Hall County Regional Planning Commission

Wednesday, June 4, 2014
Regular Meeting Packet

Commission Members:

Terry Connick	**Hall County**	
Karen Bredthauer	**Grand Island**	**Vice Chairperson**
Julie Connelly	**Grand Island**	
Craig Vincent	**Grand Island**	
Mark Haskins	**Hall County**	
Bill Hayes	**Doniphan**	
Dean Kjar	**Wood River**	
Dennis McCarty	**Grand Island**	
Richard Heckman	**Cairo**	
Pat O'Neill	**Hall County**	**Chairperson**
Deb Reynolds	**Hall County**	
Leslie Ruge	**Alda**	**Secretary**

Regional Planning Director: Chad Nabity

Planning Technician:
Edwin Maslonka

Planning Secretary:
Rose Rhoads

6:00 PM
City Hall

Call to Order

Roll Call

A - SUBMITTAL OF REQUESTS FOR FUTURE ITEMS

Individuals who have appropriate items for City Council consideration should complete the Request for Future Agenda Items form located at the Information Booth. If the issue can be handled administratively without Council action, notification will be provided. If the item is scheduled for a meeting or study session, notification of the date will be given.

B - RESERVE TIME TO SPEAK ON AGENDA ITEMS

This is an opportunity for individuals wishing to provide input on any of tonight's agenda items to reserve time to speak. Please come forward, state your name and address, and the Agenda topic on which you will be speaking.

DIRECTOR COMMUNICATION

This is an opportunity for the Director to comment on current events, activities, and issues of interest to the commission.

Hall County Regional Planning Commission

Wednesday, June 4, 2014
Regular Meeting

Item .A1

Agenda

Staff Contact: Chad Nabity

REGIONAL PLANNING COMMISSION

AGENDA AND NOTICE OF MEETING
Wednesday, June 4, 2014
6:00 p.m.
City Hall Council Chambers — Grand Island

1. **Call to Order.**
   This is a public meeting subject to the open meetings laws of the State of Nebraska. The requirements for an open meeting are posted on the wall in this room and anyone who would like to find out what those are is welcome to read through them.

2. **Minutes of May 7, 2014.**

3. **Request Time to Speak.**

4. **Public Hearing -** Concerning adoption of the Hall County 1 & 6 Year Road Improvement Plan. (C-12-2014HC)

5. **Energy Elements –** Discussion on Energy Elements for the Cities of Grand Island and Wood River and Hall County.

   Consent Agenda

6. **Final Plat – Karle Subdivision –** located south of Old Potash Hwy and east of Monitor Road, in the 2 mile extra territorial jurisdiction of the City Of Grand Island, in Hall County, Nebraska, consisting of 4.92 acres and (2 Lots).

7. **Final Plat – Copper Creek Estates Eighth Subdivision –** located south of Old Potash Hwy and east of Engleman Road, in the City Of Grand Island, in Hall County, Nebraska, consisting of 13.203 acres and (44 Lots).

8. **Directors Report**

9. **Next Meeting July 2, 2014.**

10. **Adjourn**

PLEASE NOTE: This meeting is open to the public, and a current agenda is on file at the office of the Regional Planning Commission, located on the second floor of City Hall in Grand Island, Nebraska.

Hall County Regional Planning Commission

Wednesday, June 4, 2014
Regular Meeting

Item E1

Meeting Minutes

Staff Contact: Chad Nabity

THE REGIONAL PLANNING COMMISSION OF HALL COUNTY, GRAND ISLAND, WOOD RIVER AND THE VILLAGES OF ALDA, CAIRO, AND DONIPHAN, NEBRASKA

Minutes
for
May 7, 2014

The meeting of the Regional Planning Commission was held Wednesday, May 7, 2014, in the Community Meeting Room - City Hall – Grand Island, Nebraska. Notice of this meeting appeared in the "Grand Island Independent" April 26, 2014.

Present:	Pat O'Neill	Les Ruge
	Richard Heckman	Terry Connick
	Mark Haskins	Karen Bredthauer
	Dean Kjar	Bill Hayes
	Deb Reynolds	Dennis McCarty

Absent: Julie Connelly and Craig Vincent

Other:

Staff: Chad Nabity, Rose Rhoads

Press:

1. **Call to order.**

   Chairman O'Neill called the meeting to order at 6:00 p.m.

   O'Neill stated that this was a public meeting subject to the open meetings laws of the State of Nebraska. He noted that the requirements for an open meeting are posted on the wall in the room and easily accessible to anyone who may be interested in reading them.

2. **Minutes of April 2, 2014 meeting.**

   A motion was made by Reynolds and seconded by Ruge to approve the Minutes of the April 2, 2014 meeting.

The motion carried with 10 members present and 7 voting in favor (O'Neill, Haskins, Bredthauer, Connick, Ruge, Reynolds and Heckman) and 3 members present abstaining (McCarty, Kjar and Hayes).

3. **Request Time to Speak.**
Chris Helzer (The Nature Conservatory), PO Box 438, Aurora, NE 68818, item #4.

4. Request for Conservation Easement - Concerning a Conservation Easement – Sections 13 and 14 in Township 9 N, Range 11 W. of the 6th P.M. (C-11-2014HC)

Nabity briefed the commissioners on the reason for the request and Mr. Helzer spoke in favor of the Conservation Easement.

A motion was made by Bredthauer and seconded by McCarty to approve the Conservation Easement.

The motion carried with 10 members present and all voting in favor (O'Neill, McCarty, Reynolds, Haskins, Bredthauer, Heckman, Ruge, Kjar and Connick) and no member present voting against.

5. Public Hearing - Concerning an amendment to the redevelopment plan for CRA Area 1, for a Site Specific Redevelopment Plan for 217 N. Locust Street in Grand Island Nebraska also known as: Masonic Temple Building or "Tower 217". Resolution No. 2014-06. (C-12-2014GI)

O'Neill opened the Public Hearing.

Nabity reviewed the site specific Redevelopment Plan for 217 N Locust St.

O'Neill closed the Public Hearing.

A motion was made by Ruge and seconded by Hayes to approve the Redevelopment Plan for 217 N Locust, Resolution No 2014-06.

The motion carried with 10 members present and all voting in favor (McCarty, Connick, O'Neill, Ruge, Hayes, Reynolds, Heckman, Haskins, Bredthauer and Kjar) and no member present voting against.

Consent Agenda

6. Final Plat – Little Angel Subdivision – located west of Congdon Ave., and south of E 7th St., in the City Of Grand Island, in Hall County, Nebraska, consisting of .920 acres and (2 Lots).

7. Final Plat – Ummelville Second Subdivision – located south of E 4th St., and west of Sky Park Road, in the City Of Grand Island, in Hall County, Nebraska, consisting of

10.571 acres and (3 Lots).

8. Final Plat – Horizons Second Subdivision – located south of Loup River Rd and west of 130th Rd., in Hall County, Nebraska, consisting of 4.8941 acres and (1Lot).

A motion was made to approve the plats as presented by Bredthauer and seconded by Reynolds.

The motion carried with 8 members present and all voting in favor (O'Neill, Reynolds, Hayes, Haskins, Bredthauer, Heckman, Ruge, and Connick) and two members present abstaining (McCarty and Kjar).

9. Planning Director's Report

10. Next Meeting June 4, 2014

11. Adjourn

Chairman Pat O'Neill adjourned the meeting at 6:36 p.m.

