

COUNCIL AGENDA
CITY OF ESTHERVILLE, IOWA
Tuesday, March 14, 2023, 5:00 P.M.

WORKSHOP

Anyone may join using the following Zoom meeting details or attend in person.

Join Zoom Meeting

<https://us02web.zoom.us/j/88289290199?pwd=c2FHelpBMURsVy9vSVdMMmlkN09VUT09>

Meeting ID: 882 8929 0199

Password: 946016

One tap mobile

+13126266799, 88289290199#

Call: (312) 626-6799, meeting number is 882 8929 0199

ROLL CALL:

Carbon Pipelines

The Council will be presented with information from the following stakeholders regarding the proposed Carbon Pipelines.

- 5:00 Navigator CO2
- 5:15 Summit Carbon
- 5:30 Megan Sloma

Times are approximate and subject to change.

No public forum will be held during this Council Workshop.

No action will be taken by the Council at this Workshop.

ADJOURNMENT



Navigator CO₂

PROJECT OVERVIEW

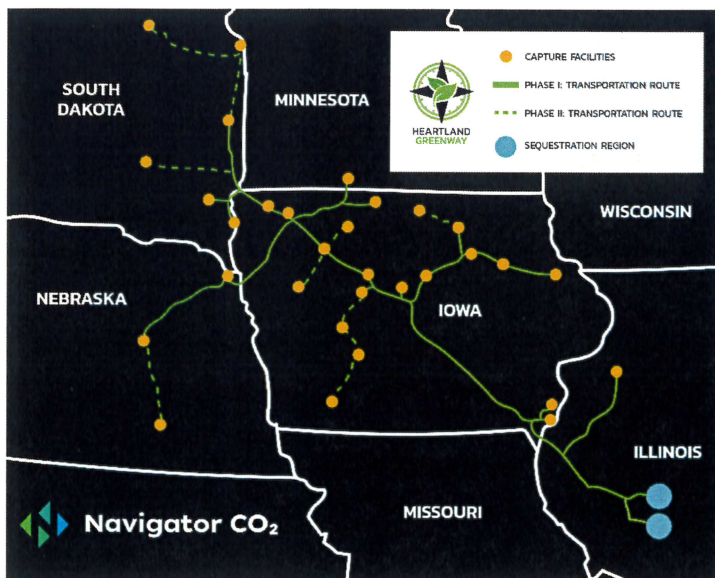
The Heartland Greenway carbon capture, utilization, and storage (CCUS) system will provide biofuel producers and other industrial customers in the Midwest with a long-term, cost-effective means to reduce their carbon footprint.

This multi-faceted project will assist customers in constructing and financing carbon dioxide (CO₂) capture equipment; safely transporting the captured CO₂ over a newly constructed approximately 1,300-mile pipeline network; and permanently storing the carbon in secure, underground sites being actively developed in south-central Illinois.

The multi-billion-dollar investment will connect rural industrial producers in Iowa, Illinois, Minnesota, Nebraska and South Dakota at more than 30 receipt points to ultimately capture and store approximately 15 million metric tons of CO₂ per year once fully expanded.

PROJECT PURPOSE

Reducing the transportation sector's carbon output is key to meeting global GHG emissions targets. By providing an economic means to reduce the carbon footprint of homegrown biofuels, the Heartland Greenway will enable producers to create a more sustainable, premium product to bring to market.



HEARTLAND
GREENWAY

PROJECT IMPACT

Reduces GHG Emissions

Once fully expanded, the system's carbon offset will be equivalent to the emissions of 3.2M passenger cars driven annually

Strengthens Communities

Creates jobs and increases tax revenue to local communities and counties over the footprint and life of the project

Crop Yield Sustainability

Adds value to the agricultural supply chain by increasing the marketability and viability of biofuels such as ethanol



HEARTLAND
GREENWAY

PIPELINE SAFETY

- Pipelines are among the safest, most environmentally friendly, and reliable methods of transporting the products we use every day.
- This project will be designed, constructed and operated to meet or exceed all federal, state and local regulations.
- Internal and external integrity assessments will be made before and after placing the system in service.
- We will have enhanced monitoring systems in place 24 hours a day, 7 days a week, 365 days a year.

EXPECTED TIMELINE

Second Quarter – Third Quarter 2022

Preliminary field surveying and
installation methodology

Fourth Quarter 2023

Anticipated receipt of federal and state permits

Second Quarter 2024 – Fourth Quarter 2024

Construction phase

Fourth Quarter 2024 – Second Quarter 2025

Initial system commissioning

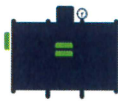
CARBON CAPTURE EXPLAINED



CO₂ is produced as a byproduct of the manufacturing process



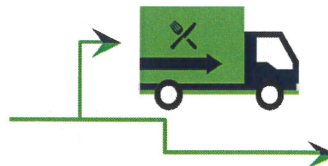
DEHYDRATION



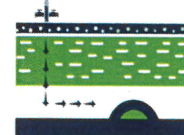
COMPRESSION



Liquid CO₂ is gathered from connected facilities and transported in a network of steel pipeline



Liquid CO₂ is made available via truck terminals and pipeline offtake connections for commercial or industrial uses



CO₂ is injected more than a mile beneath thick layers of rock for permanent storage

ECONOMIC BENEFITS



8,000

contract
positions created
during
construction



Property tax
revenue for local
communities and
counties



80

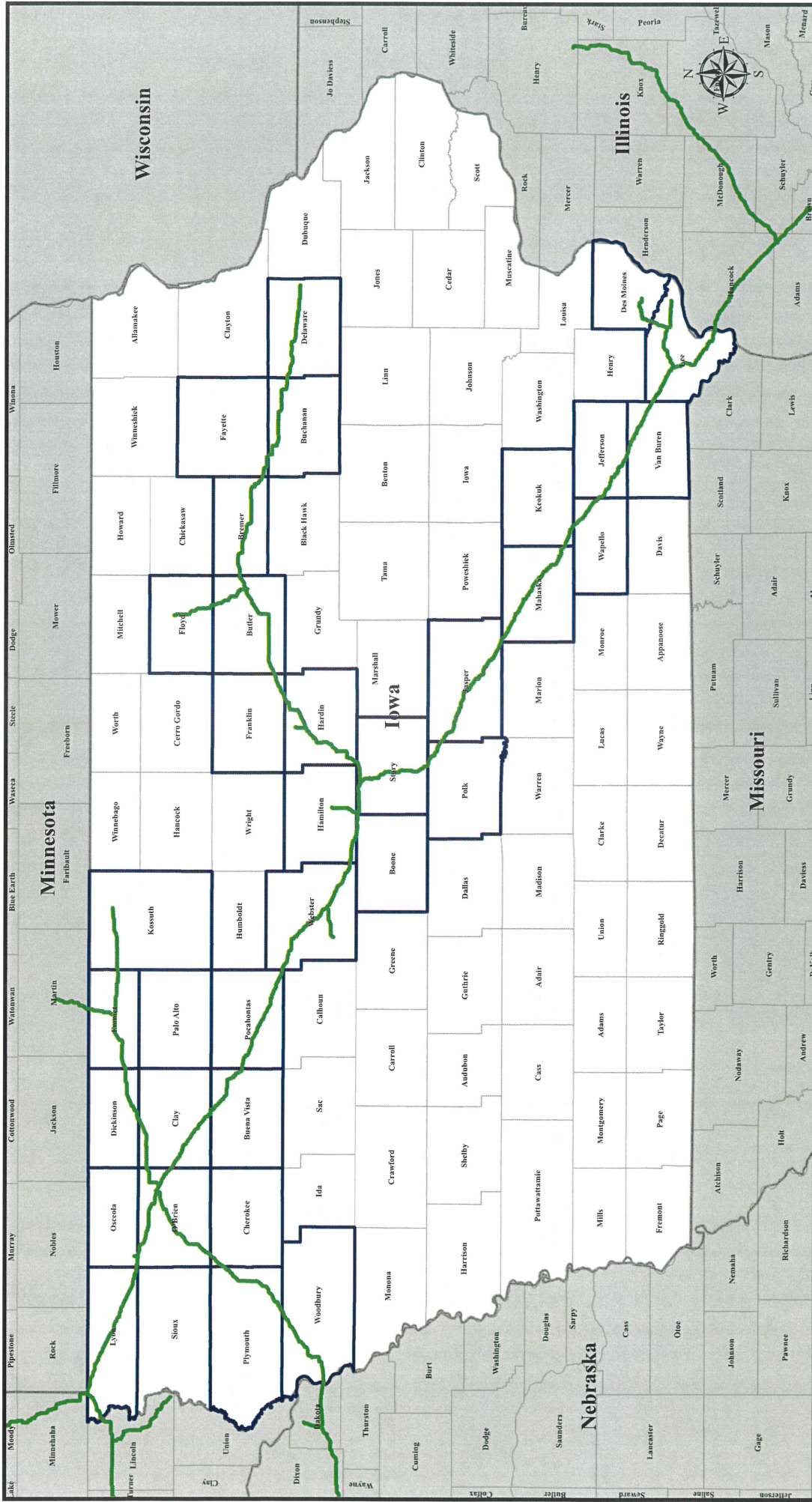
full-time
employees
once project is
complete

ABOUT NAVIGATOR

Navigator CO₂ Ventures is pioneering a path to sustainable carbon solutions, while maximizing value for all stakeholders in the new carbon economy.

Since our inception in 2012, the Navigator service team has safely constructed and operated more than 1,300 miles of new midstream infrastructure.

For more information about the project, visit www.heartlandgreenway.com.



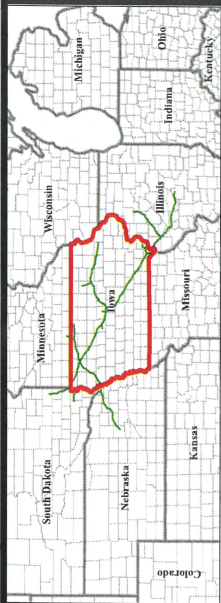
NAVIGATOR CO²

VENTURES LLC

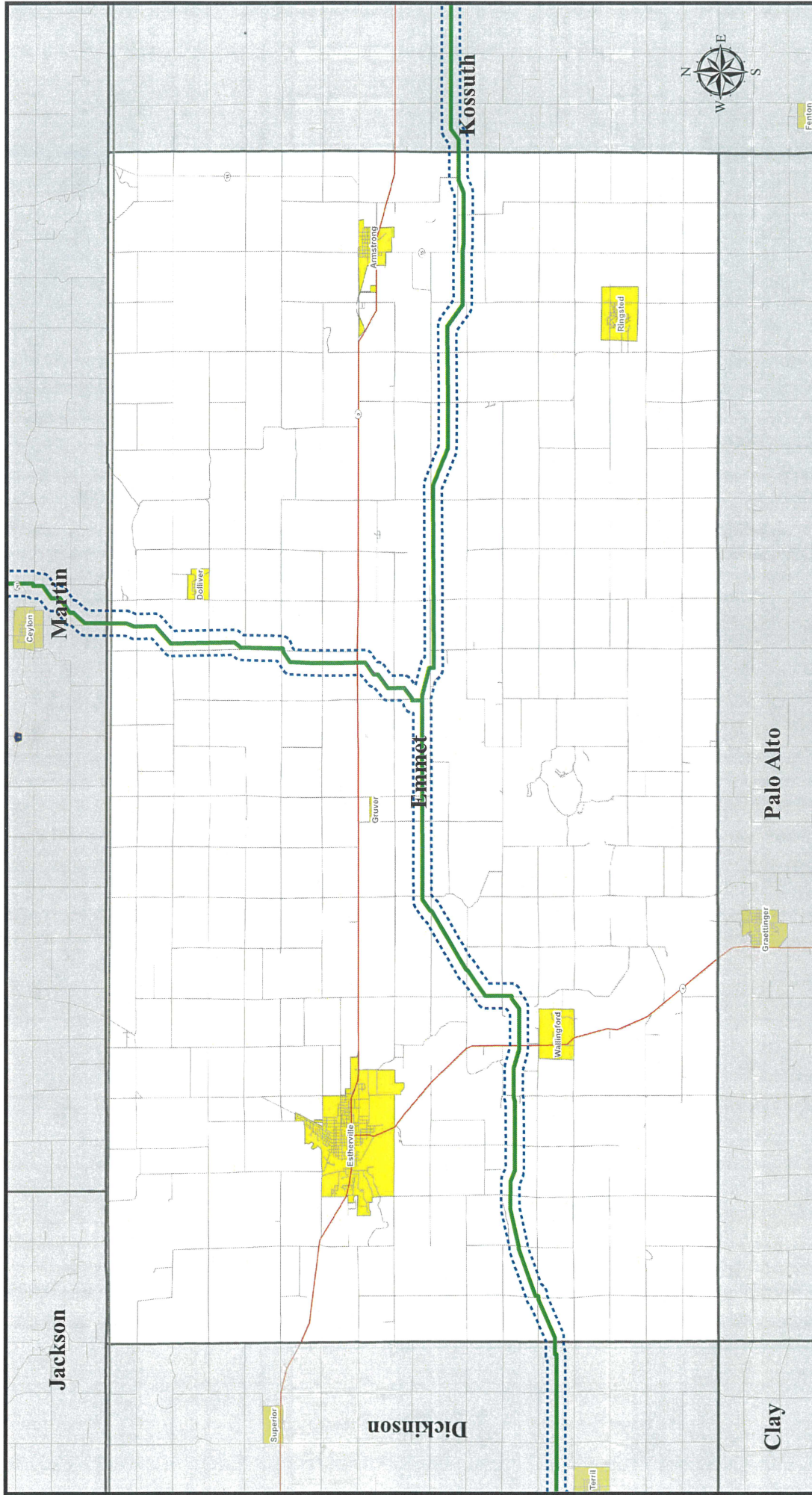


Iowa
Heartland Greenway System
Length in State:
810.15 miles

Parcels in State:



- Legend**
- Heartland Greenway – Proposed Centerline
 - Centerline County
 - Counties
 - States



Legend

- Heartland Greenway – Proposed Centerline
- - - Route Corridor – 1/4 mi each side of Centerline
- States
- Counties
- Interstates/Highways
- Roads
- High Populated Areas
- Other Populated Areas

Emmet County, Iowa

Heartland Greenway System
Length in County:
35.53 miles

Parcels in Notification Corridor:
CL Parcels:
Corridor Parcels:

Navigator CO₂

TOPOGRAPHIC
COURTESY INNOVATION LOGIC

0 20 40 80 120 160 Miles



Navigator CO₂

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Heartland Greenway Safety Overview

Navigator's Safety Commitment

At Navigator CO₂, we believe we have a responsibility to uphold rigorous environmental, health, and safety standards. That's why we strive to be good neighbors, while making safety a priority, and sharing our success with the communities we operate in.

