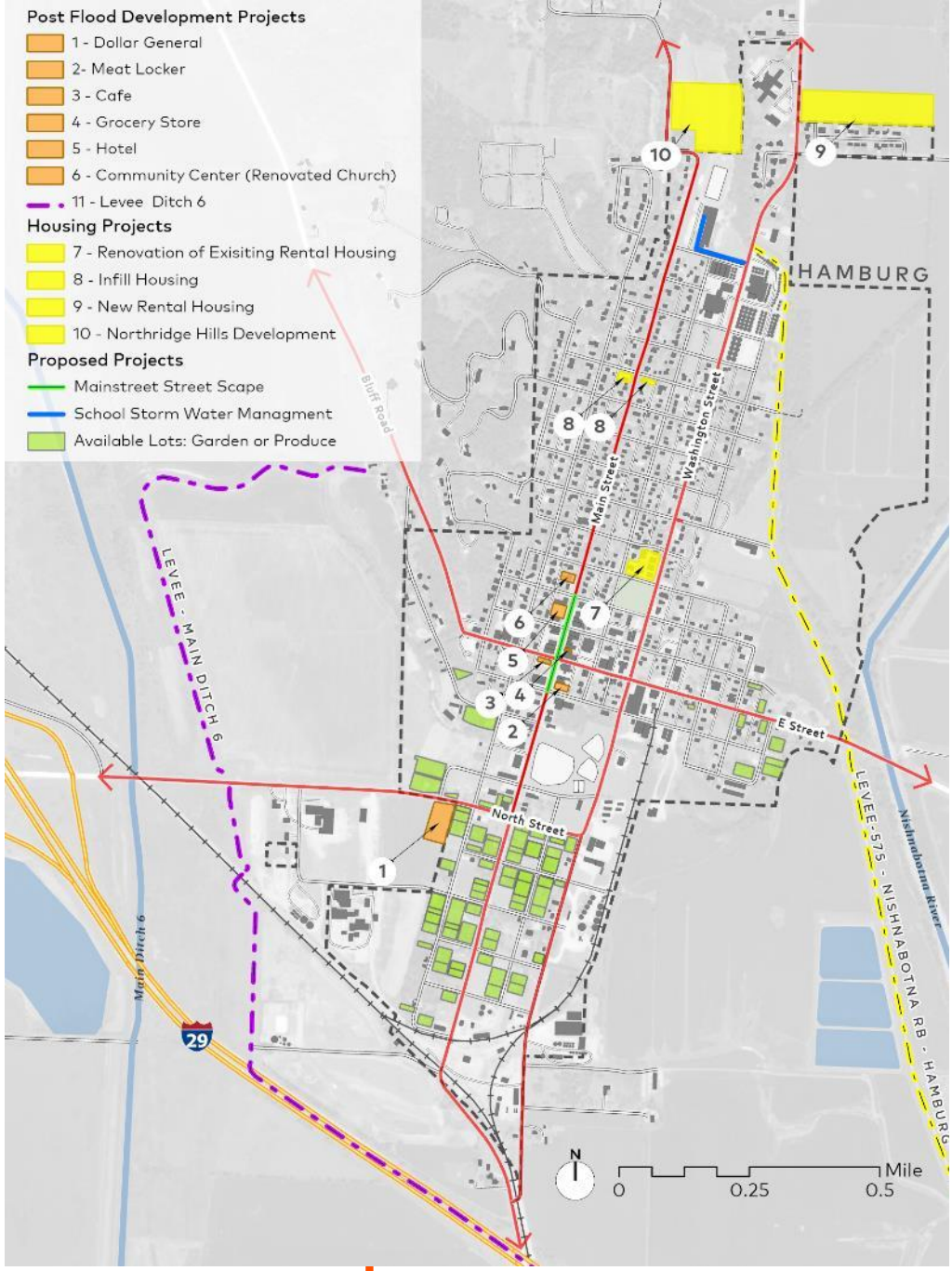
Integration of art

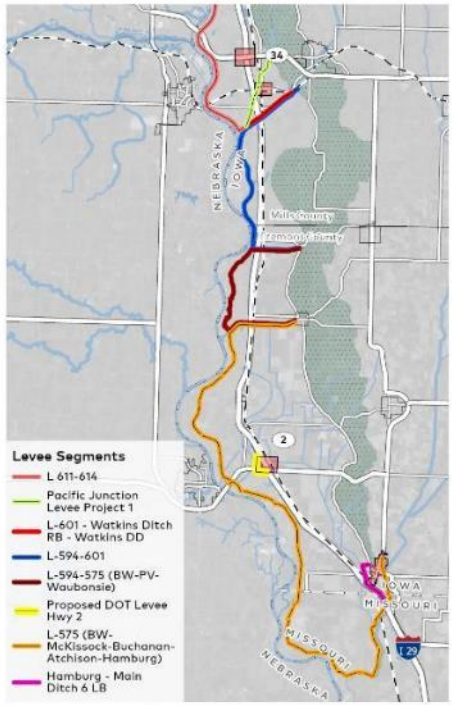


Opportunity for inventive wind turbines as art

Hamburg Recommendations:

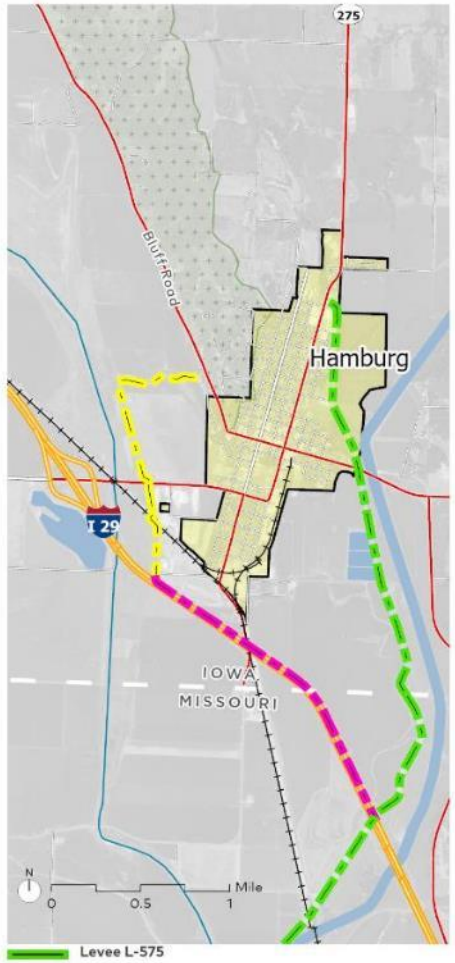
- Levee Accreditation Study –
  - $400,000 approx. (Ditch 6 / I-29 / Nishnabotna)
- Buyout Properties – Food Production
- Infrastructure Detailed Projects
  - Broadband Access
  - Green Infrastructure
    - Stormwater bumpouts ($600,000)
- Replacement Housing
  - High performance – CDBG in process
- Create Nature Park / Wildlife Sanctuary in Ditch 6 Borrow Area