_____

Leslie Ruge, Secretary

By Rose Rhoads

Hall County Regional Planning Commission

Wednesday, June 4, 2014
Regular Meeting

Item F1

Adoption of Hall County 1 & 6

Staff Contact: Chad Nabity

2014-2015
FISCAL YEAR

ONE AND SIX YEAR

ROAD PROGRAM

HALL COUNTY, NEBRASKA

Board of Public Roads Classifications and Standards

Form 11 Report of Previous Year Highway or Street Improvement

Year Ending: Fiscal - June 30, 2014

County:	City:	Village:
HALL		

PROJECT NUMBER	LENGTH *(Nearest Tenth)*	UNIT OF MEASURE	PROJECTED COST *(Thousands)*	CONTRACT PROJECT	OWN FORCES	DATE COMPLETED *(Actual or Estimated)*
C40(261)-3	2.0	MILE	500	X		Delay 1 Yr.
C40(369)	0.1	MILE	175		X	6-2014
C40(387)	0.1	MILE	50		X	6-2014
C40(400)	0.1	MILE	20		X	04-2014
C40(401)	0.5	MILE	150	X		08-2013
C40(405)	0.1	MILE	50		X	05-2014
C40(406)	0.1	MILE	50			Deleted
C40(410)	0.1	MILE	5		X	10-2013
C40(411)	0.1	MILE	30		X	10-2013
C40(412)	0.1	MILE	15		X	12-2013
C40(413)	0.1	MILE	10		X	04-2014
C40(414)	0.1	MILE	50		X	12-2013
C40(415)	0.1	MILE	5		X	09-2013
C40(416)	0.1	MILE	30		X	06-2014
C40(417)	0.1	MILE	40		X	05-2014
C40(418)	0.1	MILE	20		X	10-2013
C40(420)	0.1	MILE	10		X	09-2013
C40(421)	0.1	MILE	10		X	08-2013
C40(428)	0.5	MILE	8		X	10-2013
C40(429)	0.1	MILE	60		X	Delay 1 Yr

Signature:	Title:	Date:
Casey C Shuck	Hall County Surveyor	June 17, 2014

NBCS Form 11, Jul 96

Board of Public Roads Classifications and Standards

Form 8 Summary of One-Year Plan

Year Ending: Fiscal year end June 30, 2015

Sheet 1 of 1

County: C40 - Hall County	City:	Village:

PRIORITY NUMBER	PROJECT NUMBER	LENGTH *(Nearest Tenth)*	UNIT OF MEASURE	ESTIMATED COST *(Thousands)*	REMARKS
1	C40(261)-3	2.0	MILE	450	New Paving-Local
2	C40(429)	0.1	MILE	60	Intersection-Local
3	C40(133)	0.1	MILE	250	Bridge-Local
4	C40(373)	0.1	MILE	100	CBC, Paving-Local
5	C40(430)	0.1	MILE	20	CMP-Local
6	C40(431)	0.1	MILE	50	Bridge-Local
7	C40(432)	0.1	MILE	10	CMP-Local
8	C40(433)	1.0	MILE	10	Grading-Local
9					
10					
11					
12					
13					
14					
15					
16					
17					
			COUNTY	875	
			OTHER	75	
			TOTAL	950	

Signature:	Title:	Date:
Gary C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 8, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:

On a north and south road beginning at the intersection of Webb Road and Abbott Road and at the southeast corner of Section 25, T-12-N, R-10-W; thence northerly 2 miles to the intersection of Webb Road and One-R Road.

Webb Road 14V & 14W

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel and culverts

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 410, 2028 = 735	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-1	**Surfacing**	6"	24.0

☒ Grading	☒ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

5" x 24' Asphalt or 6" X 24' Concrete

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	450					450

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
2.0 miles	C40(261)-3

Signature:	Title:	Date:
Casey C Shanlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

Intersection of Schultz Road and 130th Road (Old NE Hwy 11), T-9-N, R-11-W at the intersection of Sections 19, 20, 29, and 30.

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Reconstruction of the intersection of Schultz Road and 130th Road (Old NE Hwy 11). Remove existing asphaltic concrete surfacing and replace with portland cement concrete surfacing.

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 418, 2033 = 600	Other Arterial (SFC)

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
ROA1	**Surfacing**	9" or 10" T.B.D.	24' to 28'

☒ Grading	☒ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☒ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:

The pavement thickness will depend on the pavement determination during design. The surfacing will be improved from the existing asphaltic concrete that is breaking up and shoving from trucks. The truning radius' will be improved from what exists with 2' tapers and 50' radius.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	60					60

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(429)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:

On a north and south road between Section 31, T-12-N, R-10-W and Section 36, T-12-N, R-11-W of the 6th P.M., Hall County, NE

80th Road between Nebraska State Hwy No. 2 and Abbott Road, County Bridge No. 26 U 8

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel and Pony Truss Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 35, 2028 = 65	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-2			

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 90'	Type: Conc Deck Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace existing 16' x 50' Truss Bridge with 90' precast slab bridge

NDOR STRUCTURE NO. C004022535

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	250					250

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 miles	C40(133)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

Intersection of Engleman Road, Airport Road and Nebr. State Hwy. No. 2. NW 1/4 of Section 2, T 11 N, R 10 W
County Bridge No. 18-T-9
County mile: 18T, 37J, & 37H

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Asphalt and Steel Girder Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 1000, 2028 = 1500	Airport Rd-Other Arterial/ Engleman Rd-Local

PROPOSED IMPROVEMENT

Design Standard Number:	Surfacing	Thickness:	Width:
ROA1/AASHTO		6"	24'

☒ Grading	☒ Concrete	☒ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☒ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter: T.B.D		Length: T.B.D.	Type: T.B.D.

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace 25.5' X 50' Steel Girder Bridge with concrete box culvert. Reconstruct south intersection of Engleman Road and Airport Road with Nebr. State Hwy. No. 2 to improve angle of the approach and raise Engleman Road grade to accommodate Central Platte NRD drainage project.

NDOR STRUCTURE NO. -C004013311

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	50				50	100

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 Mile	C40(373)

Signature:	Title:	Date:
Casey C. Shubert	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

110th Road between Holling Road and Schultz Road, between Sections 27 and 28, T-10-N, R-11-W.

County Bridge No. 32-H-8

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel, wood bridge 19.8' long x 20' wide, Rebuilt 1949

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2014 = 50, **2034** = 100	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3		2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter: 60"		Length: 38'	Type: CMP

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace 19.8' long x 20' wide wood bridge with 3-60" x 38' CMP's with headwalls.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	20					20

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(430)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Wiseman Road between Old Military Road and Holling Road between Section 31, T-10-N, R-12-W and Section 36, T-10-N, R-13W
Hall County Structure No. 50-G-4

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, Steel Girder Bridge, asphalt deck on corrugated steel.

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2014 = 250, **2034** = 500	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-2		2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width: 24'		Length: 62'	Type: Steel Girder
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Add bent, cast in place concrete deck

NDOR STRUCTURE NO. C004010115 Built 1968

1/2 Hall County 1/2 Buffalo County-Buffalo County Number will be determined in 2015.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	25				25	50

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(431)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

Rosedale Road between Sections 26 and 35, T-9-N, R-11-W between 90th Road and Schauppsvill Road

County Bridge No. 3-P-5

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Asphalt, 3' x 5' x 24' CBC

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2014 = 300, **2034** = 500	Other Arterial

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
ROA2	**Surfacing**	6"	24'

☐ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter: 36"		Length: 44'	Type: CMP-w/FES

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace 3' x 5' x 24' CBC with 3-36" CMP's w/FES

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	10					10

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(432)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Monitor Road between Stolley Park Road and Old Potash Highway between Sections 21 and 22, T-11-N, R-10-W.