Our team has a strong track record in developing infrastructure, having safely constructed and operated over 1,300 miles of pipeline in communities around the U.S. As a company, Navigator CO₂ is committed to designing, constructing, operating, and maintaining the Heartland Greenway system safely and reliably, working in parallel with local, state, and federal regulators.



Design and Routing

The Heartland Greenway system has been routed to minimize the collective impact to high populous areas, vulnerable places of gathering, and other sensitive areas. The system route will also follow other existing utilities, when practical.

The pipeline will be designed and constructed to meet or exceed minimum safety, design, construction and operating standards. Safety elements will include:

- » Carbon steel line pipe specifically engineered for CO₂ transportation
- » Increased depth of cover to 60" vs 36" to reduce the risk of third party damage and stay beneath all existing drain tile and utilities
- » Damage prevention tape installed 2' above the pipeline as a proactive warning measure to third party excavations



NAV911



The "Nav911" system will be developed and utilized for notification to residents and local responders in the event of an emergency.



Safety Overview Operations



Operational safety elements will be well-established prior to the start of construction. Not only will we meet the strict standards set out by state and federal regulators, we will also exceed many of them.

Navigator employees will be trained in an Operator qualification program to meet all Pipeline and Hazardous Materials Safety Administration (PHMSA) requirements, and will have supplemental training in OSHA Hazwoper, CO₂ Handling, Measurement, and Sensor Calibration. Employees will also be trained to manage and coordinate response efforts, including notifying local property owners, local, federal and/or HCA liaisons.

Prior to beginning operations, we will provide first responders along the route with training and tools that will include education, planning, equipment, and drills.

Operational safety elements will also include:

- » **Redundant communication and power supply at all connection points, critical valves, and metering facilities**
- » **CO₂ quality controls to ensure no contaminants adversely impact the system, environment, or public**
- » **Cathodic Protection (CP) system to safeguard against corrosion and preserve the integrity of the pipeline**
- » **Utilization of the 811 Call System for identification of 3rd party utilities**



Emergency Response

01

CONCERN IDENTIFIED

Incident identified by control center, field employee, or member of the public



02

SHUT DOWN LINE

Pipeline is safely shut down by Navigator personnel



03

CONTACT FIRST RESPONDERS

Includes emergency personnel and employees who are trained to manage response efforts, including the notification of affected parties



04

IDENTIFY AND DEPLOY EMERGENCY RESPONSE EQUIPMENT & MEASURES

Begin coordination to assess the situation, evacuate area if necessary, and implement safety protocols



05

CLOSE OUT AND RESOLUTION

Report to proper authorities. When deemed safe, pipeline and facility operations resume

Leak Detection and Continuous Monitoring



24/7 Continuous Monitoring

Internal and external systems to include pressure monitoring, mass balance system, and real time transient model (RTTM)



Semi-Monthly Aerial Patrol

Surveillance along pipeline route to identify potential risks



CO₂ Detection Devices

Installed at locations along pipeline route and booster stations

Heartland Greenway CFR 49 Part 195 Exceedance Summary



CFR 49 Part 195 Subpart		CFR 49 Part 195 Reference	CFR 49 Part 195 Requirement	Heartland Greenway Pipeline System Compliance Measures
A - General		CFR 195.11	Regulated rural gathering lines	Certain segments of the NHG system meet the definitions provided in this section. For these segments, NHG will meet this regulation as stated in 49 CFR 195.
C - Design Requirements		CFR 195.106	Internal Design Pressure - A design factor of 0.72 is permitted throughout the entire pipeline system which equates to the following required wall thicknesses utilizing a MOP of 2,200 psi: 6.625" pipe - 0.169" WT @ X60 Grade 8.625" pipe - 0.220" WT @ X60 Grade 12.75" pipe - 0.300" WT @ X65 Grade 16" pipe - 0.376" WT @ X65 Grade 20" pipe - 0.470" WT @ X65 Grade	NHG will exceed requirements as stated in 49 CFR 195 by increasing the nominal wall thickness for the pipe which results in a higher calculated MOP versus the proposed system MOP of 2,200 psi. NHG proposed wall thicknesses for each of the pipe diameters is as follows: 6.625" pipe - 0.250" WT @ X60 Grade - (Design Factor = 0.49) 8.625" pipe - 0.277" WT @ X60 Grade - (Design Factor = 0.57) 12.75" pipe - 0.344" WT @ X65 Grade - (Design Factor = 0.63) 16" pipe - 0.429" WT @ X65 Grade - (Design Factor = 0.63) 20" pipe - 0.535" WT @ X65 Grade - (Design Factor = 0.63) In addition, NHG will utilize pipe with an increased wall thickness for road crossings, bores, horizontal directional drilled crossings and within the fence line at facilities (MLV settings, Pump Station).
C - Design Requirements		CFR 195.111	Fracture propagation - CO2 pipeline system must be designed to mitigate the effects of fracture propagation.	NHG will exceed requirements as stated in 49 CFR 195. NHG engaged the services of Det Norske Veritas (DNV) to assist with an extensive fracture propagation and ductility analysis to determine the required metallurgical properties for the proposed pipeline system as well as utilize crack arrestors.
C - Design Requirements		CFR 195.112	New pipe - requirements associated with the installation of new pipe.	NHG will exceed requirements as stated in 49 CFR 195. All pipelines will be specified to API 5L, PSL-2 standards which mandates additional metallurgical requirements, inspections and record retention. In addition, all pipelines will be manufactured in accordance with the NHG developed Line Pipe specification.
C - Design Requirements		CFR 195.134	Leak detection - requirements associated with the design and installation of leak detection systems for pipelines transporting hazardous liquids.	NHG will exceed requirements as stated in 49 CFR 195, inclusive of computational pipeline monitoring (CPM) system requirements as well as advanced leak detection technology (i.e. fiber/acoustics/negative pressure wave) at various locations along the NHG.

Heartland Greenway CFR 49 Part 195 Exceedance Summary



CFR 49 Part 195 Subpart		CFR 49 Part 195 Reference	CFR 49 Part 195 Requirement	Heartland Greenway Pipeline System Compliance Measures
D - Construction		CFR 195.206	Material inspection - requires all components to be visually inspected at the site prior to installation.	NHG will exceed requirements as stated in 49 CFR 195 by performing inspection on all phases of the pipe manufacturing at each pipe mill to ensure full compliance with all quality control measures. In addition, NHG will perform factory acceptance tests (FAT) for each pre-manufactured component for facilities (pumps, compressors, dehydration units, etc.).
D - Construction		CFR 195.210	Pipeline Location - Right of way selected to avoid, as far as practicable, private dwellings, industrial buildings and places of public assembly and if not feasible, shall have minimum 12-inches of cover.	NHG will exceed requirements as stated in 49 CFR 195. NHG has made additional effort to minimize the collective impact and will utilize plume modeling for buffer zones where applicable that exceed part 195 as well as maintain a min of 60" of cover.
D - Construction		CFR 195.234	Welds: Nondestructive testing During construction, at least 10 percent of the girth welds made by each welder and welding operator during each welding day must be nondestructively tested over the entire circumference of the weld.	NHG will exceed requirements as stated in 49 CFR 195 by requiring 100 percent of all girth welds to be nondestructively tested.
D - Construction		CFR 195.248	Cover over buried pipeline 1) Below the cultivation line or to a depth of 30-inches, whichever is greater 2) Industrial, commercial and residential areas - 36" required 3) Drainage ditches at public roads and railroads - 36" required 4) Waterbodies 100-foot and greater - 48" required	NHG will exceed all requirements associated with pipeline cover: 1) NHG will have a minimum cover of 60" (5 feet) 2) NHG will have a minimum cover of 60" (5 feet) 3) NHG will have a minimum cover of 60" (5 feet) 4) NHG will utilize horizontal directional technology to cross waterbodies 100-foot and greater which will result in depth of cover far greater than the required 48" (NCO2V spec ~25')
D - Construction		CFR 195.250	Clearance between pipe and underground structures - minimum clearance is 12" with allowance of 2" clearance from drain tiles	NHG will exceed this requirement in most cases. NHG will utilize a 18" clearance between the outside of the pipe and the extremity of any underground structure, including drain tiles, where feasible. In the event 18" clearance cannot be achieved, NHG will meet the minimum requirements stated in 49 CFR 195.

Heartland Greenway CFR 49 Part 195 Exceedance Summary



CFR 49 Part 195 Subpart		CFR 49 Part 195 Reference	CFR 49 Part 195 Requirement	Heartland Greenway Pipeline System Compliance Measures
D - Construction		CFR 195.260	<p>Valves: Location</p> <p>a) On suction end and discharge end of pump station</p> <p>b) On each pipeline entering or leaving breakout storage tank</p> <p>c) Non HVL pipelines - 15-mile max spacing in HCA areas / 20-mile max spacing in non HCA</p> <p>d) On each lateral takeoff from a pipeline</p> <p>e) On each side of water crossing(s) that are 100-feet wide (high water to high water)</p> <p>f) On each side of reservoir holding water for human consumption</p> <p>g) HVL pipelines - 7.5 mile max spacing in HCA areas / 20-mile max spacing in non HCA</p>	<p>The following is the NHG valve installation philosophy:</p> <p>a) NHG will exceed requirement due to location of additional MLVs per risk assessment</p> <p>b) N/A</p> <p>c) N/A - CO2 considered to be HVL</p> <p>d) NHG will meet requirement</p> <p>e) NHG will meet requirement</p> <p>f) N/A - no reservoirs within proposed project footprint</p> <p>g) NHG will exceed requirement due to location of additional MLVs per risk assessment</p>
E - Pressure Testing		CFR 195.304	Test Pressure - requires hydrotest for 4 hours at 125% MOP plus additional 4 hours at 110% MOP.	NHG will exceed this requirement by testing all pipeline systems for 8 hours at 125% MOP.
F - Operation and Maintenance		CFR 195.402	Procedural manual for operations, maintenance, and emergencies. Prepare and follow a manual of written procedures and reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence.	NHG intends to have the plan developed well in advance of operations (90- 180 days prior to in- service) and vetted prior to operations. NHG will review the plan bi-annually, well in exceedance of the requirement to do so every 15 months and at least once each calendar year.
F - Operation and Maintenance		CFR 195.403	Emergency response training - Review and make appropriate changes at intervals not exceeding 15 months and at least once every calendar year.	NHG will review and make changes biannually. Training will include desktop drills and mock drills, detailed recording of the steps will be compared to procedures with follow-up meetings with participants to review, validate, correct and update the plan.
F - Operation and Maintenance		CFR 195.406	Maximum operating pressure	NHG will have soft alarms set below 110% to raise awareness for potential problem areas in advance of hard alarm that sets relief, shut down, etc.
F - Operation and Maintenance		CFR 195.407	Communications - reliable communication.	NHG will have primary communication sources in additional back-up power and communication to ensure constant communication.