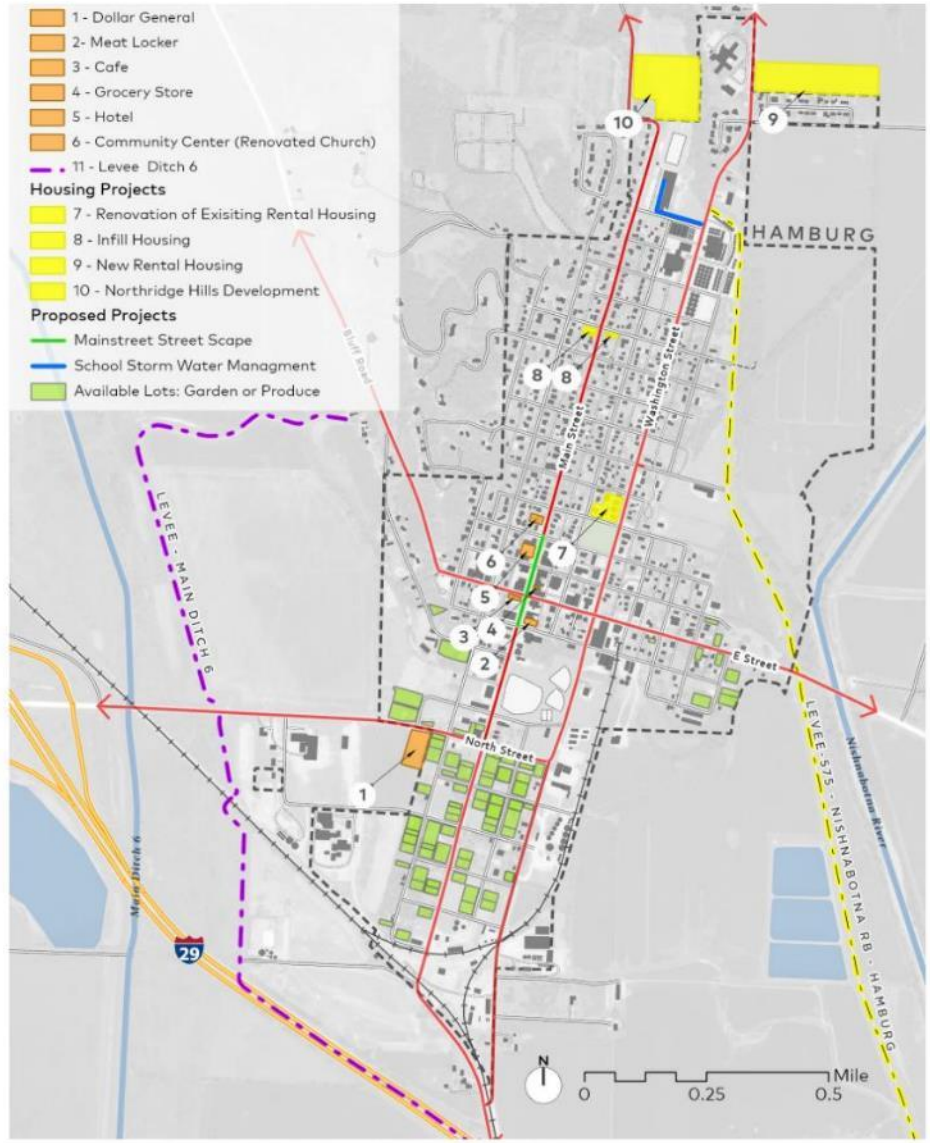


Levee system for study area

Bike trail and greenway access



Levees protecting Hamburg



Hamburg map showing recent and potential projects.

FOOD AND SEED PRODUCTION / RECREATION ON BUYOUT PROPERTIES

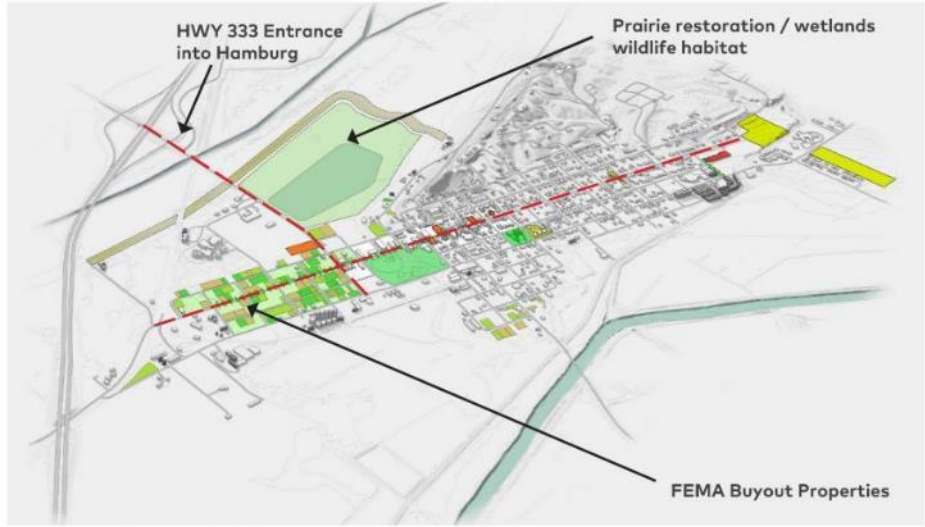
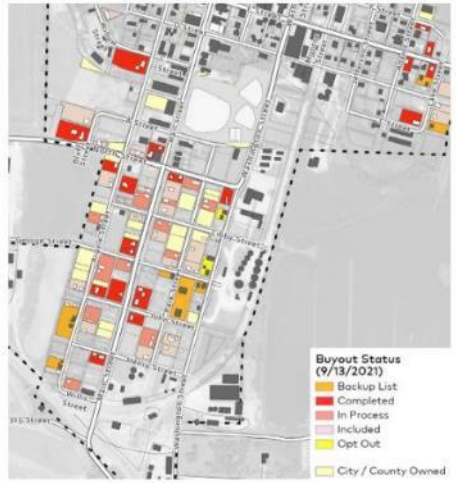