County Mile 20-Q

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, culverts

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2014 = 100, **2034** = 200	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-2	**Surfacing**	2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
County to reconsruct gravel road

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	10					10

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
1.0	C40(433)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 9 Summary of Six-Year Plan

Six-Year Period Ending: June 30, 2020

County: C40 - Hall County	City:	Village:

PRIORITY NUMBER	PROJECT NUMBER	LENGTH *(Nearest Tenth)*	UNIT OF MEASURE	ESTIMATED COST *(Thousands)*	REMARKS
1	C40(135)	0.25	MILE	150	BRIDGE - LOCAL
2	C40(171)-1	0.1	MILE	276	BRIDGE-FED AID
3	C40(300)-2	2.0	MILE	550	PAVING-LOCAL
4	C40(333)	2.5	MILE	162	BRIDGE-LOCAL
5	C40(367)	0.1	MILE	150	BRIDGE - LOCAL
6	C40(371)	0.1	MILE	200	BRIDGE - LOCAL
7	C40(372)	0.1	MILE	125	BRIDGE - LOCAL
8	C40(376)	0.1	MILE	100	BRIDGE - LOCAL
9	C40(378)	0.1	MILE	85	BRIDGE - LOCAL
10	C40(379)	0.1	MILE	85	BRIDGE - LOCAL
11	C40(389)	0.1	MILE	85	BRIDGE - LOCAL
12	C40(391)	0.1	MILE	200	BRIDGE - LOCAL
13	C40(392)	0.1	MILE	300	BRIDGE - LOCAL
14	C40(393)	0.1	MILE	250	BRIDGE - LOCAL
15	C40(409)	0.1	MILE	25	BRIDGE - LOCAL
16	C40(419)	0.1	MILE	30	CONC BOX-LOCAL
17	C40(422)	0.1	MILE	50	CONC BOX-LOCAL
18	C40(423)	0.1	MILE	50	CONC BOX-LOCAL
19	C40(424)	0.1	MILE	30	CONC BOX-LOCAL
20	C40(425)	0.1	MILE	30	CONC BOX-LOCAL
21	C40(121)-2	4.0	MILE	1100	PAVING-LOCAL
22	C40(426)	1.25	MILE	225	PAVING-LOCAL
23	C40(427)	1.00	MILE	225	PAVING-LOCAL
24	C40(434)	0.1	MILE	100	BRIDGE-LOCAL
25	C40(435)	0.1	MILE	100	BRIDGE-LOCAL

Signature: Casey C Shubert	Title: Hall County Surveyor	Date: June 17, 2014

NBCS Form 9, Jul 96

Board of Public Roads Classifications and Standards

Form 9 Summary of Six-Year Plan

Six-Year Period Ending: June 30, 2020

County: C40 - Hall County	City:	Village:

PRIORITY NUMBER	PROJECT NUMBER	LENGTH *(Nearest Tenth)*	UNIT OF MEASURE	ESTIMATED COST *(Thousands)*	REMARKS
			LOCAL	4435	
			STATE	28	
			FEDERAL	220	TOTAL = 4683

Signature: Casey C Sherlock	Title: Hall County Surveyor	Date: June 17, 2014

NBCS Form 9, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:
On an east and west road between Section 7 & 18, T-11-N, R-11-W of the 6th P.M., Hall County, NE

13th Street 33 T 6

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 45, 2028 = 90	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3			

☒ Grading	☐ Concrete	☒ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☒ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☒ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 60'	Type: Conc Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace existing 16' x 40' truss bridge, channel change and straighten road

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	150					150

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.25 mile	C40(135)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:
On a north and south road between Section 27 & 28, T-12-N, R-10-W of the 6th P.M., Hall County, NE

Monitor Road 20 V 9

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 25, 2028 = 45	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3		0	0

☐ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30.0		Length: 100.0 ft.	Type: Conc Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace existing 16' x 46' truss bridge

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	28		28	220		276

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 mile	C40(171)-1

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:
On a north and south road beginning at the intersection of Engleman Road and Abbott Road; thence 1 mile north.

Engleman Road 18 V & 18 W

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 200, **2033** = 400	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-1	**Surfacing**	6"	24.0

☐ Grading	☒ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:
5" x 24' Asphalt or 6" X 24' Concrete

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	550					550

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
2.0 miles	C40(300)-2

Signature:	Title:	Date:
Casey C Shulock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:

On a north and south road between Sections 15 & 16, T-10-N, R-11-W of the 6th P.M., Hall County, NE 110th Road between US Hwy 30 and Guenther Road

Bridge 32 K 8 C004021910

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Existing pony truss bridge on gravel road

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 65, 2033 = 115	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-2	**Surfacing**	0	0

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 31.0		Length: 75.0	Type: Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☒ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:

Replace existing 15' 4" x 51' pony truss with 30' x 75' concrete slab bridge

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	162					162

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.5	C40(333)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
190th Road between Old Military Road and Holling Road. Section 32, T 10 N, R 12 W.

County mile: 48G 08

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and Thru Truss Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 75, 2028 = 175	Local

PROPOSED IMPROVEMENT

Design Standard Number:	Surfacing	Thickness:	Width:
RL-2			

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 60'	Type: Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace 61' thru truss bridge with 60' X 30' prestressed concrete slab bridge.

C004000310

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	150					150

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 Mile	C40(367)

Signature:	Title:	Date:
Casey C Shulock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
60th Road between Wildwood Drive and Guenther Road. Section 9, T 10 N, R 10 W

County mile: 22L 06

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and Thru Truss Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 55, 2028 = 75	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-2	**Surfacing**	2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 70'	Type: Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace 71' thru truss bridge with 70' X 30' prestressed concrete slab bridge.

C004012910

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	200					200

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 Mile	C40(371)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Sky Park Road between Chapman Road and Prairie Road. Section 11, T 12 N, R 9 W.

County mile: 6Y 05

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and Thru Truss Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 55, 2028 = 75	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-2	**Surfacing**	2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 50'	Type: Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace 52' thru truss bridge with 50' X 30' prestressed concrete slab bridge.

C004024325

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	125					125

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 Mile	C40(372)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Schauppsville Road between Capital Avenue and 13th Street. Section 11, T 11 N, R 11 W.

County mile: 30S 04

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and I-beam bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 175, **2033** = 225	Collector

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RC-2	**Surfacing**	2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 30'	Type: Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace 33' X 18.5' - 15" I-beam bridge with 30' X 30' prestressed concrete slab bridge.

C004012115

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	100					100

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 Mile	C40(376)

Signature:	Title:	Date:
Casey C Shubert	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
60th Road between Barrows Road and Rosedale Road, 0.7 miles north of the SE Corner of Section 32, T-9-N, R-10-W

County Mile: 22A07

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, steel bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 35, 2008 = 55	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3			

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 30'	Type: Precast Conc Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace steel bridge with 30' X 30' precast concrete slab bridge.

Bridge built in 1968.

C004002903

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	85					85

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 mile	C40(378)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

70th Road between Barrows Road and roasedale Road. 0.3 miles North of SE Corner of Section 31, T-9-N, R-10-W.

County Mile: 24A 03

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel, steel bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 35, 2008 = 55	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3			

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 30'	Type: Precast Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace steel bridge with 30' X 30' precast concrete slab bridge.

Bridge built in 1968.

C004002703

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	85					85

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(379)

Signature:	Title:	Date:
Casey C. Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

13th street between Schauppsville Road and 110th Road
0.1 mile west of NE corner, Section 15, T-11-N, R-11-W.

