

SUMMIT CARBON SOLUTIONS, LLC
PETITION FOR HAZARDOUS LIQUID PIPELINE PERMIT

Docket No. HLP-2021-0001

EXHIBIT C

The Summit Carbon Solutions Pipeline System (“Pipeline”) will transport carbon dioxide (“CO₂”) from participating ethanol plants in Iowa and other midwestern states to North Dakota for permanent sequestration. In Iowa, the Pipeline is approximately 681 miles in length, and traverses 29 Iowa counties, with a small amount of workspace in one additional county.

The Pipeline will consist of 4 to 24-inch nominal diameter pipeline, depending upon its location on the system.

Pipeline Diameter	Length
4-inch nominal diameter	3.75 miles
6-inch nominal diameter	129.57 miles
8-inch nominal diameter	269.00 miles
10-inch nominal diameter	62.96 miles
12-inch nominal diameter	71.57 miles
16-inch nominal diameter	95.00 miles
20-inch nominal diameter	48.72 miles

The Pipeline will be manufactured of carbon steel in accordance with API Specification 5L (see Addendum 1 to Exhibit C). The maximum operating pressure of the Pipeline will be 2,183 pounds per square inch in gauge (“psig”), and while there is no definition in the controlling Department of Transportation Pipeline and Hazardous Materials Safety Administration regulations, or relevant Board regulations, of ‘normal operating pressure,’ the line is expected to run at pressures ranging from 1,200-2,150 psig. The maximum capacity of the pipeline in Iowa is 12 million metric tons/year of CO₂, and the nominal volume transported per day is expected to be approximately 16.29 thousand metric tons.

The Pipeline will be installed to a minimum depth of 48 inches from the top of the pipe and will be installed utilizing three primary methods: open cut (trench), boring, and horizontal directional drill.

The Pipeline route will include 645 secondary highway crossings. The names and locations of crossings of railroads and primary highways are below.

Boone County

The Pipeline route will include 2 secondary highway crossings, no primary highway crossings, and no railroads.

Cerro Gordo County

The Pipeline route will include 25 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Union Pacific Railroad	S3T95R20, S5T95R20, S29T96R20
US Highway 65 (Jefferson Highway Heritage Byway)	S3T95R20
Interstate 35	S5T95R21
US Highway 18	S29T96R20

Cherokee County

The Pipeline route will include 31 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Chicago, Central & Pacific Railroad	S1T92R42
Iowa State Highway 3	S1T92R42
Iowa State Highway 31	S6T90R40
US Highway 59	S27T90R40

Chickasaw

The Pipeline route will include 16 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
US Highway 63	S1T95R13
US Highway 18	S2T95R13
Dakota, Minnesota & Eastern Railroad	S15T95R14

Clay

The Pipeline route will include 35 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
US Highway 71	S24T95R37
Dakota, Minnesota & Eastern Railroad	S16T96R35
US Highway 18	S16T96R35

Crawford

The Pipeline route will include 20 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
US Highway 59	S32T84R39
Iowa State Highway 141	S32T84R39
Chicago, Central & Pacific Railroad	S21T83R39
Union Pacific Railroad	S21T83R39
US Highway 30 (Lincoln Highway Heritage Byway)	S21T83R39

Dickinson

The Pipeline route will include 23 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Union Pacific Railroad	S34T100R35, S35T100R35
US Highway 71	S20T100R35
Iowa State Highway 9	S34T100R35

Emmet

The Pipeline route will include 4 secondary highway crossings and no railroad or primary highway crossings.

Floyd

The Pipeline route will include 25 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Cedar River Railroad	S16T95R15
US Highway 18	S18T95R15
US Highway 218	S14T95R16
Iowa Highway 14	S13T95R17
Iowa Highway 147	S15T95R17
Iowa Northern Railway	S9T95R18

Franklin

The Pipeline route will include 16 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Interstate 35	S6T90R22
United Pacific Railroad	S31T90R20
US Highway 65	S32T90R20

Fremont

The Pipeline route will include 4 secondary highway crossings and no railroad crossings. The name and location of the crossing of a primary highway is below.