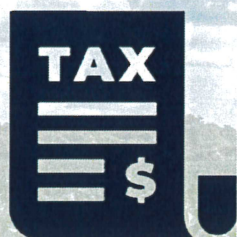
Heartland Greenway CFR 49 Part 195 Exceedance Summary



CFR 49 Part 195 Subpart		CFR 49 Part 195 Reference	CFR 49 Part 195 Requirement	Heartland Greenway Pipeline System Compliance Measures
F - Operation and Maintenance	CFR 195.414		Inspections of pipelines in areas affected by extreme weather and natural disasters to commence within 72 hours after cessation of the event.	NHG intends to exceed this requirement by commencing inspections within 24 hours after cessation of the event.
F - Operation and Maintenance	CFR 195.412		Inspection of rights-of-way - inspections are required 26 times each calendar year with intervals not exceeding 3 weeks.	NHG will exceed this requirement by performing right of way inspections ideally every 10 days and not less than 26 times each calendar year with intervals not exceeding 3 weeks.
F - Operation and Maintenance	CFR 195.440		Public Awareness	Public awareness will conservatively include stakeholders beyond the modeled areas of potential impact. NHG will perform an HCA risk analysis at operations.
F - Operation and Maintenance	CFR 195.444		Leak Detection (b) General. A pipeline must have an effective system for detecting leaks in accordance with §§ 195.134 or 195.452, as appropriate. An operator must evaluate the capability of its leak detection system to protect the public, property, and the environment and modify it as necessary to do so. At a minimum, an operator's evaluation must consider the following factors - length and size of the pipeline, type of product carried, the swiftness of leak detection, location of nearest response personnel, and leak history. (c) CPM leak detection systems. Each computational pipeline monitoring (CPM) leak detection system installed on a hazardous liquid pipeline must comply with API RP 1130 (incorporated by reference, see § 195.3) in operating, maintaining, testing, record keeping, and dispatcher training of the system.	NHG will exceed requirements as stated in 49 CFR 195 by utilizing multiple means to detect a leak via a combination of external systems: -Fiber optic sensing cables (including acoustic and negative pressure wave data) -CO2 monitoring devices And internal computational pipeline monitoring (CPM) systems on all pipeline diameters of the system: -Real time transient model -Pressure/flow/temperature monitoring -Statistical Analysis Evaluating drone technologies to supplement/validate leak detection.
H - Corrosion Control	CFR 195.563		Cathodic protection must be activated within 1 year after the pipeline begins operation.	NHG will exceed this requirement by activating cathodic protection systems in stages along the right of way as the pipelines are backfilled and completed. A fully functional cathodic protection system will be operational well in advance of the 1 year requirement.
Miscellaneous	N/A		No requirement	An Internal Line Inspection deformation tool will be run through the entire pipeline system prior to start-up to ensure quality of installation.

Heartland Greenway

Economic Benefits



**\$30.5
Million**

Annual Property
Taxes Generated



17,045

Employment Opportunities at
Peak Construction¹

8,672

Direct Good-Paying
Construction Jobs



**\$121
Million**

Growth of Net
Farm Income in the
First 10 Years



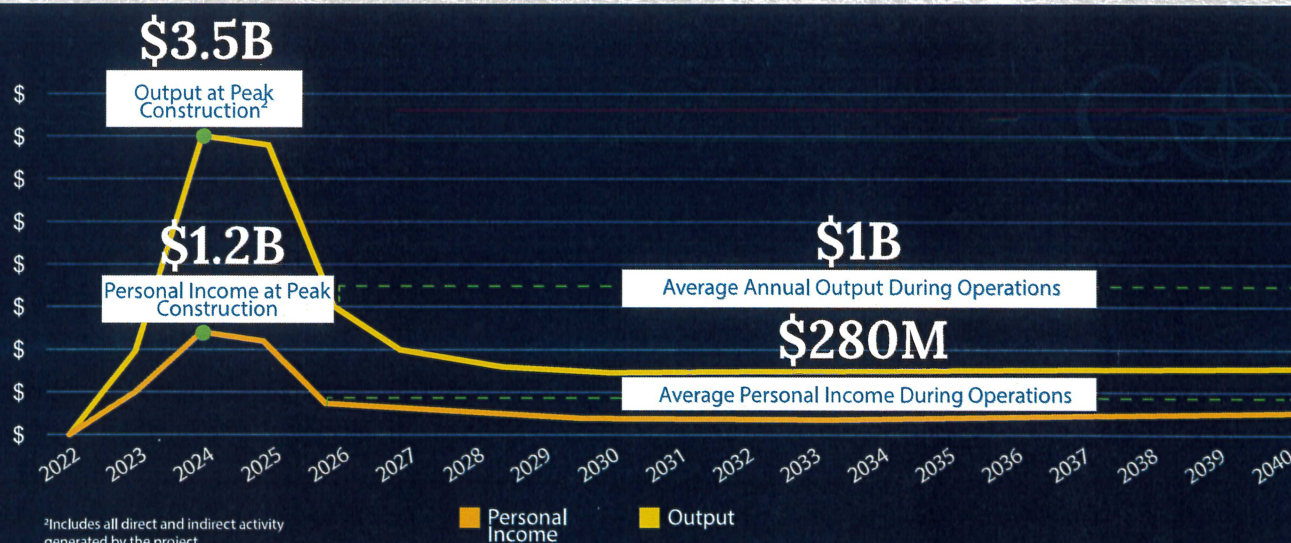
\$869 Million

Total Peak Construction
Wages

\$50,976

Average Wage

¹Includes direct and indirect employment opportunities



Our system will provide biofuel producers and other rural industrial processors in five Midwest states with a **long-term** and **cost-effective** means to reduce their carbon footprint.



Iowa

Economic Benefits



**\$1.65
Billion**

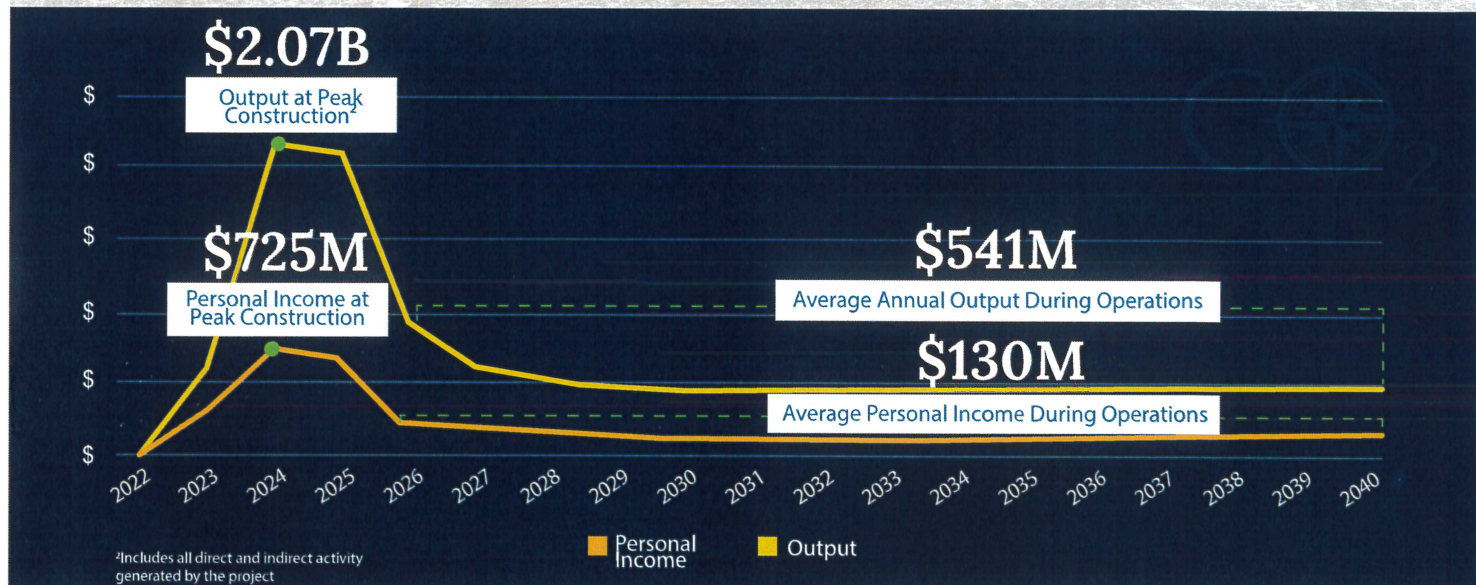
Capital Investment
in Iowa

¹Includes direct and indirect employment opportunities

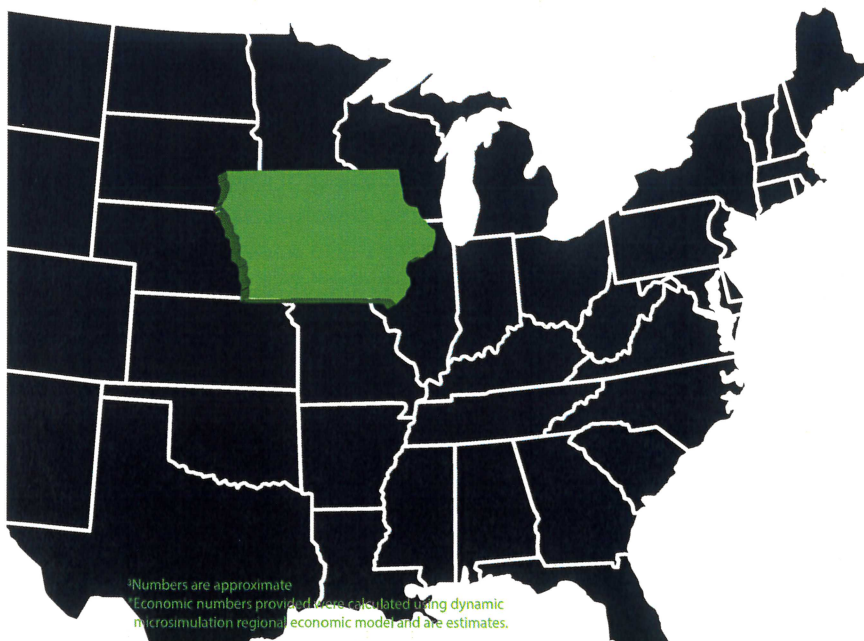


10,322

Employment
Opportunities at Peak
Construction¹



NAVIGATOR CO₂ VENTURES



³Numbers are approximate
⁴Economic numbers provided were calculated using dynamic microsimulation regional economic model and are estimates.

\$24.5M

Annual Property Taxes
Generated in Iowa

3.5M Metric Tons

of CO₂ Captured in Iowa Every Year³

From Local Facilities That Process

900M Gallons

of Ethanol and

2.2M Tons

of Fertilizer Annually³

Iowa

Numbers by County

County	Annual Direct Property Taxes (\$)	2024 Construction Phase Personal Income (\$Mil)	2030 Operations Phase Personal Income (\$Mil)	2024 Construction Phase Output (\$Mil)	2030 Operations Phase Output (\$Mil)
Boone	176,291	3.59	0.57	11.39	2.51
Bremer	937,857	24.20	4.44	67.71	20.10
Buchanan	769,646	19.80	3.67	56.04	16.68
Buena Vista	512,567	10.43	1.66	33.13	7.30
Butler	1,205,650	24.54	3.91	77.92	17.18
Cherokee	171,653	3.49	0.56	11.09	2.45
Clay	1,011,841	20.59	3.28	65.40	14.42
Delaware	681,901	13.88	2.21	44.08	9.71
Des Moines	280,690	5.71	0.91	18.14	4.00
Dickinson	443,661	9.03	1.44	28.67	6.32
Emmet	1,091,764	22.22	3.54	70.56	15.56
Fayette	203,757	5.20	0.90	14.90	4.40
Floyd	436,853	8.89	1.42	28.23	6.22
Franklin	221,435	4.51	0.72	14.31	3.15
Hamilton	223,243	4.54	0.72	14.43	3.18
Hardin	1,034,191	21.05	3.35	66.84	14.74
Jasper	1,066,411	21.70	3.46	68.93	15.19
Jefferson	460,256	9.37	1.49	29.75	6.56
Keokuk	189,412	3.85	0.61	12.24	2.70
Kossuth	477,044	9.71	1.55	30.83	6.80
Lee	1,703,802	34.67	5.52	110.12	24.28
Lyon	1,169,286	23.80	3.79	75.57	16.66
Mahaska	1,289,538	26.24	4.18	83.35	18.37
O'Brien	2,021,531	41.14	6.55	130.66	28.80
Osceola	49,488	1.01	0.16	3.20	0.71
Plymouth	762,825	15.52	2.47	49.30	10.87
Pocahontas	907,310	18.46	2.94	58.64	12.93
Polk	257,399	5.24	0.83	16.64	3.67
Story	1,246,276	25.36	4.04	80.55	17.76
Van Buren	507,763	10.33	1.65	32.82	7.23
Wapello	479,761	9.76	1.55	31.01	6.84
Webster	1,660,393	33.79	5.38	107.32	23.66
Woodbury	859,312	17.49	2.78	55.54	12.24





SUMMIT CARBON SOLUTIONS

DRIVING ECONOMIC GROWTH IN THE MIDWEST

The ethanol industry utilizes approximately half of the corn produced in Iowa.

KEY ECONOMIC FACTS

Project-Wide (Construction Phase)

Total Investment	\$3.7 billion
Total Average Annual Jobs Created	11,427
Total Federal, State, Local Taxes Paid by SCS	\$371 million
Expenditures to Suppliers, Contractors, and More	\$2.1 billion
Total Right-of-Way and Other Landowner Payments	\$309 million

Project-Wide (Operations Phase)

Annual Expenditures	\$170 million
Total Jobs Supported	1,170
Expenditures to Suppliers, Contractors, and More	\$78 million
Total Federal, State, Local Taxes Paid by SCS	\$97 million

We are proud to partner with local and other skilled contractors to build this innovative new project.

SUPPORTING ETHANOL AND AGRICULTURE

Summit Carbon Solutions will bolster the ethanol and agricultural industries that are so critical to the Midwest economy. The ethanol industry:

- Supports 360,000 jobs
- Contributes more than \$45 billion to annual U.S. GDP
- Provides a \$14 billion boost to grain markets

The project will lower carbon intensity scores for the 32 ethanol plants who have chosen to partner with Summit Carbon Solutions. This will enable ethanol plants to keep their doors open and allow farmers to continue selling their corn for a high value.