Diagram of community focus area

Existing buyout properties



Buyout map

Farm festivals

Food production

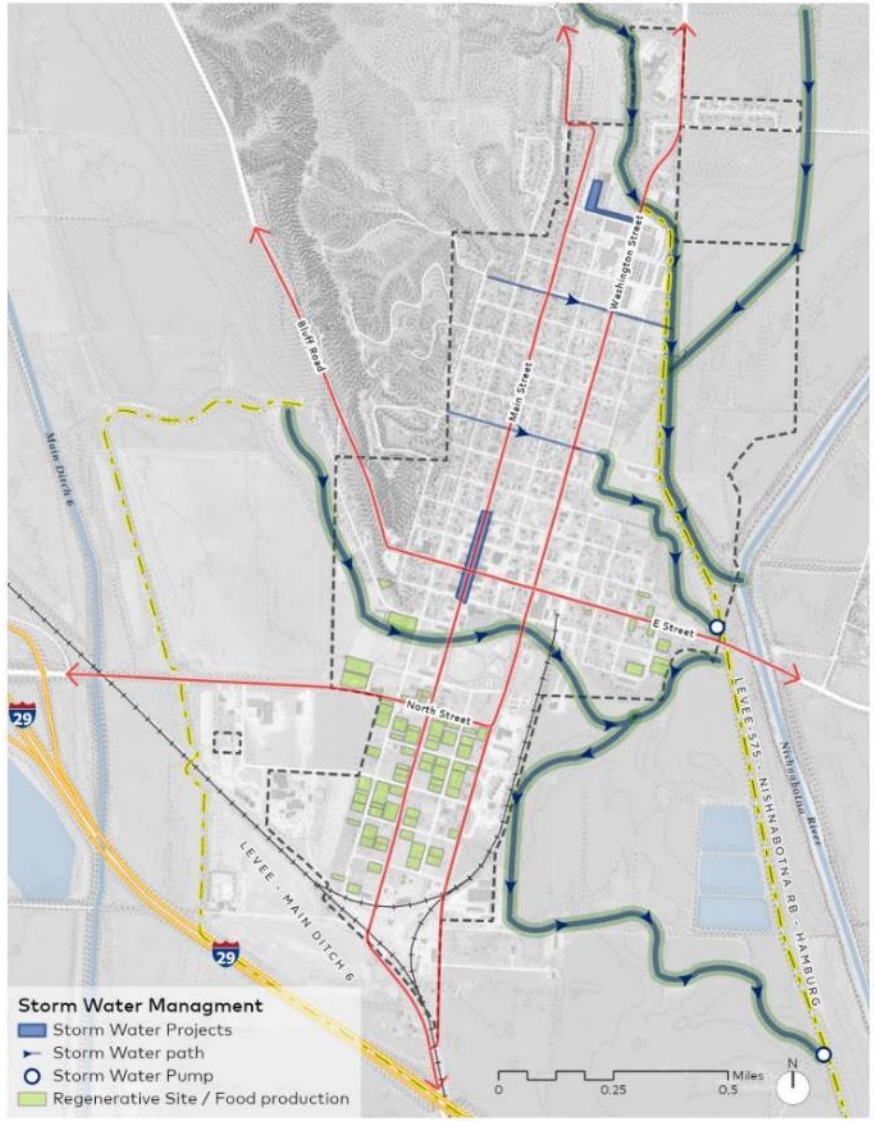
Potential future pond in buyout area

Celebrations

Potential RV camping in buyout configuration

Future RV camping and pond in buyout area

Farmer's markets



Green infrastructure / stormwater plan for community

Current green infrastructure

Potential future green insfrastructure

Bioswale under construction

Bioswale

Bioswale opportunity

Bioswale in community

Existing drainage issues northeast of baseball field

Opportunity for improved drainage

Hamburg downtown stormwater and streetscape enhancements, looking south

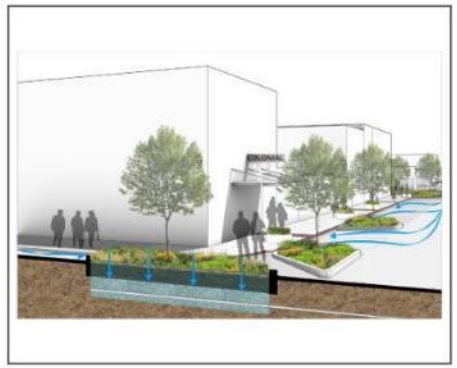


Diagram of stormwater bumpout by the Colonial Theater

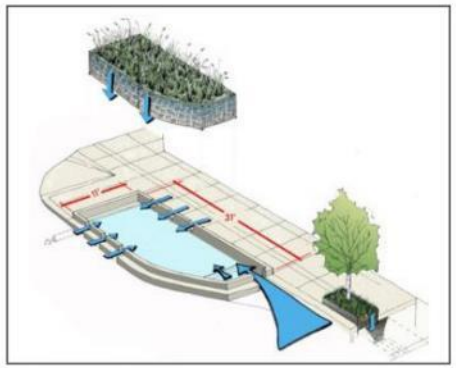


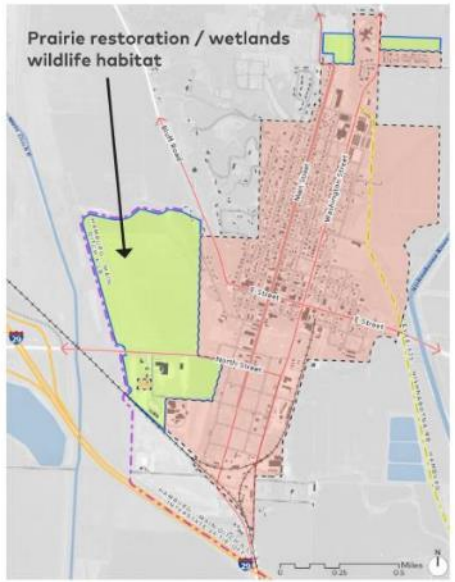
Diagram of how a stormwater bumpout works