County Mile: 33Q1

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel 15" I Beam Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2012 = 60, 2032 = 80	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-2			

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 30'	Type: Precast Conc. Slab
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace 15" I beam bridge with 30' X 30' precast concrete slab bridge.

C004001815

Bridge built in 1931

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	85					85

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(389)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Old Potash Highway between Cameron Road and McGuire Road.
0.9 mile west of the NE corner. Section 22. T-11-N. R-12-W.

County Mile: 31W09

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, concrete box I beam bridge combination.

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 100, 2008 = 125	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL2	**Surfacing**	2"	24'

☒ Grading	☐ Concrete	☒ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☒ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 42'	Type: concrete steel
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace 41' concrete box and steel I beam combination bridge

C004002005

Bridge built in 1928 and 1942

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	200					200

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 mile	C40(391)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Schimmer Drive between BLuff Center Road and 190th Road.
0.7 mile west of NE corner section 5. T-10-N. R-12-W

County Mile: 25Y07

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, I Beam and timber combination bridge.

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 35, 2008 = 55	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3			

☒ Grading	☐ Concrete	☒ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☒ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 64'	Type: concrete steel
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace 64' steel I beam and timber combination bridge.

C004002605

Bridge built in 1941

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	300					300

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 mile	C40(392)

Signature:	Title:	Date:
Casey C Shanks	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
80th Road between Wood River Road and Guenther Road.
0.6 mile North of SE Corner. Section 13. T-10-N. R-11-W

County Mile: 26K06

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, 30' Girder Bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 55, 2008 = 75	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL2			

☒ Grading	☐ Concrete	☒ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☒ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 56'	Type: concrete steel
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Replace steel grider bridge. Bridge is 14'8" wide 55' long.

C004002530

Bridge built in 1932

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	250					250

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 mile	C40(393)

Signature:	Title:	Date:
Casey C Shubert	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

190th Road between Schimmer Drive and Husker Highway
between sections 31 and 32, T-11-N. R-12-W

County Mile: 48N 01

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Existing Surface is Gravel
Existing Structure is 10.5' wood bridge in poor condition

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2008 = 55, 2008 = 75	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL2			

☒ Grading	☐ Concrete	☒ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☒ Fencing	☐ .....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 11'	Type: Precast Concrete
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace 10.5' wood bridge built in 1941 with 11' precast concrete slab bridge.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	25					25

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1 mile	C40(409)

Signature:	Title:	Date:
Casey C Shubert	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Burwick Road, between Stolley Park Road and Old Potash Highway, between Sections 20 and 21, T-11-N, R-11-W, Hall County, Nebraska

County Mile: 34Q 08

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel Surface
Existing structure is 20' wood bridge in poor condition

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 75, 2033 = 125	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-2			

- ☐ Grading
- ☐ Aggregate
- ☐ Armor Coat
- ☐ Asphalt
- ☐ Concrete
- ☐ Curb & Gutter
- ☒ Drainage Structures
- ☐ Erosion Control
- ☐ Right of Way
- ☐ Utility Adjustments
- ☐ Fencing
- ☐ Sidewalks
- ☐ Lighting
- ☐ .....
- ☐ .....
- ☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span: 8'	Rise: 5'	Length: 42'	Type: Twin Conc. Box
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☒ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:
Replace existing 20' wood bridge built in 1928 with Twin 8' X 5' X 42' precast concrete box sections.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	30					30

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(419)

Signature:	Title:	Date:
Casey C. Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

On an east and west road between Sections 14 and 23, T-12-N, R-9-W of the 6th P.M., Hall County, Nebraska on One-R Road between Quandt Road and Sky Park Road.

County Road 43B 03

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Existing 12' span by 6' rise concrete box culvert built in 1930 on a gravel road.

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 45, 2033 = 55	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-3	**Surfacing**	Gravel	22'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span: Triple 8'	Rise: 5'	Length: 36'	Type: CBC
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☒ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:

Replace existing narrow concrete box culvert with Triple 8' X 5' X 36' precast concrete box sections

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	50					50

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(422)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

Platte River Drive, between Prosser Road and 110th Road, in the Northwest Quarter of Sections 21, T-9-N, R-11-W, Hall County, Nebraska

County Mile: 7R 08

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel Road Surface
Existing structure is 20' I-beam bridge in poor condition.

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 35, 2033 = 75	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3			

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span: Triple 8'	Rise: 5'	Length: 36'	Type: triple Conc. Box
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Replace existing 20' I-beam bridge with triple 8' X 5' X 36' precast concrete box sections.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	50					50

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(423)

Signature:	Title:	Date:
Casey C. Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
South Locust Street, between Cedarview Road and Giltner Road, between Sections 3 and 4, T-9-N, R-9-W, Hall County, Nebraska

County Mile: 8F 09

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Asphalt Road Surface
Existing structure is 12' X 4' Concrete Box in good condition

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 1000, **2033** = 1500	Other Arterial

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
ROA-1			

☐ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☒ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span: Twin 6'	Rise: 4'	Length: 48'	Type: Twin Conc. Box
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Addition of twin 6' X 4' X 48' precast concrete box culvert sections along side existing 12' X 4' Concrete Box Structure to increase drainage capacity.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	30					30

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(424)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:

Cedarview Road, between South Locust Street and Stuhr Road, on the north side of Section 3, T-9-N, R-9-W, Hall County, Nebraska

County Mile: 13C 09

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel Road Surface
Existing structure is Twin 8' X 4' Concrete Box in good condition

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 100, 2033 = 150	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-2	**Surfacing**		

☐ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☒ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span: Twin 6'	Rise: 4'	Length: 40'	Type: Twin Conc. Box
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:

Addition of twin 6' X 4' X 48' precast concrete box culvert sections along side existing Twin 8' X 4' Concrete Box Structure to increase drainage capacity.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	30					30

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(425)

Signature:	Title:	Date:
Casey C. Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:

On an east and west road beginning at the southwest corner of Section 13, T-12-N, R-11-W; thence easterly 4.0 miles to the southwest corner of Section 15, T-12-N, R-10-W

One-R Road 43K, L, M & N

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*

Gravel and Culverts

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 175, 2033 = 350	Other Arterial

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
ROA-3		6"	24.0

☐ Grading	☒ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:

5" x 24' Asphalt or 6" X 24' Concretet

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	1,100					1,100

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
4.0 miles	C40(121)-2

Signature:	Title:	Date:
Casey C. Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
60th Road between Wildwood Drive and U.S. Hwy. No. 30. Section 4, T 10 N, R 10 W.

County mile: 22M

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and culverts

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 387, **2033** = 550	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-1	**Surfacing**	6"	24'

☐ Grading	☒ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:
5" x 24' Asphalt or 6" X 24' Concrete.

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	225					225

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
1.25 Miles	C40(426)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C40 - Hall County		

Location Description:
On Stolley Park Road between Shady Bend Road and Gunbarrel Road and along the north line of Section 25, T11-N-, R-9-W of the 6th P.M., Hall County, NE

Stolley Park Road 29A

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, culverts and bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2013 = 146, **2033** = 175	Other Arterial

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
ROA-3		6"	24.0

☒ Grading	☒ Concrete	☐ Right of Way	☐ Lighting
☐ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☐ Drainage Structures	☐ Fencing	☐ .....
☒ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width:		Length:	Type:
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☐ Hydraulic Analysis Pending

Other Construction Features:
5" x 24' Asphalt or 6" X 24' Concrete

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	225					225

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
1.0 Miles	C40(427)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County:	City:	Village:
C-40 Hall County		

Location Description:
Burwick Road between Cedarview Road and Holling Road between Sections 32 & 33, T-10-N, R-11-W

County Bridge No. 34-G-3

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel, steel beam, concrete deck bridge Built 1932

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2014 = 35, 2034 = 50	Local

PROPOSED IMPROVEMENT

Design Standard Number:		Thickness:	Width:
RL-3	**Surfacing**	2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ .....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ .....
☐ Asphalt	☐ Erosion Control	☐ Sidewalks	☐ .....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 40'	Type: CONC SLAB DECK
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Remove bridge built in 1932 and replace with 40' precast concrete deck slab bridge.