PARTNERS IN IOWA

Corn LP – Goldfield (IA), **Golden Grain Energy** – Mason City (IA), **Green Plains, Inc.** – Shenandoah and Superior (IA), **Homeland Energy Solutions** – Lawler (IA), **Lincolnway Energy** – Nevada (IA), **Little Sioux Corn Processors** – Marcus (IA), **Louis Dreyfus** – Grand Junction (IA), **Pine Lake Processors** – Steamboat Rock (IA), **Plymouth Energy** – Merrill (IA), **Quad County Corn Processors** – Galva (IA), **Siouxland Energy Cooperative** – Sioux Center (IA)



**SUMMIT CARBON
SOLUTIONS**

SUPPORTING IOWA'S ECONOMY

BY COUNTY

The following table shows the projected amount of new property taxes each county will realize as part of the Summit Carbon Solutions project.

County	Total Investment (Const.)	Total Labor Income	New Property Taxes
Boone	\$1,163,000	\$488,000	\$45,000
Cerro Gordo	\$49,851,000	\$19,698,000	\$1,910,000
Cherokee	\$57,047,000	\$22,421,000	\$2,185,000
Chickasaw	\$49,091,000	\$19,085,000	\$1,881,000
Clay	\$37,837,000	\$15,868,000	\$1,450,000
Crawford	\$22,237,000	\$9,368,000	\$856,000
Dickinson	\$39,239,000	\$15,508,000	\$1,503,000
Emmet	\$4,540,000	\$1,904,000	\$174,000
Floyd	\$22,702,200	\$9,521,000	\$870,000
Franklin	\$13,814,000	\$5,793,000	\$529,000
Fremont	\$28,396,000	\$10,701,000	\$1,088,000
Greene	\$34,334,000	\$13,191,000	\$1,315,000
Hancock	\$30,714,000	\$12,881,000	\$1,177,000
Hardin	\$56,706,000	\$22,573,000	\$2,172,000
Ida	\$43,810,000	\$17,426,000	\$1,678,000
Kossuth	\$22,056,000	\$9,250,000	\$845,000
Lyon	\$10,625,000	\$4,456,000	\$407,000
Montgomery	\$16,931,000	\$6,874,000	\$628,000
O'Brien	\$30,726,000	\$12,886,000	\$1,177,000
Page	\$6,394,000	\$2,681,000	\$245,000
Palo Alto	\$22,000,000	\$9,226,000	\$843,000
Plymouth	\$42,175,000	\$16,740,000	\$1,616,000
Pottawattamie	\$22,920,000	\$9,612,000	\$878,000
Shelby	\$22,642,000	\$9,496,000	\$867,000
Sioux	\$65,499,000	\$26,522,000	\$2,509,000
Story	\$40,552,000	\$15,799,000	\$1,554,000
Webster	\$27,699,000	\$11,616,000	\$1,061,000
Woodbury	\$18,423,000	\$7,726,000	\$706,000
Wright	\$66,389,000	\$26,634,000	\$2,543,000

INVESTING IN IOWA: KEY FACTS

Iowa (Construction Phase):

Total Iowa Investment \$987 million

Total Labor Income in Iowa \$389 million

State and Local Taxes Paid by SCS (Iowa) \$73 million

Iowa (Operations Phase):

Annual Iowa Expenditures \$64 million



IOWA

Voluntary Easement Miles Acquired

- Over 457 miles now signed
- Over 1,092 landowners have signed, equating more than 1,911 agreements executed

Iowa Utilities Board

- Permit Application Submitted to Iowa Utilities Board January 2022 – Docket Number HLP-2021-0001
- Decision requested June 2023
- Iowa Utilities Board accepting comments at iub.iowa.gov

OVER
457
miles

Construction Anticipated Start Date: **Fall of 2023**



- A gas in atmospheric conditions.
- A dense phase deep underground or in a pipeline. A dense phase has the viscosity of a gas but a density closer to that of a liquid.
- Nonexplosive and noncombustible.
- Dispersed as a gas when introduced to conditions outside the pipeline.
- CO₂ pipelines have an excellent safety record exceeding pipelines that carry other materials.
- Transported at ambient temperature that does not affect the surrounding soil.

Pipeline Transport Is Critical to Carbon Capture & Storage

Transporting carbon dioxide by pipeline is the safest method for the large volumes of CO₂ that will be captured and permanently stored. With more than 5,000 miles of infrastructure currently operating in the United States, carbon dioxide pipelines have an excellent safety record.

Carbon capture and storage utilizes longstanding technology that is safe for landowners and communities.

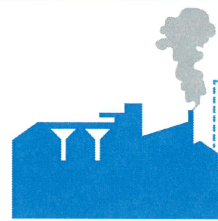
- CO₂ capture is already deployed at more than 40 ethanol plants.
- There are 5,000 miles of existing CO₂ pipelines in the United States regulated by the Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA).
- Captured CO₂ is permanently and safely stored deep underground based on EPA standards.

Pipelines Are Highly Regulated

Stringent requirements for the safe design, construction, and operation of CO₂ pipelines have been established by the DOT PHMSA. Additionally, constructing the Summit Carbon Solutions system requires permits from the following entities:

- | | |
|----------------------------------------------|-----------------------------------------|
| State: | Federal: |
| • Iowa Utilities Board | • United States Army Corps of Engineers |
| • Iowa Department of Natural Resources (DNR) | • United States Fish and Wildlife |

Summit Carbon Solutions is working with landowners, community leaders, stakeholders, and more with respect, honesty, and transparency to obtain the necessary rights from the landowners for any proposed temporary and permanent easements.

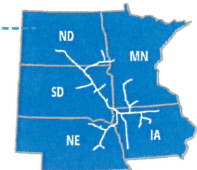


Investors

- Ethanol Plant Partners
- John Deere
- Continental Resources
- Tiger Infrastructure
- TPG Rise Climate
- Summit Agricultural Group

Partners

- 32 ethanol plants across 5 states (Nebraska, Iowa, Minnesota, North Dakota, South Dakota)
- Minnkota Power Cooperative (CO₂ storage) giving Summit Carbon Solution access to the largest of only three permitted CO₂ storage sites in the United States.



Summit Carbon Solution's Pipeline is Overbuilt for Safety

Summit Carbon Solutions' pipeline will be built beyond federal specifications in these ways:

- PHMSA - 195.248 Pipeline Location - requires 3ft depth below ground level. Summit Carbon Solutions will be at 4ft minimum depth.
- PHMSA - 195.210 Pipeline Location - requires 50ft setback from all dwellings. Summit Carbon Solutions is designing the pipeline that far exceeds the minimum setback.
- PHMSA - 195.250 Clearance Between Pipe and Underground Structures - Any new pipe must be at least 12" away from any other underground pipe or structure. Summit Carbon Solutions' best practice is 24".
- PHMSA 49 CFR Part 195 defines minimum requirements like the spacing between block valves, which is no more than 20 miles apart and in some cases less for Summit Carbon Solutions' pipeline.

Summit Carbon Solutions will employ a computer based, computational leak detection system that continuously monitors the operation of the pipeline from a manned control center. Similar leak detection systems are currently being utilized in the operation of numerous pipelines across the United States. Data will be continuously collected from pressure sensors, flowmeters, and temperature sensors installed along the pipeline and used to identify abnormal operating conditions. In the unlikely event of a leak, the system will provide information necessary to locate the leak, isolate the pipeline segment, and mitigate risk.

Community Investment

Summit Carbon Solutions is looking to invest and volunteer in local communities. If there is somewhere we can invest in your community, please contact Kaylee Langrell 501-581-3348 or Kaylee.Langrell@tki360.com

Contact Information

For Emergency Management Questions:

ROD DILLON

Director of Regulatory Compliance

rdillon@summitcarbon.com

515-531-2624

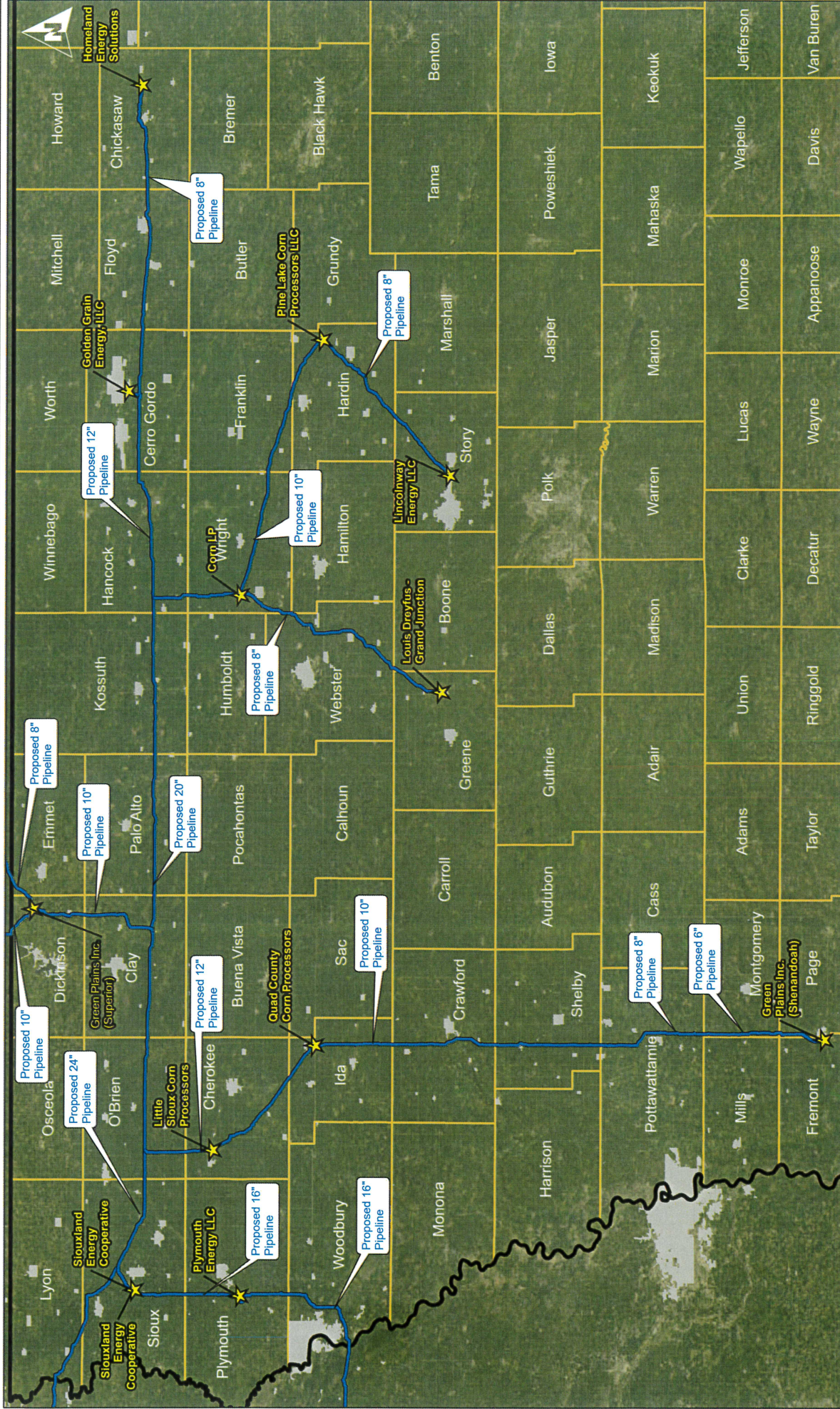
For More Project Information or Interviews:

JESSE HARRIS

Director of Public Affairs

jharris@summitcarbon.com

515-240-2104



★ Participating Ethanol Plant
 — Route
 State Boundary
 County Boundary

688.55 MILES OF ANTICIPATED PIPELINE ROUTES IN IOWA

Pipeline centerline is based on the 01/05/2023 route.

Iowa Pipeline Mileage Overview	
COUNTY/MULTIPLE	DRAWN BY: CC
STATE: IOWA	CHECKED BY:
REV. NO.	REVISION
0	ISSUED FOR REVIEW 2022-09-29
1	ISSUED FOR REVIEW 2022-11-03
PRELIMINARY ROUTE SUBJECT TO CHANGE	
DATE: 10/2023	PROJECTION: NAD 83

**SUMMIT
CARBON
SOLUTIONS**

0 4.52 9.05 10.7 20.45 39.4

Miles

DWG: 1

SHEET: 1

Proposed CO2 Sequestration Pipelines in Iowa

Purpose:

Capture the CO2 being emitted from Ethanol Plants (including nearby Superior), place it under an extreme amount of pressure (1,200- 2,200 psi) to cause it to become a liquid. Pump the liquid to a permeant sequestration site in North Dakota or Illinois.

Concerns:

- This is a new and untested technology.
- Any rupture or leak is catastrophic. The pure CO2 that is released is an odorless, colorless gas that acts as an asphyxiant to all living beings. It causes people to become disoriented and unconscious. Internal Combustion engines cannot operate and so people cannot leave in their cars and people cannot drive in to the scene of the rupture to render aid.
- First Responders do not have the necessary training or equipment to deal a potential mass causally event involving a CO2 pipeline rupture.
- CO2 acidifies water when it makes contact.
- The land will be adversely affected. Tile lines will be cut causing disruption of water flow throughout the area. The top soil will be greatly disturbed leading to decreased productivity of the land. CO2 is "plant food" and needed for healthy crops to grow. Hence, taking it out of the atmosphere will cause a decrease in crop yield.