Site plan for Main Street stormwater bumpouts

Example of stormwater bumpout

Example of stormwater bumpout intersection

CREATION OF NATURE PRESERVE AND WILDLIFE HABITAT



Annexation plan of Hamburg

Accessible trail through habitat

Environmental education

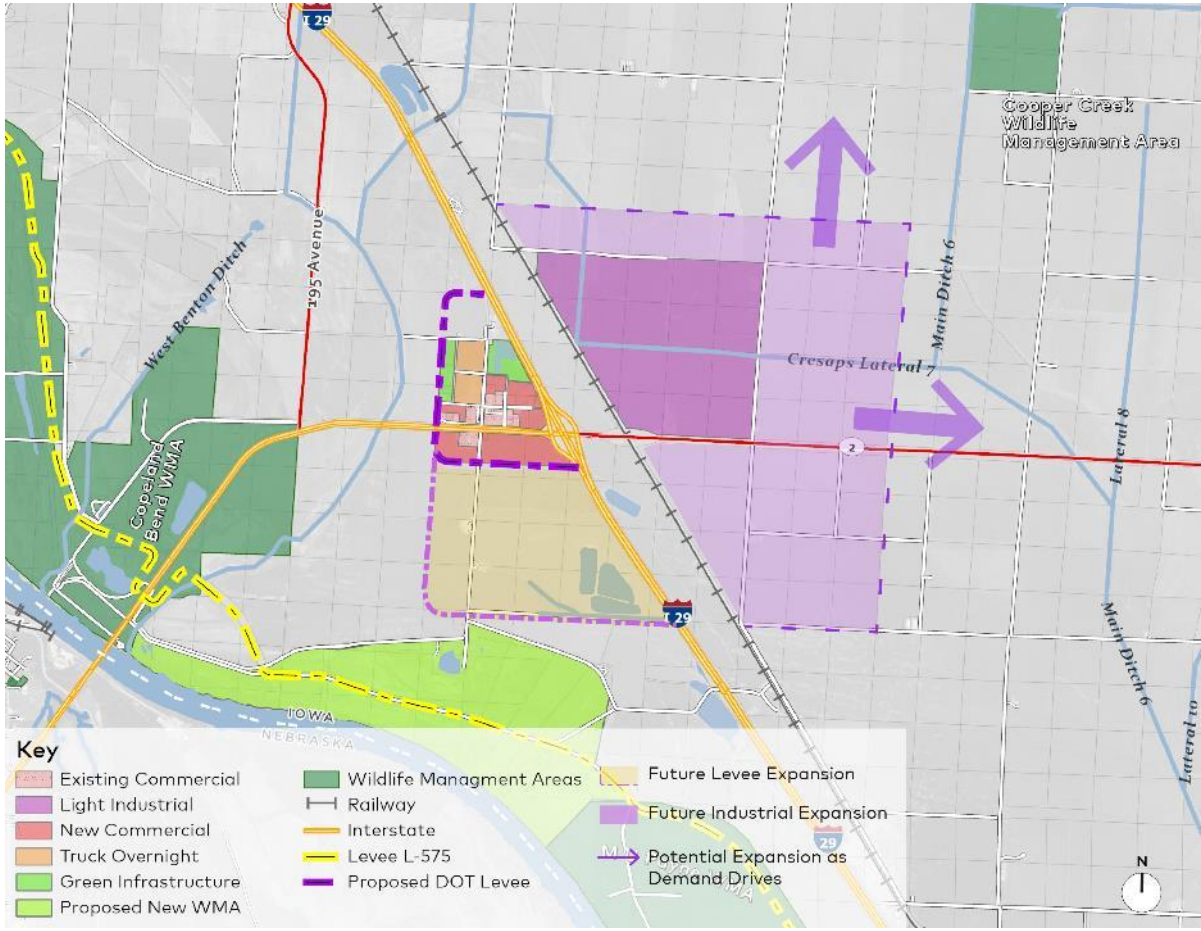
Opportunity for wetlands and wildlife habitat

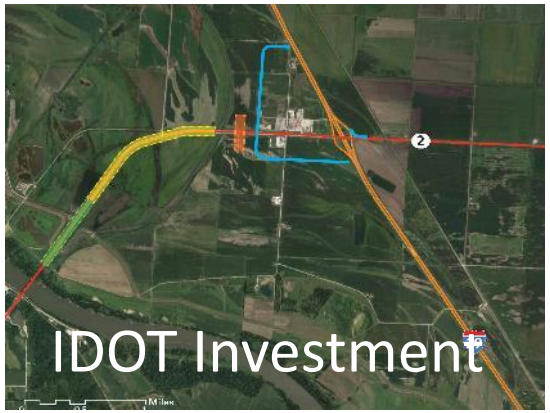
Diagram illustrating opportunity for prairie and wildlife habitat

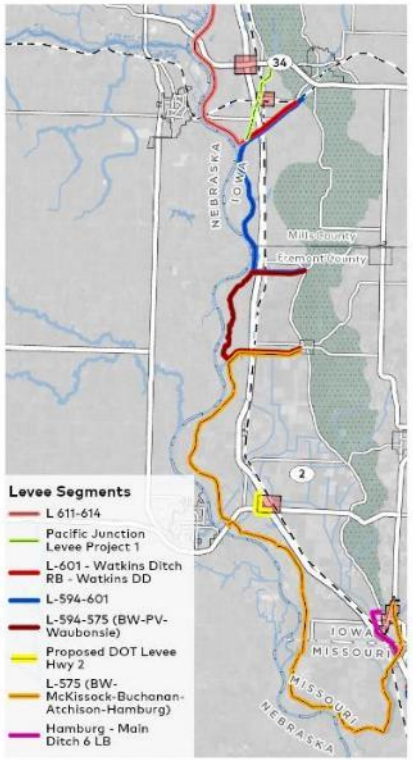
Prairie restoration with trails

Hwy 2 / I-29 Interchange Recommendations:

- L-575 Levee Accreditation Study
- Detailed Utility Analysis Needed
- Create Fremont County Economic Development Entity (similar to Mills)
- Determine Point of Contact for Interchange Development
- Consider Partnership with Nebraska City – retail /dining analysis
- Conduct study to determine best ways to integrate public access to Missouri River and expand Wildlife Management Areas