NDOR STRUCTURE NO. C004011710

ESTIMATED COST *(in Thousands)* ★ OPTIONAL	★ COUNTY	★ CITY	★ STATE	★ FEDERAL	★ OTHER	TOTAL
	100					100

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(434)

Signature:	Title:	Date:
Casey C Sherlock	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

Board of Public Roads Classifications and Standards

Form 7 One- and Six-Year Plan
Highway or Street Improvement Project

County: C-40 Hall County	City:	Village:

Location Description:
Cedarview Road between NE Hwy 11 and Burwick Road between Section 32, T-10-N, R-11-W and Section 5. T-9-N, R-11-W

County Bridge No. 13-S-3

Existing Surface Type and Structures: *(Such as dirt, gravel, asphalt, concrete, culvert, or bridge)*
Gravel and transverse joist girder bridge

Average Daily Traffic:	Classification Type: *(As shown on Functional Classification Map)*
2014 = 35, **2034** = 50	Local

PROPOSED IMPROVEMENT

Design Standard Number:	**Surfacing**	Thickness:	Width:
RL-3		2"	20'

☒ Grading	☐ Concrete	☐ Right of Way	☐ Lighting
☒ Aggregate	☐ Curb & Gutter	☐ Utility Adjustments	☐ ....
☐ Armor Coat	☒ Drainage Structures	☐ Fencing	☐ ....
☐ Asphalt	☒ Erosion Control	☐ Sidewalks	☐ ....

Bridge to Remain in Place	Roadway Width:		Length:	Type:
New Bridge	Roadway Width: 30'		Length: 40'	Type: CONC SLAB DECK
Box Culvert	Span:	Rise:	Length:	Type:
Culvert	Diameter:		Length:	Type:

Bridges and Culverts Sized ☐ Yes ☐ N/A ☒ Hydraulic Analysis Pending

Other Construction Features:
Remove bridge built in 1971 and replace with 40' precast concrete deck slab bridge.

NDOR STRUCTURE NO. C004003805

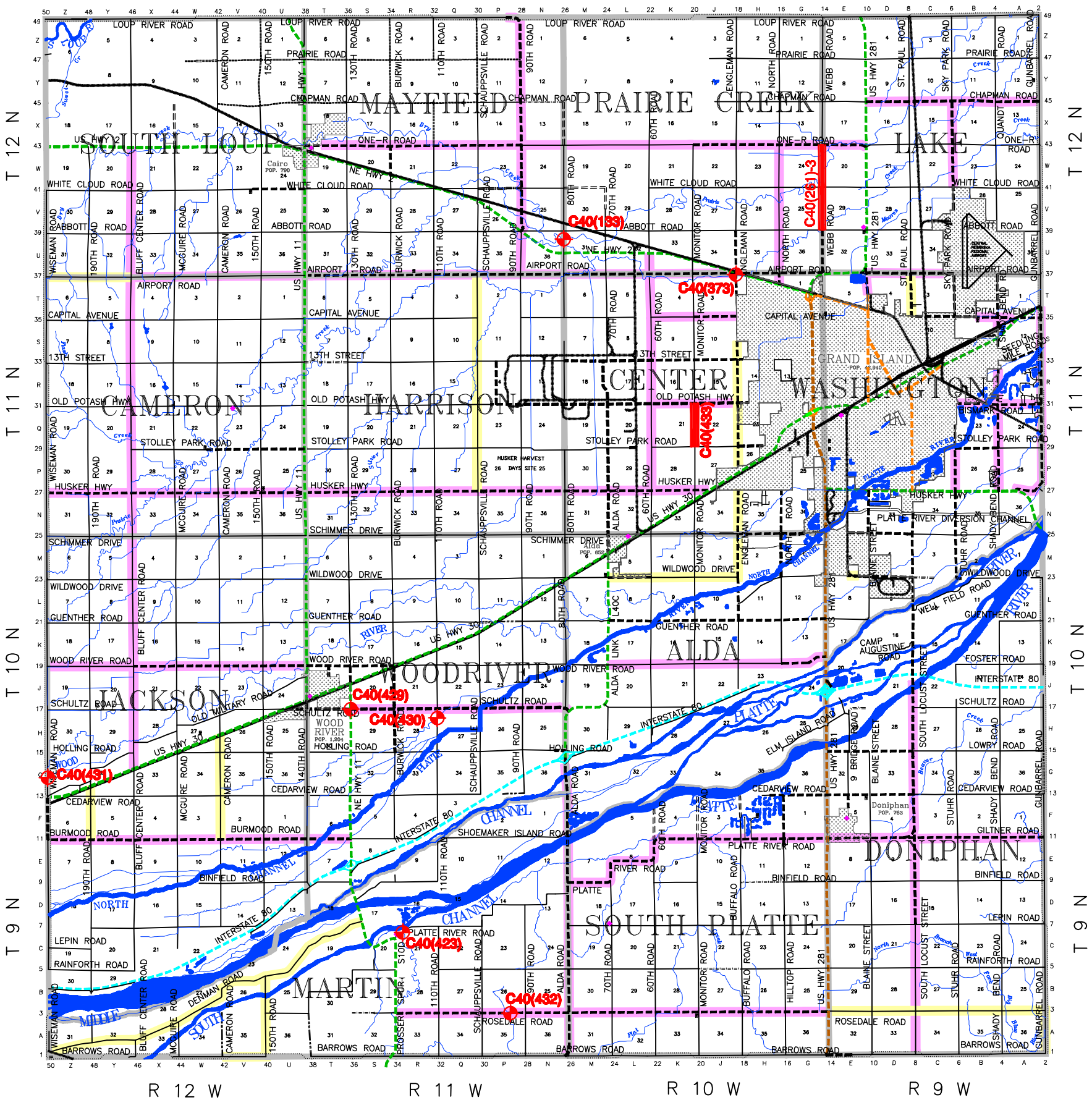
ESTIMATED COST *(in Thousands)* ★ **OPTIONAL**	★ **COUNTY**	★ **CITY**	★ **STATE**	★ **FEDERAL**	★ **OTHER**	**TOTAL**
	100					100

Project Length: *(Nearest Tenth, State Unit of Measure)*	Project No.:
0.1	C40(435)