What government entities can do:

- File an Objection Letter with the IUB.
 - Summit: HLP-2021-0001
 - Navigator: HLP-2021-0003
- Intervene as a party in the IUB case to present concerns specific to their constituency.
- Pass laws/ordinances that regulate the construction of such large-scale projects to make them less intrusive.
- Make sure that constituents know that they have options (they do not need to sign the Easements presented by the pipeline companies; they will always get reimbursed for land taken for the pipeline no matter how it is taken; there are regulations regarding the activities of land agents and survey crews and when they can access land that landowners can enforce.)

More Information:

www.iowa easement.org

Customer Objection Form Submission

Submitter Information:

Armstrong City Council Armstrong
519 S Sixth Street
Armstrong, Iowa 50514
cityofarmstrong@gmail.com

Submitted to the Iowa Utilities Board

January 19, 2023 07:29 PM CST

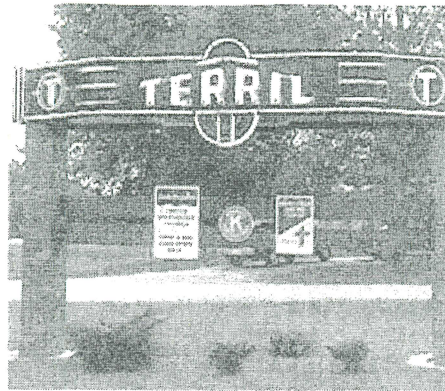
Objection to be filed in Docket Nos.:

- HLP-2021-0003 (*Navigator Heartland Greenway LLC*; Petition for Hazardous Liquid Pipeline Permit)

The Armstrong City Council, located in Emmet County, would like to formally file an objection letter to the proposed CO2 pipelines in Iowa. Currently, plans show the proposed CO2 pipeline would run within a few miles of the City of Armstrong. Research shows that liquid CO2 causes severe respiratory, circulatory, and nervous system problems that result in death. The severe environmental consequences and loss of life as a result of a leak is an unnecessary health risk for all of our citizens. Within our small town, is a high school, nursing home, assisted living center, several daycares, local businesses, and private residences. It would be virtually impossible to ensure a timely evacuation of our town and save lives if a leak would occur. We also know that local firefighters and EMS do not have the adequate training or equipment to respond to a leak. The closest unit equipped to respond is located in Mason City, which is one hour and thirty-five minutes from our city limits. This excessive response time is another major concern for our citizens. In addition to the enormous health concerns of the proposed pipeline, we believe the location of this toxic pipeline would have a negative economic impact on the value of property within our city. We have heard concerns from citizens that the value of their businesses and residences would decrease with the location of the pipeline.

We ask that you decline the permit application for the CO2 pipeline based on dire health and safety concerns, as well as negative economic impact on our community. We believe there are other viable ways to reduce carbon emissions within our state and look forward to seeking safer answers to this situation. The Iowa Utilities Board should side with the people of this state, rather than support the profit of private companies.

Armstrong City Council



RECEIVED
MAY 18 2022
IOWA UTILITIES BOARD

May 11, 2022

Iowa Utilities Board
1375 East Court Avenue
Des Moines, Iowa 50310-0069

RE: HLP-2021-0003 (Navigator CO2 Ventures LLC, Petition for a Hazardous Liquid Pipeline Permit)

Iowa Utilities Board:

On this day May 9, 2022, the City of Terril passed a unanimous motion to submit comment and our objection for the docket regarding the Navigator CO2 pipeline. This pipeline is tentatively planned to go just North of Terril. As a city we are very concerned for the health and welfare of our citizens. Therefore, we ask the Iowa Utilities Board to deny the permit for this pipeline.

Sincerely,

Julie Thiesen
Mayor

Mark Lair
Councilperson

Amy Ness
Councilperson

Jeri Nissen
Councilperson

Austin Fairchild
Councilperson

Shawn Adams
Councilperson

Filed with the Iowa Utilities Board on May 20, 2022, HLP-2021-0003



January 10, 2023

Iowa Utilities Board

1375 E. Court Ave.

Des Moines, IA 50319-0069

To Whom It May Concern,

We, the members of the City Council for the City of Waverly, submit to you this letter of objection to the proposed Navigator Heartland Greenway LLC pipeline project, which has been slated to be constructed through Bremer County.

After careful study and discussion regarding this proposed pipeline, we have serious concerns about the impact that such a pipeline would have on our county and the community of Waverly. The following points summarize our reasons for opposing the project:

---We have significant concerns about the potential risks to the safety of our community's residents, should a pipeline rupture occur. As you are aware, the potential escape of highly pressurized, concentrated CO2 gas from a rupture could rapidly and catastrophically injure and/or kill untold numbers of people in its path. The proposed pipeline route would be positioned dangerously close to two new elementary schools which are currently being built in Waverly, in addition to countless existing homes, businesses and institutions.

---Neither the efficacy or safety of this type of CO2 sequestration has yet been adequately studied or documented, nor has the Federal Government had time to complete development of adequate safety regulations for them.

---We believe that the presence of this pipeline, in its currently proposed iteration, would have significant deleterious effects on the economic vitality of our community. Its proximity to the City of Waverly, and even more so our Future Land Use Plan, would most certainly have a

200 First Street NE | PO Box 616 | Waverly, IA 50677
Phone 319-352-4252 | www.waverlyia.com | askthecity@ci.waverly.ia.us

Filed with the Iowa Utilities Board on January 13, 2023, HLP-2021-0003

negative impact on the potential for future businesses and residents to expand or locate in and around Waverly.


---In a time when small communities like ours are already struggling to maintain adequate quality EMS services, this proposed pipeline would dramatically increase the burden on those essential services. The presence of such a pipeline would add increased burden in the form of additional hazardous materials training and increased potential risk to essential EMS personnel, factors which could easily break what is already a tenuous emergency response system in our rural communities. Despite suggestions that the private developers of the pipeline might help to compensate for such burdens, we would argue that we can find no evidence that what they might contribute could begin to balance out the risks involved.

---We do not feel that the stated potential benefits of this pipeline come close to justifying the enactment of Eminent Domain, which would be necessary for acquiring use of our area's valuable agricultural land. We believe that, whereas Eminent Domain exists to allow use of private property for the greater good of the public, this project would instead benefit primarily its private investors.

We, as the City Council of the City of Waverly, Iowa, respectfully ask that you give careful consideration to this input, and vote to deny the application for the Navigator Heartland Greenway LLC pipeline project.

Sincerely,

CITY OF WAVERLY



Adam P. Hoffman, Mayor

Enclosures: Resolution approving letter in objection

Resolution 23-06

A Resolution Approving a Letter of Objection to the Iowa Utilities Board, voicing objection to Navigator's request for approval from that body which (if approved) would allow construction as proposed.

WHEREAS, proponents of the pipeline argue that CO2 sequestration via the pipeline would help mitigate the environmental impacts of excess CO2 in our atmosphere. CO2 is a byproduct of the manufacturing process of biofuels, which are a big business in Iowa. The federal Inflation Reduction Act of 2022 has made available some tax incentives for businesses to decrease their carbon footprint, and the developers of these pipelines argue that they are facilitating such efforts; and

WHEREAS, opponents of the pipeline argue that there are no substantive studies showing that this type of CO2 sequestration is significantly effective, that a private enterprise such as Navigator has not shown sufficient public benefit to justify the exercise of eminent domain (which would be necessary for the pipeline to traverse private agricultural lands), and that the risk to public health and welfare, the well-being of our rich agricultural lands, wildlife, and future economic development outweigh any potential benefits of the pipeline; and

WHEREAS, a potential rupture of the pipeline would allow dissemination of highly pressurized CO2 gas into the local atmosphere. CO2 in high concentrations rapidly displaces oxygen and becomes an asphyxiant to all breathing organisms in the immediate area of the leak. Exposure to and inhalation of it would cause immediate disorientation and rapid demise. The displacement of oxygen can also cause any emergency vehicles and/or equipment which require oxygen to function, to become completely disabled; and

WHEREAS, the proposed path of the pipeline is dangerously close to Waverly's two new elementary schools, and likewise to what is expected to be new housing developments in those areas. Once a pipeline is built, future growth and development in the corridor will be curtailed, likely impacting the availability of housing and the growth of the community's tax base; and

WHEREAS, the potential for such incidents will affect how close people and businesses want to be to the pipeline which will in turn affect their economic decisions such as whether to buy or sell property in the pipeline corridor and the price at which those transactions occur; and

WHEREAS, the coexistence of abundant underground tiling that is present on our county's farmland and the proposed pipeline system may contribute to potential instability of both types of structures, possibly adding to the risk of a dangerous pipeline fracture. This will impact both farmers and future development; and


WHEREAS, there is only one other pipeline of this type in existence in the U.S. thus far, and the federal government has not yet completed exhaustive studies into the safety and efficacy of such pipelines, nor had time to develop adequate safety regulations for them. It would be prudent to keep all hazardous liquid pipelines a sufficient distance away from existing land uses, and this is especially the case where the federal government is still studying and evaluating the safety regulations applicable to such pipelines; and

WHEREAS, opponents of the pipeline argue that there are no substantive studies showing that this type of CO2 sequestration is significantly effective, that a private enterprise such as Navigator has not shown sufficient public benefit to justify enactment of eminent domain (which would be necessary for the pipeline to traverse private agricultural lands), and that the risk to public safety, the well-being of our rich agricultural lands, wildlife, and future economic development outweigh any potential benefits of the pipeline; and


NOW, THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WAVERLY, IOWA:

to approve a Letter of Objection to the Iowa Utilities Board, voicing objection to Navigator's request for approval from that body which (if approved) would allow construction as proposed.

PASSED AND ADOPTED this 9th day of January, 2023.


Adam P. Hoffman, Mayor

ATTEST:


Carla Guyer, City Clerk

Located in Plymouth County
222 Main St., PO Box 309
Kingsley, IA 51028
(712) 378-3601
kingsleyia@wiatel.net

RICK BOHLE
Mayor

VICKI SITZMANN
Clerk

Councilmen
Neal Rolling
Keith Bohle
Jason Jasperson
Ron Mathers
Todd Beelner

Iowa Utilities Board
1375 East Court Ave.
Des Moines, IA 50319-0069

Dear Board Members:

The City of Kingsley in Plymouth County, Iowa would like to express their opposition to the issuing of permits establishing the application of eminent domain for both the Summit Carbon Solutions, and the Navigator Heartland Greenway CO2 pipeline projects.

We respectfully ask that you deny permits to these two entities and in the future consider only projects that serve the actual public good.

Sincerely,



(Mayor)

Kingsley City Council

Filed with the Iowa Utilities Board on February 18, 2022, HLP-2021-0003

ORDINANCE NO. 2023-01

AN ORDINANCE AMENDING VARIOUS SECTIONS OF THE 2013 EMMET COUNTY ZONING ORDINANCE FOR THE PURPOSE OF REGULATING AND RESTRICTING THE USE OF LAND FOR THE TRANSPORT OF HAZARDOUS LIQUID THROUGH A HAZARDOUS LIQUID PIPELINE

WHEREAS, the Supervisors of Emmet County Iowa (“the County”), under the authority of IA CONST Art. 3, § 39A, Iowa Code § 331.301, and Iowa Code § 335.3, the County has adopted the Emmet County Zoning Ordinance (effective on March 13, 2013) pertaining to county zoning and land use controls (“the Ordinance”); and

WHEREAS, the County may by ordinance lawfully regulate and restrict the use of land for trade, industry, residence, or other purposes in accordance with a comprehensive plan and designed to further the considerations and objectives set forth in Iowa Code § 335.5; and

WHEREAS, the County adopted a comprehensive plan in 2002, which among other things sets forth (1) a master land use plan; (2) goals and objectives for agriculture and natural resources, residential and commercial development, industrial activities, utilities, recreation, environment, land use, and the role of the government; and (3) an implementation plan for achieving the goals of the plan; and

WHEREAS, the comprehensive plan identified a number of goals for planning designed to provide guidance to development plans for the future of Emmet County, among which are (1) to “minimize the number of conflicting land uses while preserving the character of urban and rural development areas”; (2) to “recognize and achieve a progressive balance between urban and rural land uses that facilitates the economic development potential of the county”; (3) to “preserve the irreplaceable natural resources of the county”; (4) to “facilitate the provision of required services and facilities to the residents of the county”; (5) to protect and utilize “vast areas of prime agricultural lands...for farm production uses”; (6) to permit restricted industrial uses to be allowed in agricultural zones but only after “careful examination and approval from planning and zoning, in order to keep residential uses at safe distances”; (7) to “increase the county’s existing tax base through the promotion of new opportunities in the county”; (8) to protect “environmentally sensitive areas”; (9) to “ensure that the best interests of all citizens of Emmet County are protected and advanced”; and

WHEREAS, the considerations and objectives of land use and zoning regulations under Iowa Code § 335.5 require counties to design the regulations (1) to secure safety from fire, flood, panic, and other dangers; (2) to protect health and the general welfare; (3) to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirement; and