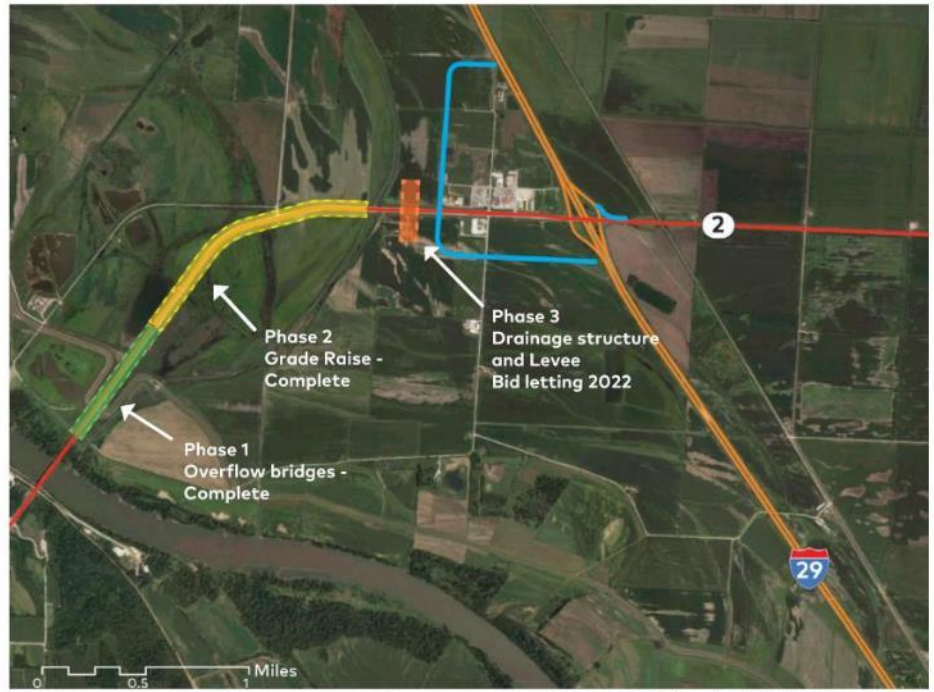
Regional levee map

2019 flooding

Aerial map of Hwy 2 interchange; existing condition

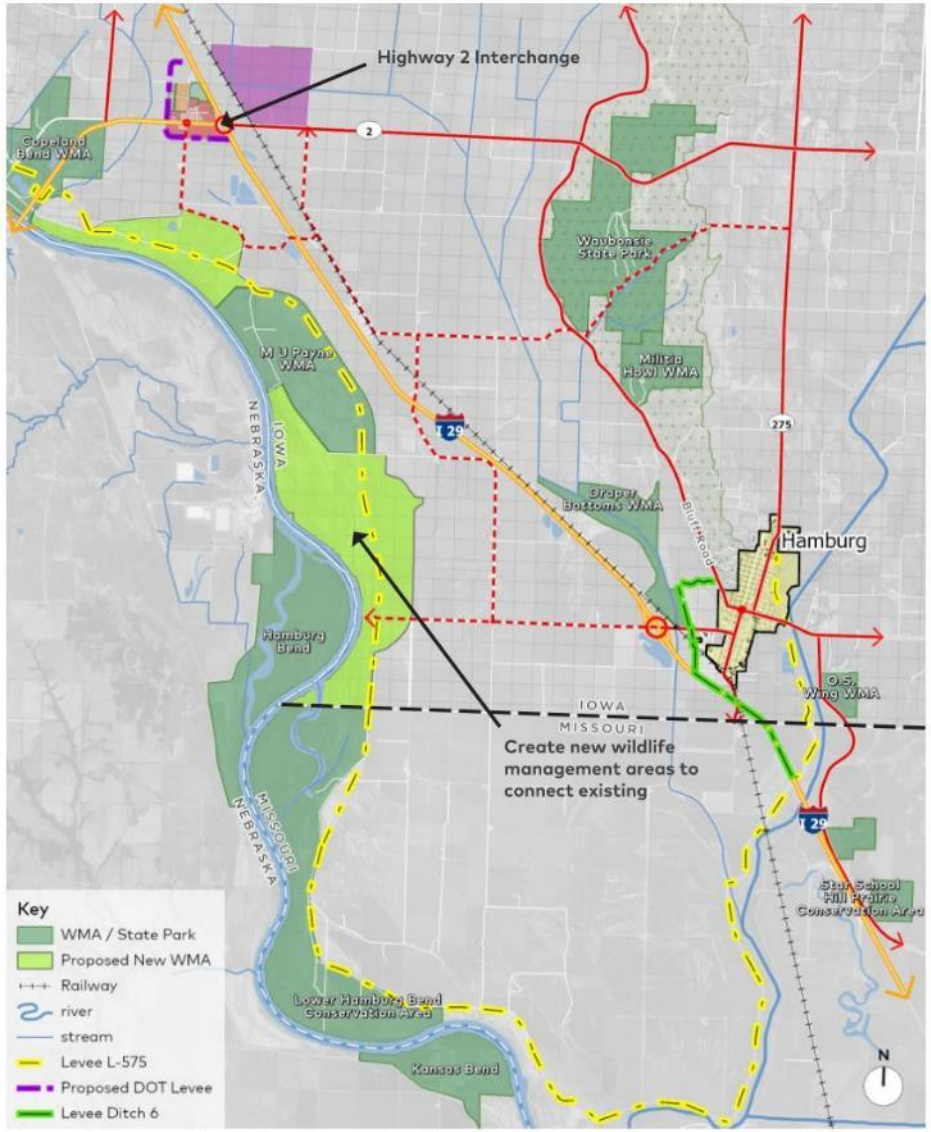
I-29 & Hwy 2 Interchange during 2019 flood event; Source: Fremont County Emergency Management

I29 & Hwy 2 Interchange during 2019 flood event; Source: Fremont County Emergency Management

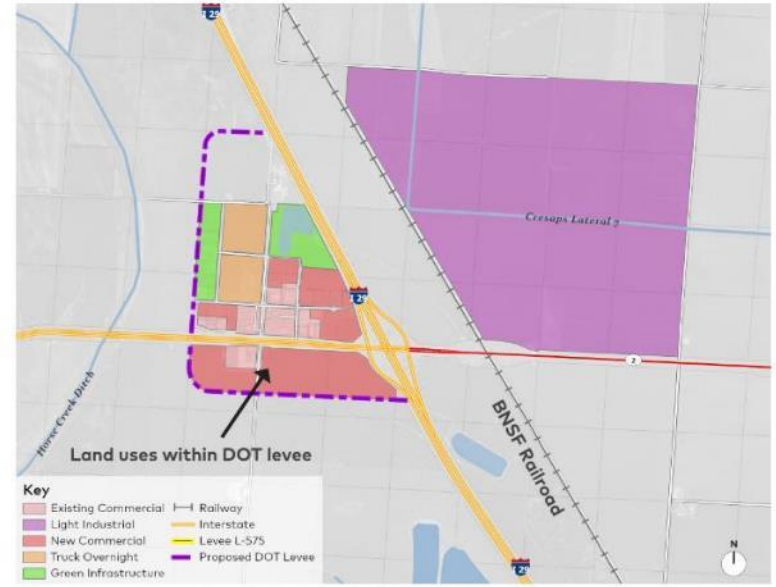


Iowa Transportation Commission; resiliency investment since 2019 floods: $54.5 million