Signature:	Title:	Date:
[signature]	Hall County Surveyor	June 17, 2014

NBCS Form 7, Jul 96

HALL COUNTY
NEBRASKA
1-YEAR ROAD PROGRAM
FISCAL YEAR 2014-2015



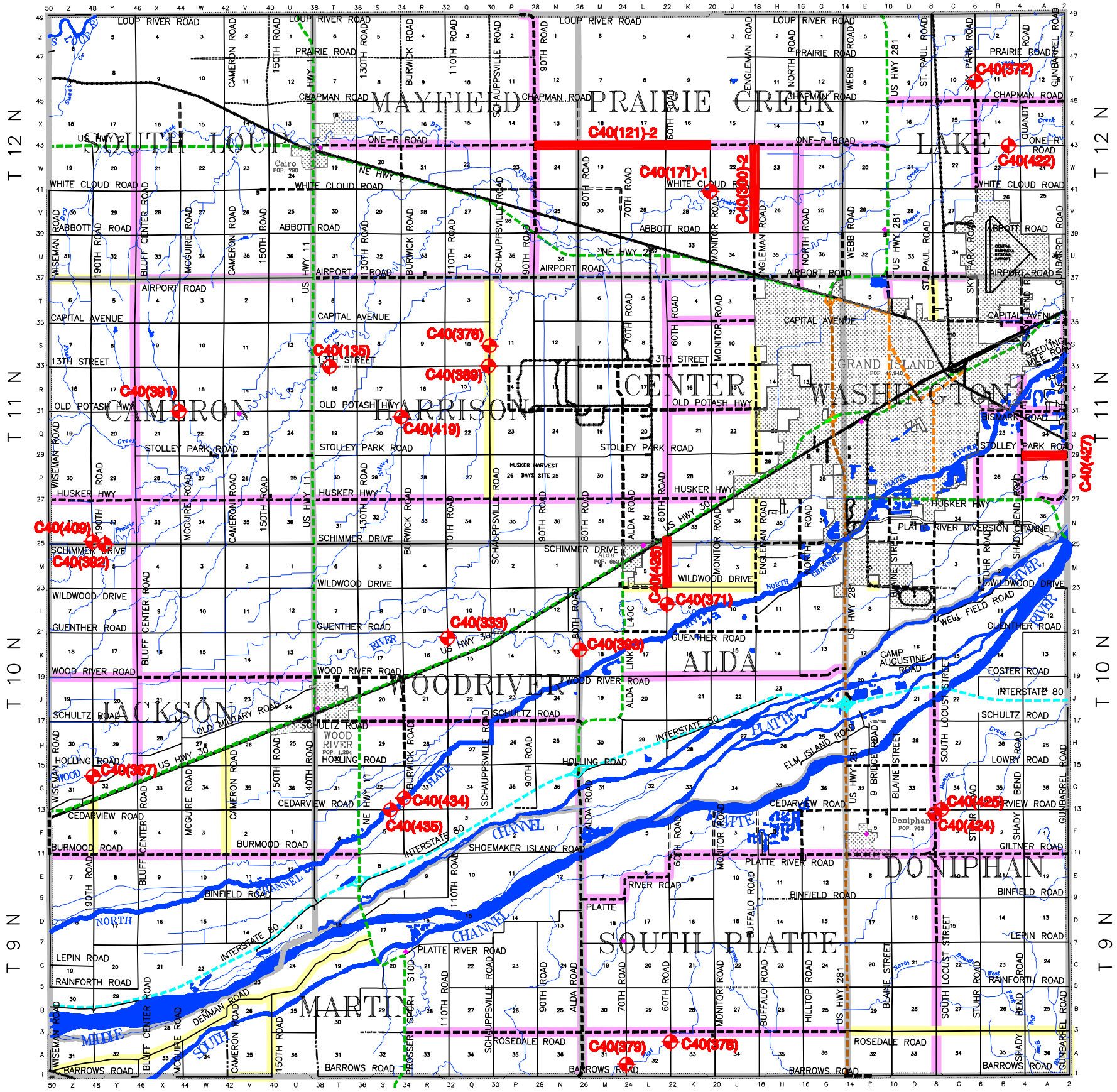
NOT TO SCALE

LEGEND

ROAD PROJECT
BRIDGE PROJECT
COUNTY ROAD – PAVED
COUNTY ROAD –PAVED SUBDIVISION
COUNTY ROAD – GRAVEL
COUNTY ROAD – DIRT
COUNTY ROAD – MIN. MAINT. GRAVEL
COUNTY ROAD – MIN. MAINT. PRIMITIVE
TOWNSHIP ROAD – GRAVEL
TOWNSHIP ROAD – DIRT
TOWNSHIP ROAD – NON MAINTAINED
TOWNSHIP ROAD – PRIMITIVE
COUNTY SHOP
CEMETERY

STATE FUNCTIONAL CLASSIFICATIONS
INTERSTATE
EXPRESSWAY
MAJOR ARTERIAL
OTHER ARTERIAL
COLLECTOR

HALL COUNTY
NEBRASKA
6-YEAR ROAD PROGRAM
FISCAL YEARS 2014-2020



NOT TO SCALE

LEGEND

ROAD PROJECT
BRIDGE PROJECT
COUNTY ROAD – PAVED
COUNTY ROAD –PAVED SUBDIVISION
COUNTY ROAD – GRAVEL
COUNTY ROAD – DIRT
COUNTY ROAD – MIN. MAINT. GRAVEL
COUNTY ROAD – MIN. MAINT. PRIMITIVE
TOWNSHIP ROAD – GRAVEL
TOWNSHIP ROAD – DIRT
TOWNSHIP ROAD – NON MAINTAINED
TOWNSHIP ROAD – PRIMITIVE
COUNTY SHOP
CEMETERY

STATE FUNCTIONAL CLASSIFICATIONS
INTERSTATE
EXPRESSWAY
MAJOR ARTERIAL
OTHER ARTERIAL
COLLECTOR

Hall County Regional Planning Commission

Wednesday, June 4, 2014
Regular Meeting

Item J1

Final Plats

Staff Contact: Chad Nabity

May 20, 2014

Dear Members of the Board:

RE: Final Plat – Karle Subdivision.

For reasons of Section 19-923 Revised Statues of Nebraska, as amended, there is herewith submitted a final plat of Karle Subdivision, located in the City of Grand Island, in Hall County Nebraska.

This final plat proposes to create 1 lot, a part of the West Half of the Northwest Quarter of Section 22, Township 11 North, Range 10 West of the 6th P.M., in Hall County, Nebraska, in the two mile jurisdiction of the City of Grand Island, Hall County, Nebraska, said tract containing 4.92 acres.