WHEREAS, the County and the several municipalities within the County employ a number of emergency response personnel, including local sheriffs, police, firefighters, and emergency medical service responders, and are responsible for ensuring the safety of these public servants through adequate training, knowledge, and access to personal protective equipment; and

WHEREAS, the State of Iowa through Iowa Code chapter 29C requires the County and the several cities within the County to participate in and fund county-level and regional emergency response planning for both natural and human-caused disasters through its joint county-municipal local emergency management commission and agency, to support response to disasters in other Iowa counties, and to establish emergency communication measures to alert County residents of threats to their lives and wellbeing; and

WHEREAS, the County has authority under Iowa law to require information from a company that proposes to construct a hazardous liquid pipeline in the County that will enable the County to fulfill its statutorily required emergency planning duties and protect county emergency response personnel; and

WHEREAS, the County, in coordination with the State of Iowa, other counties, and the several cities within the County, has adopted a Comprehensive Emergency Management Plan in order to provide for a coordinated response to a disaster or emergency in Emmet County; and

WHEREAS, the existing emergency response plan for the County does not currently evaluate the risk of or plan for the County's response to a rupture of a carbon dioxide pipeline passing through the County; and

WHEREAS, the transport of hazardous liquid through a hazardous liquid pipeline constitutes a threat to public health and the general welfare such that the Pipeline and Hazardous Materials Safety Administration of the United States Department of Transportation ("PHMSA") has the authority to prescribe safety standards for such pipelines; and

WHEREAS, the federal Pipeline Safety Act in 49 U.S.C. § 60101 et seq. authorizes the United States Department of Transportation to regulate safety standards for the design, construction, operation, and maintenance of hazardous liquid pipelines, including those that transport supercritical carbon dioxide, but § 60104(e) of this law provides that "[t]his chapter does not authorize the Secretary of Transportation to prescribe the location or routing of a pipeline facility," such that no federal regulation determines the location or route of a hazardous liquid pipeline; therefore, the State of Iowa may determine the route or location of a federally regulated hazardous liquid pipeline based on such policy factors that the State of Iowa deems relevant;

WHEREAS, the State of Iowa and its political subdivisions may and must consider the risks of a hazardous liquid pipeline when selecting a route for it, so as to prevent its construction overly near to residential buildings, existing and future public and private infrastructure, high and vulnerable population buildings such as schools and nursing homes, future housing or industrial developments, and confined animal facilities; and

WHEREAS, in Iowa, the Iowa Utilities Board ("the IUB") has authority pursuant 49 U.S.C. § 60104(e) of the Hazardous Liquid Pipeline Safety Act and under Iowa Code chapter 479B to implement certain controls over hazardous liquid pipelines, including the authority to approve the location and routing of hazardous liquid pipelines; and

WHEREAS, under Iowa Code § 479B.4, a pipeline company must file a verified petition with the IUB asking for a permit to construct, maintain, and operate a new pipeline along, over, or across the public or private highways, grounds, waters, and streams of any kind in this state; and

WHEREAS, Iowa Code § 479B.5 requires that each petition for a permit must state the relationship of the proposed project to the present and future land use and zoning ordinances; and

WHEREAS, Iowa Code § 479B.20: (1) specifically provides for the application of provisions for protecting or restoring property that are different than the provisions of section 479B.20 and the administrative rules adopted thereunder, if those alternative provisions are contained in agreements independently executed by the pipeline company and the landowner; (2) specifically contemplates that such agreements will pertain to "line location;" (3) specifically requires the County to hire a "county inspector" to enforce all land restoration standards, including the provisions of the independently executed agreements; and (4) specifically requires that independent agreements on "line location" between the landowner and the pipeline company must be provided in writing to the county inspector; and

WHEREAS, the construction of a hazardous liquid pipeline constitutes a use of land for trade, industry, or other purposes which the County has not heretofore regulated or restricted through the use of zoning or other ordinances; but which constitutes an industrial use of the land that is not currently a permitted use in any of the County's zoning districts; and

WHEREAS, Summit Carbon Solutions, LLC ("Summit") has submitted to the IUB a Petition for a Hazardous Liquid Pipeline Permit ("the Permit") and proposes to build a carbon capture and sequestration project ("Project") that would transport up to 12 million metric tons of carbon dioxide ("CO2") annually from participating industrial facilities in Iowa, as well as CO2 from facilities in Minnesota, North Dakota, South Dakota, and Nebraska to a sequestration site in North Dakota, where the CO2 will be permanently stored; and

WHEREAS, Navigator Heartland Greenway, LLC ("Navigator") has also submitted to the IUB a Petition for a Hazardous Liquid Pipeline Permit ("the Petition") and proposes to build and operate a large-scale carbon capture pipeline system spanning approximately 1,300 miles across five states in the Midwest, including 811 miles in Iowa, that will capture carbon dioxide from local facilities before it reaches the atmosphere, convert it to a liquid form, and transport it via pipeline to a permanent underground sequestration site; and

WHEREAS, Summit and Navigator have filed with the IUB, certain maps indicating that the proposed pipelines would be located in and pass through the County; and

WHEREAS, the IUB has not yet issued a permit to Summit or to Navigator; and

WHEREAS, there are several factors that would influence human safety in the event of a rupture of such a pipeline, including CO2 parts per million (ppm) concentration, wind speed and direction, velocity of the gas exiting the pipe, and thermodynamic variables; and

WHEREAS, (1) a sudden rupture of a CO2 pipeline may lead to asphyxiation of nearby people and animals, (2) CO2 is lethal if inhaled for 10 minutes at a concentration larger than 10% by volume, (3) the National Institute for Occupational Safety and Health (“NIOSH”) has set the Immediate Dangerous to Life and Health (IDLH) limit of CO2 at 4% by volume; and (4) at concentrations of 25% volume, CO2 is lethal to humans within 1 minute; and

WHEREAS, the rupture of a carbon dioxide pipeline in the County would likely release large amounts of carbon dioxide that could rise to dangerous levels near the rupture and that could threaten the health and lives of county residents, emergency response personnel, and animals, including but not limited to valuable livestock in confined animal feeding facilities; and

WHEREAS, a rupture of a carbon dioxide pipeline near a populated area could cause a mass casualty event; and

WHEREAS, on February 22, 2020, a 24-inch diameter carbon dioxide pipeline ruptured approximately one (1) mile from the town of Satartia, Mississippi (“the Satartia Incident”), and caused a number of residents to become unconscious or intoxicated; required the hospitalization of forty-six (46) persons and the evacuation of more than three hundred (300) persons, and also put the lives and welfare of local emergency response personnel at risk; and

WHEREAS, on May 26, 2022, PHMSA announced new safety measures to protect Americans from carbon dioxide pipeline failures after the Satartia Incident, including (1) initiating a new rulemaking to update standards for CO2 pipelines, including requirements related to emergency preparedness, and response; (2) issuing an advisory bulletin to remind owners and operators of gas and hazardous liquid pipelines, particularly those with facilities located onshore or in inland waters, about the serious safety-related issues that can result from earth movement and other geological hazards; and (3) conducting research solicitations to strengthen pipeline safety of CO2 pipelines; and

WHEREAS, the rulemaking initiated by PHMSA to update safety and emergency preparedness standards for CO2 pipelines is not yet complete; and

WHEREAS, the IUB does not have jurisdiction over emergency response in Iowa and has no expertise in emergency response planning; and

WHEREAS, the County does not have access to scientific assessments of the area of risk that would result from a rupture of the carbon dioxide pipeline proposed to be constructed in the County, which can be estimated through the use of computer modeling; and

WHEREAS, the County seeks to require the preparation of an estimate of the hazard zone resulting from a rupture of a carbon dioxide pipeline proposed to pass through the County, for the purpose of facilitating the least dangerous route through the County; and

WHEREAS, the County may adopt land use and zoning restrictions (1) for purposes of regulating the use of land in the County, including the execution of independent agreements between landowners and pipeline companies regarding land restoration and line location; and

(2) for purposes of planning the County's emergency response and of facilitating the least dangerous route through the County of a hazardous liquid pipeline, including requiring the completion of an emergency response and hazard mitigation plan; and

WHEREAS, the adoption of such land use and zoning regulations is (1) consistent with Iowa Code chapter 479B, including Iowa Code §§ 479B.5(7) and 479B.20, and (2) necessary to facilitate the IUB's approval of a permit, in whole or in part upon terms, conditions, and restrictions as to location and route that are "just and proper;" and

WHEREAS, in Exhibit F to the application for the Permit, Summit states that it will "work with local county officials to verify if any additional permits or approvals are needed prior to construction of the Project..."; and

WHEREAS, the County intends to establish a process under the Ordinance for permitting and approving the use of land in Emmet County for the transport of hazard liquid through a hazard liquid pipeline that is not inconsistent with federal law, including the Hazardous Liquid Pipeline Safety Act, and not inconsistent with Iowa law, including Iowa Code chapters 479B, 331, and 335.

WHEREAS, the County Planning and Zoning Commission held a public hearing on the Ordinance on Feb 8, 2023 and on Feb 014, 2023 recommended approval of the Ordinance.

NOW THEREFORE, BE IT ENACTED BY THE SUPERVISORS OF EMMET COUNTY, IOWA:

SECTION 1. – TEXT AMENDMENT - Article IV, Section 4.6 – General Regulations, is amended by repealing the introductory paragraph of the section and replacing it with the following:

Except as hereinafter provided, no building, structure or land shall hereafter be used and no building or part thereof or structure shall be erected, constructed, reconstructed, occupied, moved, altered, or repaired, except in conformity with the regulations herein prescribed for the district in which such building, structure or land is situated and a zoning compliance permit is issued by the zoning administrator.

SECTION 2. – TEXT AMENDMENT - Article XIV: General Regulations of the Ordinance, is amended by adding the following new section to the Article:

14.19 Hazardous Liquid Pipelines – No person or property owner shall use land in any area or district in this county for purposes of transporting hazardous liquid through a hazardous liquid pipeline except under the conditions and restrictions provided hereinafter in Article XXV – Hazardous Liquid Pipelines. For purposes this Ordinance,

“hazardous liquid” and “hazardous liquid pipeline” shall have the meanings defined in Article XXV.

SECTION 3. – TEXT AMENDMENT -Article III: Definition of Terms, Section 3.2.5: Industrial Land Use Definitions, is amended by inserting after paragraph 7 the following new definition:

7A. Hazardous Liquid Pipeline: A building, structure or land used for pipeline intended to transport Hazardous Liquids, and also includes Class 3, Class 6, Class 8, or Class 9 hazardous materials, as defined by 49 C.F.R. § 173.120, et seq., with any portion proposed to be located within the County

SECTION 4. – TEXT AMENDMENT – Articles XXV, XXVI, and XXVII are renumbered as Articles XXVI, XXVII, and XXVIII, respectively, and all of their numbered sections and subsections are renumbered accordingly.

SECTION 5. – TEXT AMENDMENT – The Ordinance is amended by adding the following new Article XXV in place of the former Article XXV which is being renumbered:

ARTICLE XXV: HAZARDOUS LIQUID PIPELINES

25.1 Purposes

This Article prescribes and imposes the appropriate conditions and safeguards when using land in this County for purposes of a Hazardous Liquid Pipeline.

The purposes of the regulations provided in this Article are:

1. To lawfully regulate and restrict the use of land in the County for the transport of Hazardous Liquid through a Hazardous Liquid Pipeline in a manner that is in accordance with the County’s current comprehensive plan and that is designed to implement the purposes of county zoning pursuant to Iowa Code chapter 335, including all of the following: (1) to secure safety from fire, flood, panic, and other dangers; (2) to protect health and the general welfare; (3) to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirement.

2. To implement Section 25.1(1) with regard to the community planning and land use goals of the County, including cities, as contemplated in the County’s Comprehensive Plan and as provided in Iowa Code chapter 335. In particular, the purpose of this Article is to further the following specific goals of the County: (1) to minimize the number of conflicting land uses while preserving the character of urban and rural development areas; (2) to recognize and achieve a progressive balance between urban and rural land uses that facilitates the economic development potential of the county; (3) to preserve the irreplaceable natural resources of the county; (4) to facilitate the provision of required services and facilities to the residents of the county; (5) to protect and utilize vast areas of prime agricultural lands...for farm production uses; (6) to permit restricted industrial uses to be allowed in agricultural zones but only after careful examination and approval from planning and zoning, in order to keep residential uses at safe distances; (7) to increase the

county's existing tax base through the promotion of new opportunities in the county; (8) to protect environmentally sensitive areas; (9) to ensure that the best interests of all citizens of Emmet County are protected and advanced.

3. To implement Section 25.1(1) with regard to the County's legal obligation to engage in emergency response and hazard mitigation planning, including furthering the comprehensive plan's goals and objectives for assessing ongoing mitigation, evaluating mitigation alternatives, and ensuring there is a strategy for implementation and including the need to protect the health and welfare of both residents and emergency response personnel.

4. To implement Section 25.1(1) in a manner that is not inconsistent with or preempted by federal or state law, including the United States Constitution, the federal Pipeline Safety Act in 49 U.S.C. § 60101 et seq., the Iowa Constitution, and Iowa Code chapters 29C, 479B, 331, and 335.

5. To implement Section 25.1(1) in a manner that treats all Hazardous Liquid Pipelines in a similar manner, to the extent they are similarly situated, and to utilize to the greatest extent feasible the land use and zoning regulations and processes already utilized in the County.