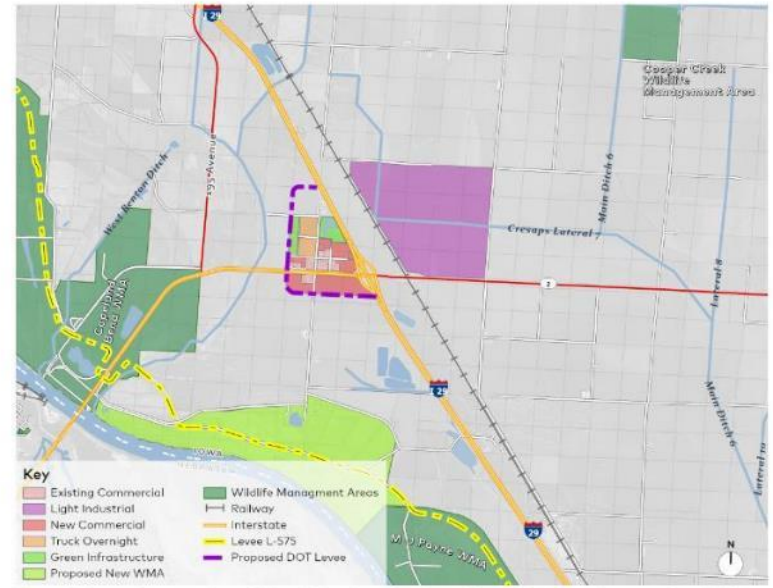
Overflow bridge



Regional diagram of Hamburg in relationship to Hwy 2 Interchange and Missouri River

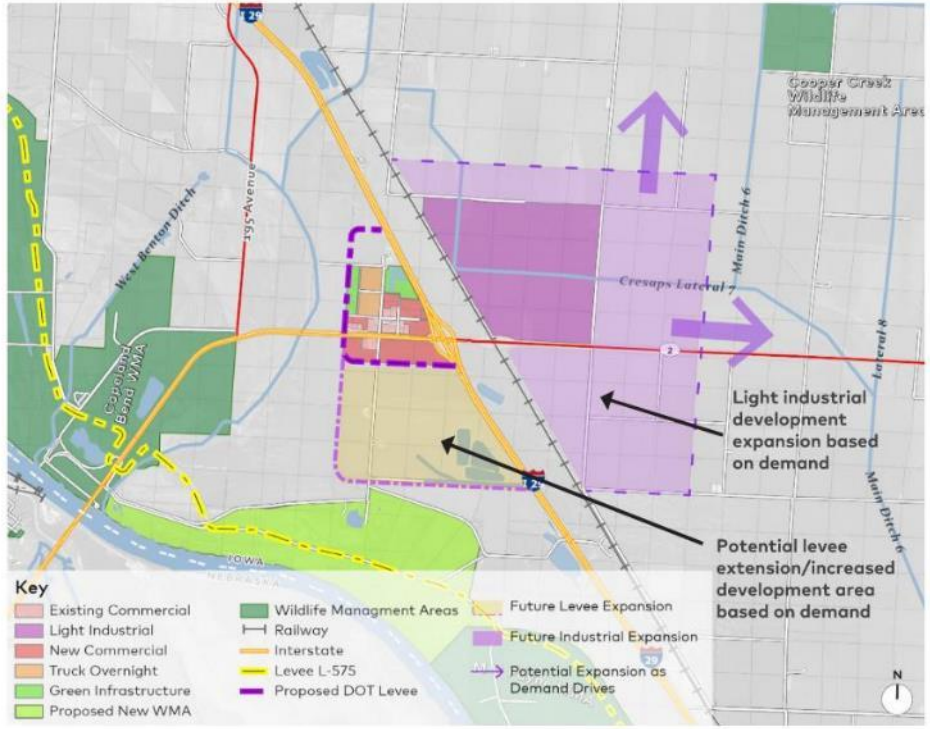


Hwy 2 Interchange Land Use Plan indicating DOT levee



Hwy 2 Interchange Land Use Plan in relationship with the river and wildlife management areas.

Example of solar energy field the size of what has been discussed in the area



Hwy 2 Interchange Land Use Plan in relationship with the river and wildlife management areas, indicating potential expansion of development based on demand

Existing Sapp Bros truck stop

Existing Motel 6

Opportunity for RV development

Opportunity to connect & increase wildlife management areas and to Missouri River