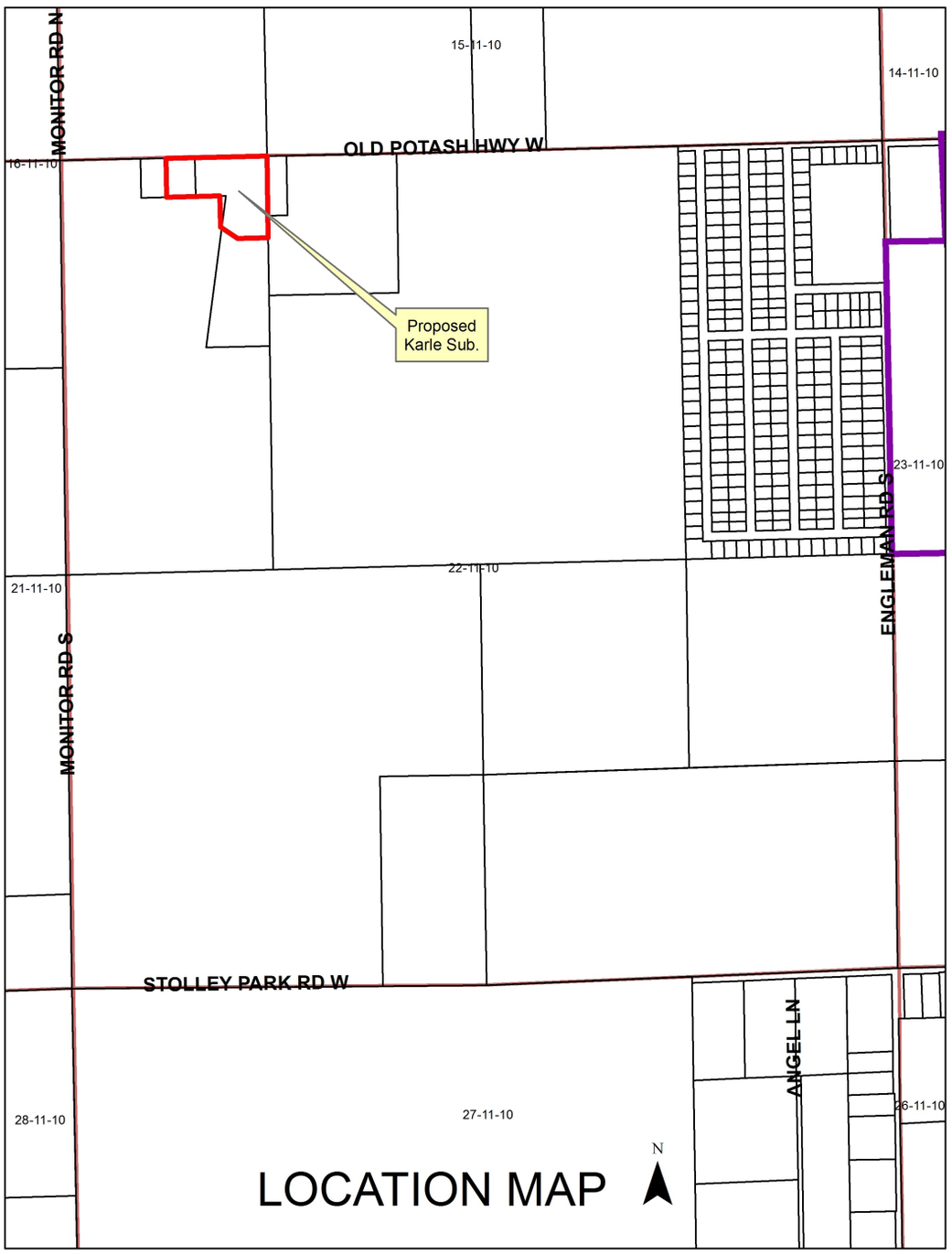
You are hereby notified that the Regional Planning Commission will consider this final plat at the next meeting that will be held at 6:00 p.m. on June 4, 2014 in the Council Chambers located in Grand Island's City Hall.

Sincerely,

Chad Nabity, AICP
Planning Director

Cc: City Clerk
City Attorney
City Public Works
City Building Department
City Utilities
Hall County Clerk
Hall County Attorney
Hall County Public Works
Hall County Zoning
Manager of Postal Operations
Baseline Surveying, LLC

This letter was sent to the following School Districts 1R, 2, 3, 19, 82, 83, 100, 126.


MONITOR RD N
15-11-10
14-11-10
OLD POTASH HWY W
16-11-10
Proposed
Karle Sub.
23-11-10
ENGLEMAN RD S
22-11-10
21-11-10
MONITOR RD S
STOLLEY PARK RD W
ANGEL LN
26-11-10
28-11-10
27-11-10
N
LOCATION MAP

May 20, 2014

Dear Members of the Board:

RE: Final Plat – Copper Creek Estates Eighth Subdivision.

For reasons of Section 19-923 Revised Statues of Nebraska, as amended, there is herewith submitted a final plat of Copper Creek Estates Eighth Subdivision, located in the City of Grand Island, in Hall County Nebraska.

This final plat proposes to create 44 lots, on a tract of land comprising a part of vacated Lots Sixty Nine (69), Seventy (70), Seventy One (71) and Eighty Four (84) Copper Creek Estates Subdivision, along with a part of the Northwest Quarter (NW1/4), all in Section Twenty Three (23), Township Eleven (11) North, Range Ten (10) West of the 6th P.M., in the City of Grand Island, Hall County, Nebraska, said tract containing 13.203 acres.

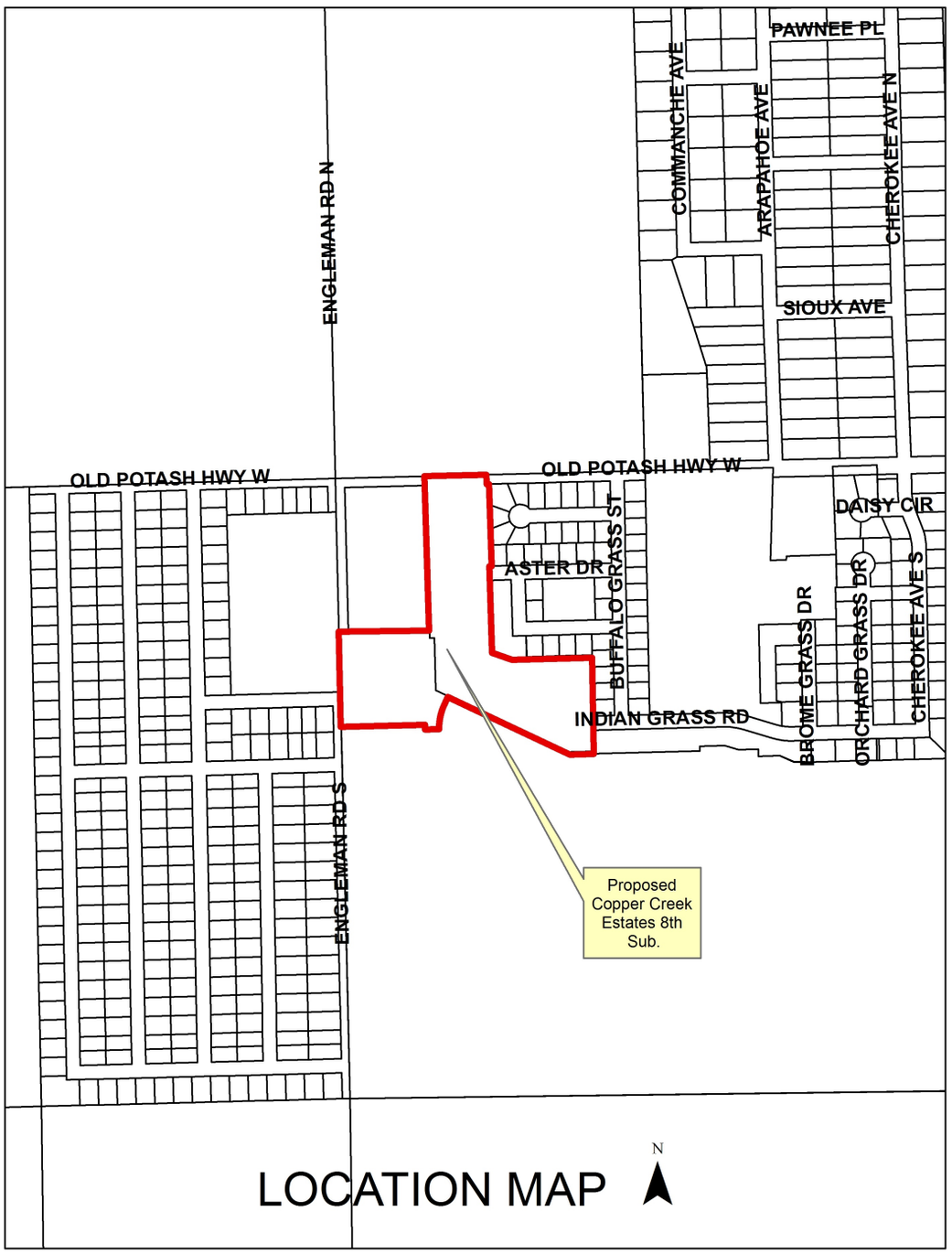
You are hereby notified that the Regional Planning Commission will consider this final plat at the next meeting that will be held at 6:00 p.m. on June 4, 2014 in the Council Chambers located in Grand Island's City Hall.