6. To implement Section 25.1(1) in a manner (1) that facilitates the approval of a permit by the Iowa Utilities Board, in whole or in part upon terms, conditions, and restrictions as to location and route that are "just and proper;" and (2) that creates a process that allows a Hazardous Liquid Pipeline operator to work with local county officials to obtain all local permits or approvals prior to the construction of the pipeline.

25.2 Definitions

For purposes of this Article, unless the context otherwise requires:

"Affected person" means the same as defined in Iowa Administrative Code 199-13.1(3) and, unless otherwise defined in that rule, means any Person with a legal right or interest in the property, including but not limited to a landowner, a contract purchaser of record, a Person possessing the property under a lease, a record lienholder, and a record encumbrancer of the property.

"Applicant" means a Pipeline Company or a Property Owner who applies for a Conditional Use Permit for a Hazardous Liquid Pipeline pursuant to this Article.

"Application" means the documents and information an Applicant submits to the County for purposes of obtaining a Conditional Use Permit as well as the related process and procedures for considering the application pursuant to this Article.

"Blast Zone" means the geographic area in County that would be subject to a shock wave from rupture of a Hazardous Liquid Pipeline, including of a Carbon Dioxide Pipeline,

that could harm or kill persons or animals due solely to physical trauma, for example from flying debris or the physical impact of a pressure wave resulting from a rupture.

“Board of Adjustment” means the Emmet County Board of Adjustment established pursuant to Iowa Code chapter 335 and this Zoning Ordinance.

“Carbon Dioxide Pipeline” means a Hazardous Liquid Pipeline intended to transport liquified carbon dioxide and includes a Pipeline of 4 inches or more in diameter used to transport liquid, or supercritical fluid comprised of 50 percent or more of carbon dioxide (CO₂).

“Conditional Use Permit” means a special or conditional use, or a use limitation, authorized and approved by the Board of Adjustment in the manner and according to the guidelines, requirements, and standards provided in Article XXIV of this Zoning Ordinance.

“Confidential Information” means information or records allowed to be treated confidentially and withheld from public examination or disclosure pursuant to Iowa Code chapter 22 or other applicable law.

“Conservation Area” means a County park, natural resource area, wildlife area, or similar areas established or designated for such purposes by the County prior to the effective date of this Article.

“County” or “the County” means Emmet County, Iowa.

“Emergency” means the same as defined in Iowa Administrative Code 199 rule 9.1(2) and, unless otherwise defined in that rule, means a condition involving clear and immediate danger to life, health, or essential services, or a risk of a potentially significant loss of property.

“Facility” is any structure incidental or related to the Hazardous Liquid Pipeline and any space, resource, or equipment necessary for the transport, conveyance, or pumping of a Hazardous Liquid through a Hazardous Liquid Pipeline located in the County, including all related substations.

“Fatality Zone” means the geographic area in the County in which residents of the County would face a significant risk of loss of life due to a rupture of a Hazardous Liquid Pipeline, taking into consideration, in the case of a Carbon Dioxide Pipeline, the dispersion of CO₂ from a rupture, taking into consideration CO₂ concentration and the duration of exposure.

“Hazard Zone” means, in the case of a Carbon Dioxide Pipeline, the geographic area in the County in which residents of the County would likely become intoxicated or otherwise suffer significant adverse health impacts due to a rupture of a Carbon Dioxide

Pipeline, taking into consideration the dispersion of CO₂ from a rupture, taking into consideration CO₂ concentration and the duration of exposure.

“Hazardous Liquid” means the same as defined in Iowa Code § 479B.2 and, unless otherwise defined there, means crude oil, refined petroleum products, liquefied petroleum gases, anhydrous ammonia, liquid fertilizers, liquefied carbon dioxide, alcohols, and coal slurries.

“Hazardous Liquid Pipeline,” means a Pipeline intended to transport Hazardous Liquids, and also includes Class 3, Class 6, Class 8, or Class 9 hazardous materials, as defined by 49 C.F.R. § 173.120, et seq., with any portion proposed to be located within the County

“In-service date” is the date any Hazardous Liquid is first transported through any portion of a Pipeline located in the County.

“Independent Agreement” means alternative provisions regarding land restoration or Line Location contained in agreements independently executed by a Pipeline Company and a Landowner or a Property Owner as described in Iowa Code § 479B.20(10).

“IUB” means the Iowa Utilities Board created within the Iowa Department of Commerce pursuant to Iowa Code chapter 474.

“Landowner” means the same as defined in Iowa Code §§ 479B.4(4) and 479B.30(7), and, unless otherwise defined there, means a Person listed on the tax assessment rolls as responsible for the payment of real estate taxes imposed on the property and includes a farm tenant.

“Line Location” means the location or proposed location or route of a Pipeline on a Landowner’s property.

“Occupied Structure” means a Building or Structure that has been inhabited or used for residential, commercial, industrial, or agricultural purposes at any time during the twelve (12) months preceding an application for a Conditional Use Permit pursuant to this Article.

“PHMSA” means Pipeline and Hazardous Materials Safety Administration of the United States Department of Transportation.

“Person” means the same as defined in Iowa Administrative Code 199-13.1(3) and, unless otherwise defined in that rule, means an individual, a corporation, a limited liability company, a government or governmental subdivision or agency, a business trust, an estate, a trust, a partnership or association, or any other legal entity as defined in Iowa Code § 4.1(20).

“Pipeline” means the same as defined in Iowa Code § 479B.2 and, unless otherwise defined there, means an interstate pipe or pipeline and necessary appurtenances used for the transportation or transmission of hazardous liquids.

“Pipeline Company” means the same as defined in Iowa Code § 479B.2 and, unless otherwise defined there, means any Person engaged in or organized for the purpose of owning, operating, or controlling Pipelines for the transportation or transmission of any Hazardous Liquid or underground storage facilities for the underground storage of any Hazardous Liquid.

“Pipeline Construction” means the same as defined in Iowa Administrative Code 199-9.1(2) and, unless otherwise defined in that rule, means activity associated with installation, relocation, replacement, removal, or operation or maintenance of a pipeline that disturbs agricultural land, but shall not include work performed during an emergency, tree clearing, or topsoil surveying completed on land under easement with written approval from the landowner.

“Property Owner” means the owner or owners, together with his, her, its or their heirs, successors and/or assigns, of the land or property over, under, on, or through which, a Pipeline, or any part of it, including any related facilities, may be located and which is subject to the regulations and restriction of this Zoning Ordinance. Property Owner includes a Landowner and also includes a Person with whom a Pipeline Company negotiates or offers to execute an Independent Agreement with respect to a Pipeline.

“Reclamation” means the restoration and repair of damaged real property, personal property, land or other areas through which a Pipeline is constructed or from where it is removed as close as reasonably practicable to the condition, contour, and vegetation that existed prior to the construction or prior to the removal of the Pipeline, as applicable.

“Reclamation Cost” means the cost of Reclamation and includes the cost to restore or repair roads, bridges, or county property as well as the cost to restore or repair all real and personal property of Property Owners and Affected Persons.

“Sensitive Area” means any area designated for inclusion in Emmet County’s Floodplain Management Ordinance, No. 2016-1.

“Zoning Ordinance” or “the Zoning Ordinance” means the collection of land use and zoning regulations known as the Zoning Ordinance of Emmet County, as provided and made effective in the Zoning Ordinance of Emmet County.

25.3 Conditional Use Class Created and Use Limitations Imposed on Hazardous Liquid Pipelines

1 All land in the County must be used in accordance with this Zoning Ordinance. As provided in Article XXIV of this Zoning Ordinance, the County may create a class of uses that have conditions or other use limitations attached to approval. Such conditions

are established in order to protect the health, wellbeing, and welfare of the public and to preserve property values.

2 The County hereby establishes a class of use for Hazardous Liquid Pipelines, and no land or property interest in this County, regardless of the zone or area, shall be used for purposes of a Hazardous Liquid Pipeline except in conformity with this Article.

25.4 Conditional Use Permits Required

1. A Pipeline Company that has filed a verified petition with the IUB asking for a permit to construct, maintain, and operate a new Pipeline along, over, or across land in this County shall submit an Application to the County Zoning Administrator for a Conditional Use Permit. The Pipeline Company shall submit the Application for a Conditional Use Permit within thirty (30) days of filing the petition with the IUB, unless the petition was filed with the IUB prior to the effective date of this Article in which case the Pipeline Company shall submit an application for a Conditional Use Permit under this Article within thirty (30) days of the effective date of this Article. The Zoning Administrator may extend the time for filing the Application for good cause shown. However, any extension of more than 30 days must be approved by the Board of Adjustment.

2. A Property Owner that intends to negotiate or sell an easement to a Pipeline Company by means of an Independent Agreement shall submit an application to the County Zoning Administrator for a Conditional Use Permit before executing the Independent Agreement with the Pipeline Company. If a Property Owner executes an Independent Agreement with a Pipeline Company on or after the effective date of this Article without obtaining a Conditional Use Permit, the County may exercise all lawful remedies as provided elsewhere in this Zoning Ordinance.

3. Upon receiving an Application for a Conditional Use Permit from a Pipeline Company or from a Property Owner, the County Zoning Administrator and the Board of Adjustment shall consider the Application according to the process and standards set forth in this Article and Article XXIV of this Zoning Ordinance.

25.5 Separation Requirements

The use of land for purposes of transporting Hazardous Liquids through Pipelines poses a threat to the public health and welfare, to the productivity of agricultural lands, and to the property values of residential, commercial, and industrial Property Owners in the County. The separation requirements of this section are designed to further the goals and objectives of the County's comprehensive zoning plan, including to protect public health and welfare, to preserve existing infrastructure and future development, and to maintain property values.

A Hazardous Liquid Pipeline shall not be constructed, used, sited, or located, in violation of the separation requirements listed below. In addition, the terms of an Independent

Agreement regarding a Line Location shall conform to the separation requirements listed below. All distances shall be measured from the centerline of the proposed Hazardous Liquid Pipeline to the portion of the existing use nearest the centerline of the proposed Hazardous Liquid Pipeline.

The minimum separation distances for a Hazardous Liquid Pipeline are:

1. From the city limits of an incorporated city, not less than two miles.
2. From a church, school, nursing home, long-term care facility, or hospital, not less than one half of one mile.
3. From a public park, Conservation Area, Sensitive area, or public recreation area, not less than one quarter of one mile.
4. From any Occupied Structure, not less than 1000 feet.
5. From a confined animal feeding operation or facility, not less than 1000 feet.
6. From an electric power generating facility with a nameplate capacity of 5MW or more, an electric substation, a public drinking water treatment plant, or a public wastewater treatment plant, not less than 1,000 feet.
7. From any public water system or any nonpublic water supply well subject to the rules of the Iowa Department of Natural Resources pursuant to 567 IAC chapter 43 or 567 IAC chapter 49, not less than 200 feet.

25.6 Permit Application Requirements for Pipeline Companies

A Pipeline Company applying for a Conditional Use Permit for a Hazardous Liquid Pipeline pursuant to this Article shall submit the following documents and information to the County Zoning Administrator:

1. The information required for a Conditional Use Permit as described in Article XXIV of this Zoning Ordinance, including all required forms prescribed by the County Zoning Administrator.
2. A complete copy of the application for a permit filed with the IUB pursuant to Iowa Code chapter 479B. This requirement is an ongoing requirement, and as the application for the IUB permit is amended or changed, the Pipeline Company shall provide updated information and documents to the County.
3. A map identifying each proposed crossing of a County road or other County property and map identifying each crossing of Conservation Areas or Sensitive Areas.

4. A map and a list containing the names and addresses of all Affected Persons in the County. The map and list shall include all Property Owners who have executed an Independent Agreement or who have been or will be contacted about the execution of an Independent Agreement.

5. A set of plans and specifications showing the dimensions and locations of the Pipeline, including plans and specifications for all related facilities and above-ground structures, such as pumps, lift-stations, or substations.

6. A copy of the standard or template Independent Agreement the Pipeline Company proposes to execute with Property Owners in the County. The standard or template for the Independent Agreement shall include terms and conditions that comply with the Abandonment, Discontinuance, and Removal requirements of section 25.13 of this Article.

7. The emergency response and hazard mitigation information required pursuant to section 25.12 of this Article.

8. All applicable fees required pursuant to section 25.8 of this Article.

9. A statement identifying any Confidential Information in the Application and a request, if any, to withhold such information from public examination or disclosure as provided in, and to the extent permitted by, Iowa Code chapter 22. A failure to identify Confidential Information in the Application may result in the County treating such information as a public record.

25.7 Permit Application Requirements for Property Owners

A Property Owner applying for a Conditional Use Permit for a Hazardous Liquid Pipeline pursuant to this Article shall submit the following documents and information to the County Zoning Administrator:

1. The information required for a Conditional Use Permit as described in Article XXIV of this Zoning Ordinance, including all required forms prescribed by the County Zoning Administrator.

2. A copy of the Independent Agreement the Property Owner proposes to execute with the Pipeline Company, including a map and a legal description of the proposed Line Location and a statement of verification of compliance with the separation requirements of this Article.