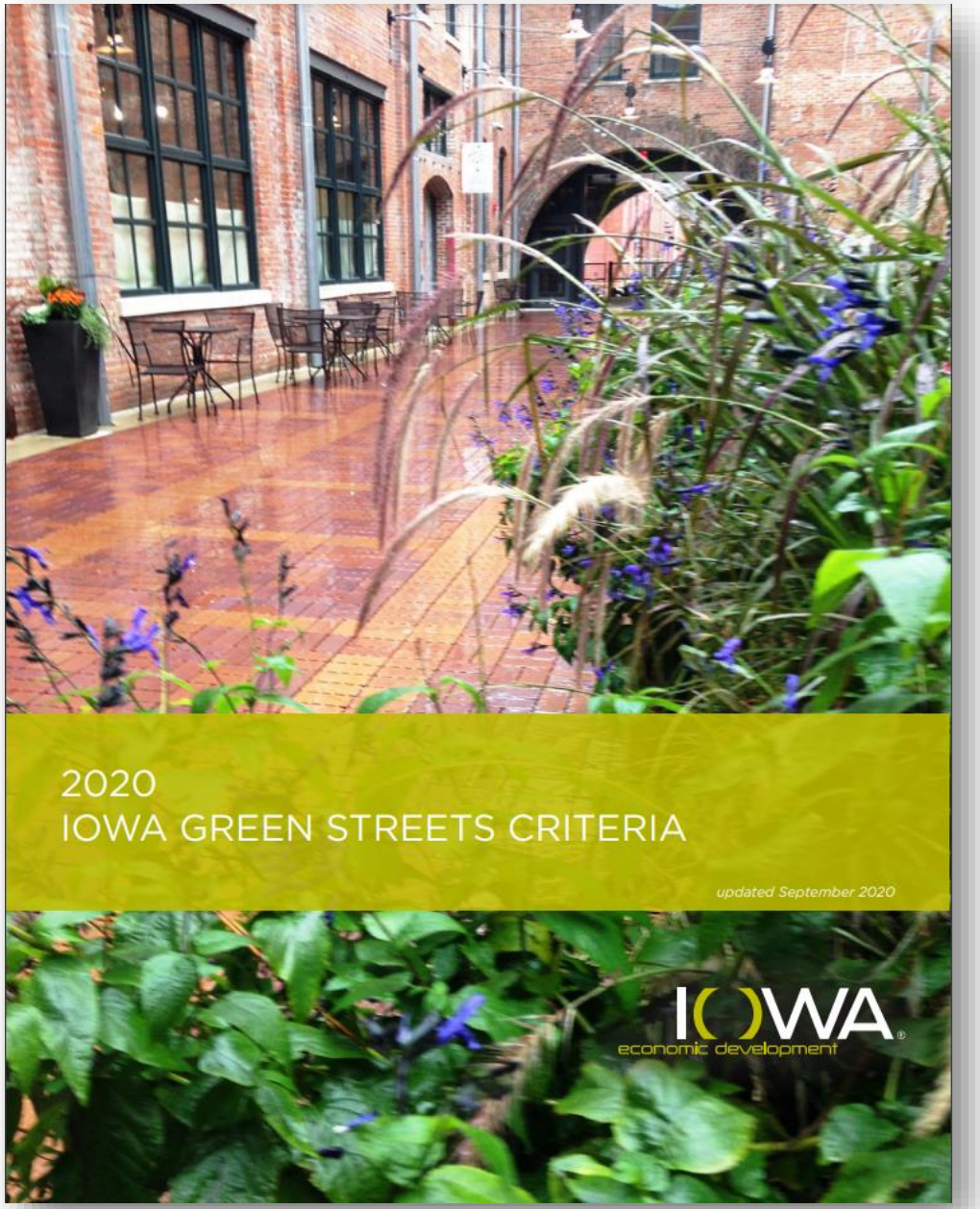
Opportunities for light industrial, warehousing, and distribution facilities

Iowa Economic Development Authority

Iowa Green Streets Criteria

Guiding Principles

- Results in a high-quality, healthy living and working environments
- Lower utility Costs
- Enhance connections to nature
- Protect the environment by conserving energy, water, materials, and other resources
- Advance the health of local and regional ecosystems



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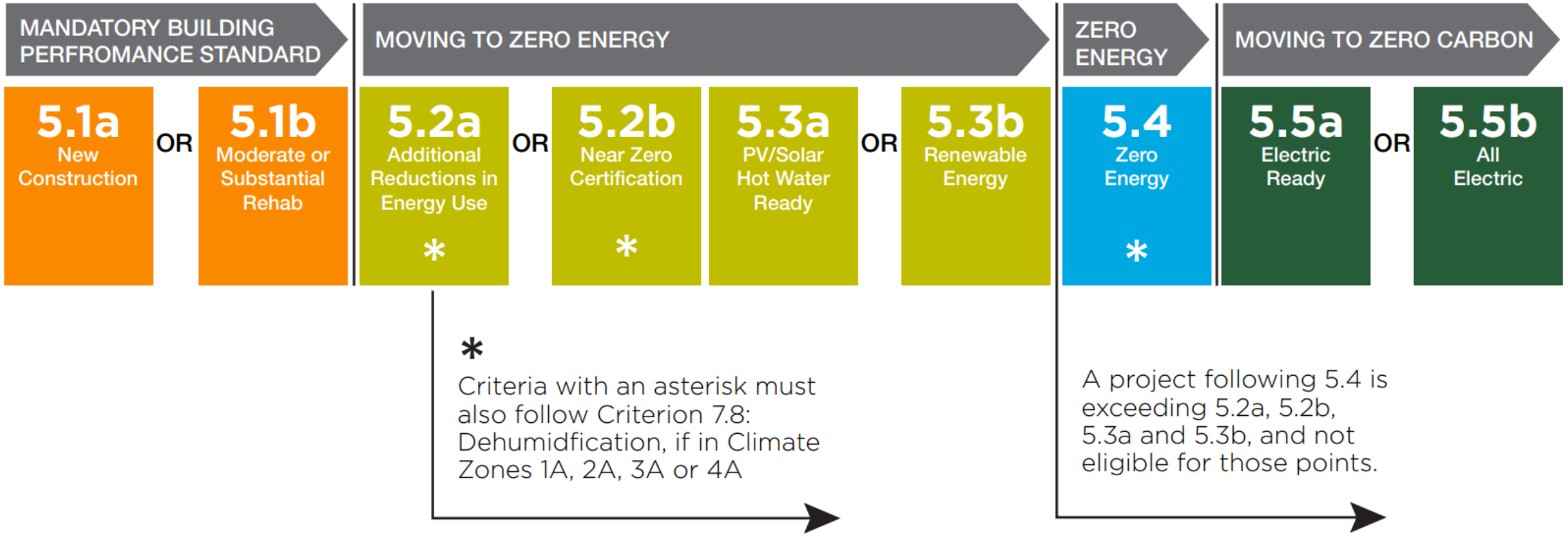
PATH TO ZERO



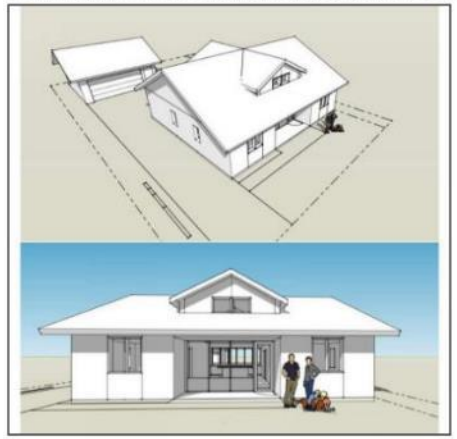
ENERGY PERFORMANCE RATINGS

ITEM	MINIMUM REQUIRED
Residential New Construction	Home Energy Rating System (HERS) Index ≤ 61, (HERS) Index ≤ 56 required for Disaster Recovery Housing Projects.