Crossing	Location
US Highway 59	S1T69R40

Greene

The Pipeline route will include 8 secondary highway crossings and no railroad or primary highway crossings.

Hancock

The Pipeline route will include 29 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Iowa Northern Railway Co	S18T95R23
US Highway 69	S18T95R23
Iowa State Highway 17	S30T95R26

Hardin

The Pipeline route will include 40 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Chicago, Central & Pacific Railroad	S11T89R20
US Highway 65	S5T89R20, S33T86R21
US Highway 20	S9T88R19
Iowa State Highway 175	S11T87R20
Iowa State Highway 65	S33T86R21

Ida

The Pipeline route will include 23 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
US Highway 20	S35T89R39
Iowa State Highway 175	S20T87R39
Chicago, Central & Pacific Railroad	S20T87R39

Kossuth

The Pipeline route will include 24 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Iowa State Highway 17	S25T95R27
Union Pacific Railroad	S30T95R28
US Highway 169	S25T95R29
Iowa State Highway 15	S30T95R30

Lyon

The Pipeline route will include 11 secondary highway crossings and no railroad crossings. The name and location of the crossing of a primary highway is below.

Crossing	Location
US Highway 18	S20T98R47, S24T98R48

Montgomery

The Pipeline route will include 16 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
US Highway 34	S18T72R39
BNSF Railway (Amtrak)	S19T72R39

O'Brien

The Pipeline route will include 33 secondary highway crossings and no railroad crossings. The names and locations of the crossings of primary highways are below.

Crossing	Location
US Highway 59	S18T95R40
Iowa State Highway 10	S2T94R42

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The Pipeline route will include 5 secondary highway crossings and no railroad crossings. The name and location of the crossing of a primary highway is below.

Crossing	Location
US Highway 59	S6T69R39

Palo Alto

The Pipeline route will include 18 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Iowa State Highway 15	S25T95R31
Union Pacific Railroad	S28T95R31
Iowa State Highway 4	S30T95R32

Plymouth

The Pipeline route will include 22 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Iowa State Highway 3	S11T92R46
US Highway 75	S10T91R46
BNSF Railway	S10T91R46
Chicago, Central & Pacific Railroad	S11T91R46

Pottawattamie

The Pipeline route will include 21 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Interstate 80	S2T77R40
Iowa Interstate Railroad	S13T76R40, S30T76R39
US Highway 59	S30T76R39
US Highway 6	S6T75R39
Iowa State Highway 92	S6T74R39

Shelby

The Pipeline route will include 22 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
BNSF Railway	S32T81R39
Iowa State Highway 37	S32T81R39
Iowa State Highway 44	S17T79R39

Sioux

The Pipeline route will include 54 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Iowa State Highway 60	S15T95R43, S16T95R43
Union Pacific Railroad	S16T95R43
US Highway 75	S9T96R45, S16T96R45
BNSF Railway	S5T96R45, S20T96R45
US Highway 18	S25T97R46
Iowa State Highway 10	S35T95R46

Story

The Pipeline route will include 21 secondary highway crossings and no primary highway crossings. The name and location of the crossing of a railroad is below.

Crossing	Location
Union Pacific Railroad	S34T85R22, S2T83R23

Webster

The Pipeline route will include 31 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Chicago, Central & Pacific Railroad	S6T88R27
US Highway 20	S7T88R27
Iowa State Highway 175	S10T86R28
US Highway 169	S15T86R28

Woodbury

The Pipeline route will include 22 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
U.S. Highway 20	S33T89R46
Union Pacific Railroad	S8T87R47
Interstate I 29	S8T87R47

Wright

The Pipeline route will include 43 secondary highway crossings. The names and locations of the crossings of railroads and primary highways are below.

Crossing	Location
Iowa State Highway 3	S34T92R26
Union Pacific Railroad	S17T91R25, S15T91R26, S7T90R26
Iowa State Highway 17	S15T91R26
US Highway 69	S35T91R24