3. All applicable fees required pursuant to section 25.8 of this Article.

25.8 Fees

The following fees and assessments apply to a Conditional Use Permit for a Hazardous Liquid Pipeline pursuant to this Article:

1. A Pipeline Company seeking a Conditional Use Permit shall pay the following fees and assessments:
 - a. An application fee in the amount of \$100 for each Affected Person identified in the Application.
 - b. An annual fee in the amount of \$116.92 per mile of Pipeline constructed, operated, and maintained in the County, or an amount equal to the most current user fee assessed to the operators of Hazardous Liquid Pipelines by PHMSA, whichever is greater. This fee shall be due each year on the anniversary of the Pipeline's In-Service Date, and the County shall apply this assessment towards its emergency planning and hazard mitigation costs, including expenses for law enforcement and emergency response personnel.
 - c. All other applicable user or permit fees required for obtaining Conditional Use Permits under Article XXIV, Section 24.3 and for crossing County roads or using the public right-of-way in the County.
2. A Property Owner seeking a Conditional Use Permit shall pay application fee as provided in Article XXIV, Section 24.3.

25.9 Public Hearing Requirements and Permit Approval

1. Upon receipt of an application for a Conditional Use Permit by a Pipeline Company, the County Zoning Administrator shall verify that the Pipeline Company permit application requirements of this Article are met and shall make a report to the Board of Adjustment recommending approval, denial, or modification of the Application. Upon the verification and report of the County Zoning Administrator, the Board of Adjustment shall set the date of one or more public hearings in the County on the question of granting a Conditional Use Permit to the Pipeline Company. Once the public hearing dates have been set, the Board of Adjustment shall publish notice in a local newspaper pursuant to Iowa Code § 331.305, and the Pipeline Company shall send notice of each scheduled public hearing to each Affected Person identified in the Application by United States Mail.
2. A public hearing shall not be required in the case of a Property Owner applying for a Conditional Use Permit. Upon receipt of an application for a Conditional Use Permit from a Property Owner, the County Zoning Administrator shall verify that the Property Owner permit application requirements are met and shall make a report to the Board of Adjustment recommending approval, denial, or modification of the Application. Upon the verification and report of the County Zoning Administrator, the Board of

Adjustment shall consider the application at a regular meeting of the Board of Adjustment.

3. Once the application, public hearing, and other requirements of this Article are met, the Board of Adjustment shall consider each application for a Conditional Use Permit according to the standards set forth in Article XXIV, Section 24.5 of this Zoning Ordinance and the standards and findings ordinarily required of special or conditional uses. The Board of Adjustment shall issue a permit if the Board of Adjustment finds that all applicable standards are met. The burden of establishing that all applicable standards are met shall be on the Applicant for the Conditional Use Permit.

4. A Conditional Use Permit granted to a Pipeline Company pursuant to this Article is not transferrable to any Person. A Pipeline Company, or its successors in interest, shall apply for a new Conditional Use Permit whenever the Hazardous Liquid Pipeline is transferred or its use is materially or substantially changed or altered.

25.10 Appeals and Variances

A Pipeline Company or a Property Owner may appeal an adverse determination on a Conditional Use Permit, or may seek a special exception or variance from the Board of Adjustment, as provided in Article XXIII of this Zoning Ordinance.

25.11 Applicability and Compliance

1. The permit requirement in Section 25.4 and the separation requirements in Section 25.5 of this Article shall not apply to (1) a Hazardous Liquid Pipeline that is already permitted, constructed, and placed in-service on or before the effective date of this Article; however, a Pipeline Company shall comply with the abandonment, Reclamation and decommissioning requirements for a Pipeline that is decommissioned on or after the effective date of this Article; (2) a Pipeline owned and operated by a public utility that is furnishing service to or supplying customers in the County; or (3) a Property Owner that has already executed an Independent Agreement with a Pipeline Company prior to the effective date of this Article.

2. If a Property Owner has executed an Independent Agreement prior to the effective date of this Article and the Independent Agreement does not meet the separation requirements of this Article, then notwithstanding the Independent Agreement, the Pipeline Company shall comply with the separation requirements of this Article.

3. If a Property Owner has executed an Independent Agreement prior to the effective date of this Article, and the Independent Agreement provides for separation requirements that are greater than the separation requirements this Article, then the Pipeline Company shall comply with the terms of the Independent Agreement with the Property Owner.

25.12 Emergency Response and Hazard Mitigation Information for Hazardous Liquid Pipelines

As stated in the Purposes section of this Article, this Article is intended to implement local zoning regulations in a manner designed to facilitate the comprehensive plan's goals and the County's objectives for assessing ongoing mitigation, evaluating mitigation alternatives, and ensuring there is a strategy for implementation. This goal is consistent with the County's legal obligation under Iowa Code chapter 29C to engage in emergency response and hazard mitigation planning and with the need to protect the health and welfare of both residents and emergency response personnel. For these reasons, the County requires Hazardous Liquid Pipelines to provide information to assist the County in its emergency response and hazard mitigation planning as required by Iowa Code chapter 29C. The requirement to provide emergency response and hazard mitigation information pursuant to this section is not intended to constitute a safety standard and is not intended to conflict with any PHMSA safety standards applicable to a Pipeline Company which regulate the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities.

1. If an Applicant for a permit pursuant to this Article is a Pipeline Company and if the proposed pipeline is a Carbon Dioxide Pipeline, then the Applicant shall provide the following information to the County for purposes of assisting the County with its emergency response and hazard mitigation planning efforts:

- a. A map and legal description of the proposed route for a Carbon Dioxide Pipeline showing all human occupied structures and animal husbandry facilities, by type, within two miles of the centerline of the proposed route including addresses.
- b. A description of the health risks resulting from exposure of humans and animals to carbon dioxide released from a pipeline, considering the concentrations of carbon dioxide in the air near to a rupture, the duration in time of exposure, and the presence of other harmful substances released from a rupture. The description shall identify the exposure level and duration of time that may cause a fatality of persons or animals, and the exposure level and duration that may cause intoxication or other significant adverse health effects.
- c. An estimate of the worst-case discharge of carbon dioxide released in metric tons and standard cubic feet from a rupture of a pipeline considering the interior volume of the pipeline, the location of emergency valves that limit release of carbon dioxide, the location of crack arrestors, operating pressures, operating temperatures, and other relevant factors.
- d. A rupture dispersion modeling report containing the results of computational fluid dynamic computer model estimates of the maximum geographic ranges of the Fatality Zone and Hazard Zone for the Carbon Dioxide Pipeline in the event of its rupture in a range of weather conditions and representative topography in County, as well as in low elevation areas of the County where released carbon dioxide may settle.

- e. A computer model report showing the Blast Zone for the Carbon Dioxide Pipeline.
- f. A list of structures and facilities within the Hazard Zone, Fatality Zone, and Blast Zone for the proposed route of a Carbon Dioxide Pipeline that in the preceding year have contained humans or livestock, and an estimate of the numbers of persons and livestock in each structure and facility.
- g. A list of High Consequence Areas. A High Consequence Area is any area within the Hazard Zone, the Fatality Zone, or the Blast Zone where a single rupture would have the potential to adversely affect 10 or more persons or a facility with 100 or more livestock.
- h. A description of the potential adverse impacts of a rupture of a Carbon Dioxide Pipeline on the humans, livestock, and other real and personal property within the Hazard Zone, the Fatality Zone, and the Blast Zone for the route of a Carbon Dioxide Pipeline.
- i. Identification of alternative routes through the County designed to minimize risks to humans and animals from a rupture of the Carbon Dioxide Pipeline, and an analysis of the risks of these alternative routes relative to the proposed route.
- j. All information needed by county first responders, emergency response personnel, and law enforcement personnel in order to engage in local emergency management and hazard mitigation planning, equipment, and training needs. Such information includes but is not limited to:
 - i. a material safety data sheet for the materials transported in the Carbon Dioxide Pipeline;
 - ii. agency-specific response plans for law enforcement, emergency medical responders, and other response agencies;
 - iii. carbon dioxide detectors and evacuation plans for each human occupied structure;
 - iv. response equipment needs for emergency response personnel, such as carbon dioxide and other chemical detectors; respirators; personal protective equipment; communications equipment; road barriers and traffic warning signs; and non-internal combustion engine evacuation vehicles;
 - v. a Carbon Dioxide Pipeline rupture emergency response training program to ensure safe and effective response by county and municipal law enforcement, emergency medical services, and other responders during the operational life of the Carbon Dioxide Pipeline.
- k. Identification of residential and business emergency response needs, including but not limited to:
 - i. a Mass Notification and Emergency Messaging System;

- ii. evacuation plans;
- iii. evaluation equipment needs especially for mobility impaired individuals;
- iv. carbon dioxide detectors, and respirators.

2. If an Applicant for a permit pursuant to this Article is a Pipeline Company and if the proposed pipeline is a type other than a Carbon Dioxide Pipeline, then the Applicant shall provide (1) a draft emergency response plan or facility response plan for the proposed pipeline; and (2) a detailed description of how the Pipeline Company will work with the County's law enforcement, emergency management personnel, and first responders in the event of a spill, lead, rupture, or other emergency or disaster related to pipeline.

3. The Board of Adjustment may include a condition in a Conditional Use Permit granted pursuant to this Ordinance that requires an applicant to reimburse the County for all costs and expenses incurred for purposes of emergency response or hazard mitigation planning, equipment acquisition or repair, training, and communications if such costs and expenses are reasonably related to the Pipeline.

25.13 Abandonment, Discontinuance, and Removal of Hazardous Liquid Pipelines

In addition to the requirements set by Iowa Code § 479B.32, a Hazardous Liquids Pipeline in the County that is abandoned shall comply with the requirements of this section. A Hazardous Liquid Pipeline shall be deemed abandoned for purposes of this section whenever the use of the Hazardous Liquid Pipeline has been discontinued such that there is no longer regulatory oversight of the Pipeline by PHMSA.

For purposes of the land restoration standards of Iowa Code § 479B.20, the term "construction" includes the removal of a previously constructed pipeline, and the County will treat the removal of a Pipeline in the same manner as the Pipeline's original construction for purposes of the County's obligations under Iowa Code chapter 479B.

1. A Pipeline Company granted a Conditional Use Permit pursuant to this Article shall by certified mail notify the County and all Affected Persons in the County of the Pipeline Company's intent to discontinue the use of the Pipeline. The notification shall state the proposed date of the discontinuance of use.

2. Upon abandonment or discontinuance of use, the Pipeline Owner shall offer to each Property Owner the option to have the Pipeline and all related facilities physically dismantled and removed, including both the below and above ground facilities. The removal of the Pipeline and the related Reclamation and Reclamation Costs shall be the Pipeline Company's responsibility and shall be completed within one-hundred eighty (180) days from the date of abandonment or discontinuation of use unless a Property Owner agrees to extend the date of removal. Such an extension must be by written agreement between the Pipeline Company and the Property Owner, and the agreement

shall be filed at the Emmet County Recorder's office and a copy delivered to the County by the Pipeline Owner.

3. A Property Owner shall not be required to have the Pipeline removed, but if the Property Owner agrees to the removal and Reclamation, the Property Owner shall allow the Pipeline Company reasonable access to the property.

4. Upon the removal of the Pipeline and the Reclamation, the Pipeline Owner shall restore the land according to the requirements of Iowa Code § 479B.20 and the rules adopted thereunder at 199-9.1(479,479B), including all amendments thereto.

SECTION 6. – TEXT AMENDMENT – Article XXXIV: Conditional Use Regulations, Section 24.5, Standards, of the Zoning Ordinance, is amended by repealing the section and replacing it with the following:

Section 24.5. STANDARDS.

No Conditional Use Permit shall be granted unless the Board of Adjustment has found:

- a. That the establishment, maintenance, or operation of the special use will not be detrimental to or endanger the public health, safety, moral, comfort, or general welfare of the County.
- b. That the special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purpose already permitted, nor substantially diminish and impair property values within the area.
- c. That the establishment of the special use will not impede the normal and orderly development of the surrounding property for uses permitted in the district.
- d. That adequate utilities, access roads, drainage and/or necessary facilities have been or are being provided.
- e. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic hazards or congestion on public roads.
- f. The use shall not include noise or other emissions which are objectionable due to dust vapors or other substance which is harmful to health, animals, vegetation or other property or which can cause soiling, discomfort, or irritation.
- g. The use shall not involve any activity substantially increasing the burden on any public utilities or facilities unless provisions are made for any necessary adjustments.

SECTION 7. REPEALER. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION 8. NON-SUBSTANTIVE CORRECTIONS. All mistakes, typographical errors, numbering errors, formatting problems, and all similar non-substantive issues may be corrected by the County and included in the final version of the Zoning Ordinance when it becomes effective.

SECTION 9. SEVERABILITY CLAUSE. If any section provision or part of this ordinance shall be adjudged invalid or unconstitutional such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

SECTION 10. WHEN EFFECTIVE. This ordinance shall be in effect from and after its final passage, approval, and publication as provided by law.

First Reading Passed: _____

Second Reading Passed: _____

Third Reading Passed: _____

Passed and adopted this ____ day of _____, 2023.

Todd Glasnapp, Chairperson

ATTEST:

Amy Sathoff, County Auditor or Designee

I hereby certify that the foregoing was published as Ordinance No. 2023-01 in the

Estherville News on the _____ day of _____, 2023.

Armstrong Journal on the _____ day of _____, 2023.

Ringsted Dispatch on the _____ day of _____, 2023.

Amy Sathoff, County Auditor or Designee