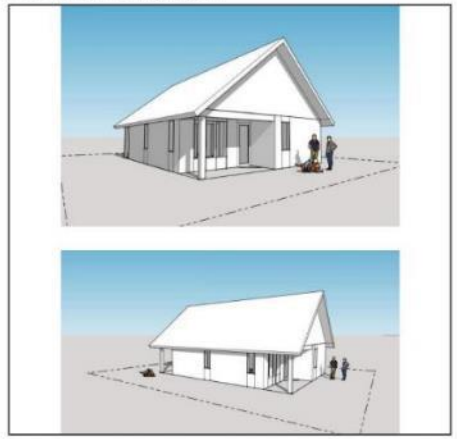
Green Streets Energy Requirements

CONSTRUCTION OF HIGH-PERFORMANCE NEIGHBORHOOD - NORTH RIDGE HILLS

North Ridge Hills development proposal; CDBG HUD awarded project

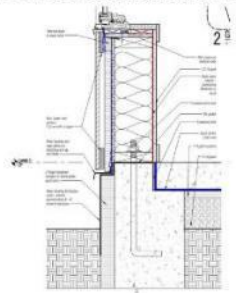


High-performance home design; DOE Zero Energy Ready



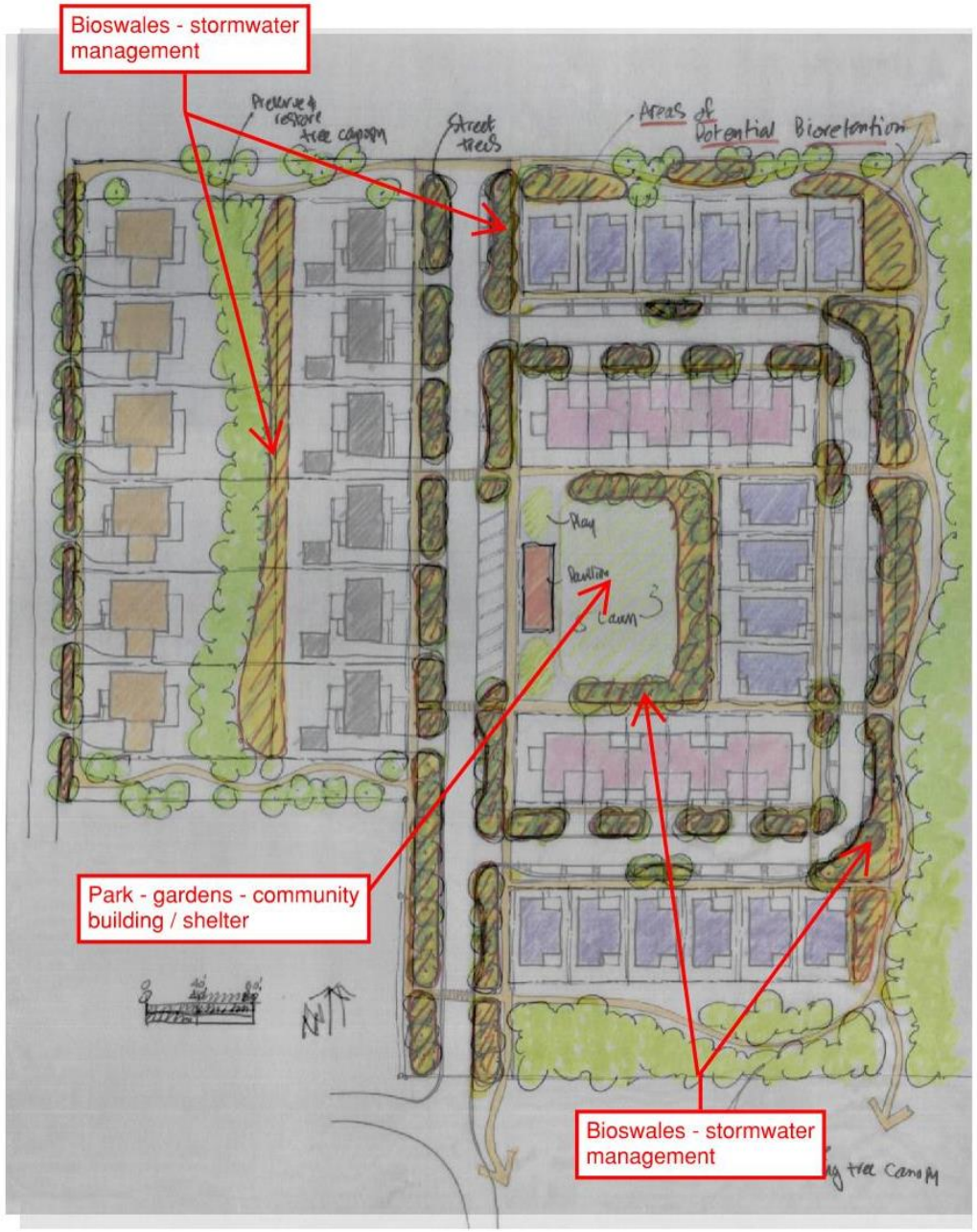
High-performance home design; DOE Zero Energy Ready

Main Street extension into North Ridge Hills development



High-performances wall section

Native landscape concept and stormwater management



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Adam & Amber
Keller

Hamburg - Northridge Housing Development - Prototype 001

NORTH-EAST ELEVATION

NORTH ELEVATION (FACING STREET)

SOUTH-WEST ELEVATION

SOUTH ELEVATION (FACING BACKYARD)

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BNIM Architects — Architect

Faber Rhodes — Structural

Lamp Rynearson — Civil

KCL Engineering — MEP

David Yocca, FASLA, PLA — Landscape

317 6th Avenue Suite 100
Des Moines, IA 50309

Project No: 21026.01

Issued Issue Date

Rev. #	Description	Date Issued

PRELIMINARY NOT FOR CONSTRUCTION

Cover Sheet

001.1

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Hamburg - Northridge Housing Development - Prototype 002

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NORTH-EAST ELEVATION

NORTH ELEVATION (FACING STREET)

SOUTH-WEST ELEVATION

SOUTH ELEVATION (FACING BACKYARD)

001 Cover sheet
002 Floor Plans
003 Elevations
004 Sections
005 Details
006 Roof Plan
007 Framing Plans

Schematic Design Documents

Brunow Contracting LLC

www.brunowcontracting.com

Project No: 21026.01

Cover Sheet

001.2

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Hamburg - Northridge Housing Development - Prototype 003

NORTH-WEST ELEVATION

NORTH ELEVATION (FACING STREET)

SOUTH-EAST ELEVATION

SOUTH ELEVATION (FACING BACKYARD)

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BNIM Architects

001 Cover Sheet
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Schematic Design Documents

Brunow Contracting LLC

www.brunowcontracting.com

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Cover Sheet

001.3

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2022 APA Iowa Planning Conference

A Vision of Hope for Mills & Fremont Counties Post 2019 Historic Flooding

Alexsis Fleener, AICP / Kevin Nordmeyer, AIA

10.14.22

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