Sincerely,

Chad Nabity, AICP
Planning Director

Cc: City Clerk
City Attorney
City Public Works
City Building Department
City Utilities
Manager of Postal Operations
Rockwell & Associates

This letter was sent to the following School Districts 1R, 2, 3, 19, 82, 83, 100, 126.


PAWNEE PL
COMMANCHE AVE
ARAPAHOE AVE
CHEROKEE AVE N
ENGLEMAN RD N
SIOUX AVE
OLD POTASH HWY W
OLD POTASH HWY W
DAISY CIR
ASTER DR
BUFFALO GRASS ST
BROME GRASS DR
ORCHARD GRASS DR
CHEROKEE AVE S
INDIAN GRASS RD
ENGLEMAN RD S
Proposed Copper Creek Estates 8th Sub.
N
LOCATION MAP

Hall County Regional Planning Commission

Wednesday, June 4, 2014
Regular Meeting

Item 1

Energy Elements

Staff Contact: Chad Nabity

Energy Element

Energy Element

Energy usage in the early 21st Century is becoming a critical issue throughout Nebraska as well as the entire United States. Our dependency on energy sources that are not renewable has increased significantly over the past 100 years. Energy usage comes in several forms, such as:

- Lighting our homes and businesses
- Heating our homes and businesses
- Heating our water for homes and businesses
- Food preparation
- Transportation – both personal and business related
- Recreation and Entertainment – vehicular, computers, music, etc.
- Irrigating agricultural lands

The 21st Century ushered in an increased concern for energy usage and its impacts on the environment. With the increased concern for the environment came an increased understanding of the carbon footprint generated by any one individual as well as striving towards modifying our behavior patterns in order to lessen that footprint. In addition, the phrase and concept of sustainability has become more widely used, even in the smaller communities of Nebraska and United States.

Energy and the issues connected to the different sources are becoming more critical every year. The need for the Energy Element in the Grand Island Comprehensive Development Plan was established by the Nebraska Unicameral and Governor when LB997 was passed and signed during the 2010 legislative session. All communities and counties, with the exception of villages, in Nebraska are required to have an energy element in their comprehensive development plan (if they have one) by January 1 of 2015. This additional requirement forces communities to look at their energy usage and needs and plan that into the future development of the community. This makes the comprehensive development plan more comprehensive and therefore more meaningful. The passage of LB 997 appears to be a first step toward new comprehensive plans addressing the entire issue of Sustainability.

Sustainability

Sustainability, in today's discussions, has a number of meanings. According to Webster's Third International Dictionary, the verb "sustain" is defined as "to cause to continue...to keep up especially without interruption, diminution or flagging". However, the Brundtland Commission Report in 1987,[1] described sustainability as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs". In other words, sustainability is the ability of the present generation to live without jeopardizing the ability of future generations to sustain life as we know it today.

Our world's ability to stabilize and begin to make the switch to cleaner and more renewable resources will aid future generations with their quality of life. The more renewable energy sources become the norm for our world, the more likely these sources will be second nature and common place in the future.

Americans have grown to rely heavily on electricity. However, state and federal policies have been increasingly more insistent on curbing this reliance; especially, those sources that are produced by non-renewable fossil fuels such as oil and coal. Federal policy has set a goal that 20% of all electricity, by 2030, in the United States be from renewable sources. Renewable sources would include solar, wind, water, geothermal and any number of other sources that have not yet been discovered or brought to production levels.

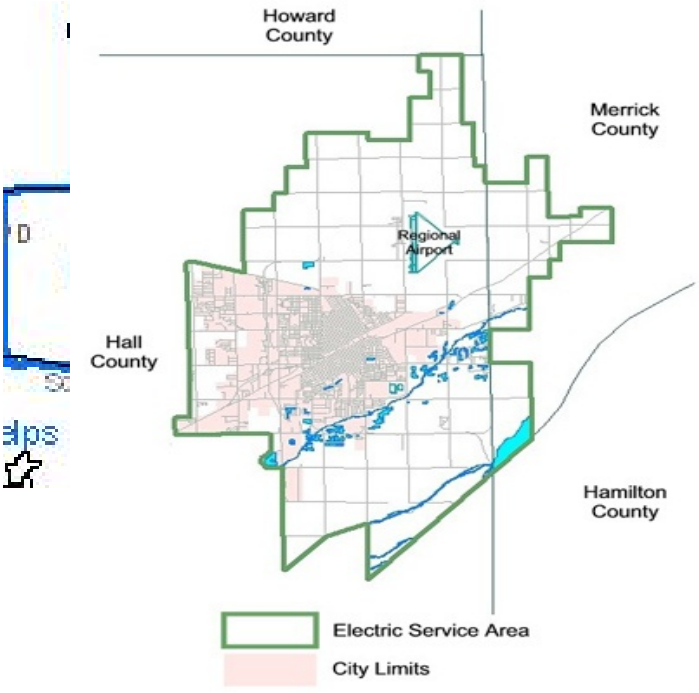
Energy infrastructure

Electrical Power

The majority of electrical power in Hall County, except for the cities of Grand Island and Wood

River and is supplied by Southern Power District. However, there are portions of Hall County that fall into the service area of the Grand Island Utilities.

Figure 1
Rural Public Power Districts in Hall County



Source:http://www.powerreview.nebraska.gov/maps/Map%20with%20County,%20PPD%20&%20Co-op%20Boundaries%20_5-1-09_.pdf and http://www.grand-island.com/index.aspx?page=214

Southern operates over 6,900 miles of distribution lines that are served by 73 substations located throughout the District's 4,028 square mile service area. Southern purchases all of its power from Nebraska Public Power District (NPPD) of Columbus, Nebraska.

Our chartered service area extends through the rural areas of seven counties: Adams, Franklin, Hall, Hamilton, Kearney, Merrick, Phelps, and a small portion of Clay County.

Southern also provides retail electric service to the towns highlighted on the map below.
Source: (http://www.southernpd.com/servicearea.html)

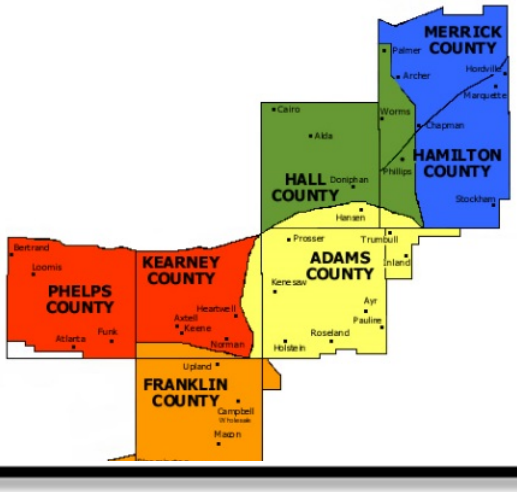


Figure 2
Southern Power District Service Area

Source: (http://www.southernpd.com/servicearea.html)

The city of Grand Island is served by Grand Island Utilities which maintains the distribution systems as well as generation for the city. The City of Wood River maintains their own distribution system while buying power wholesale through the Nebraska Municipal Power Pool (NMPP).

Electrical Distribution
The overall distribution system is in good condition. Typically the local rural power district continually upgrades the system and performing needed maintenance.

Natural Gas Service
Natural gas is available in parts of Hall County and is supplied by SourceGas.

Energy Use by Sector
This section analyzes the energy use by residential, commercial, and industrial and other users. This section will examine the different types of energy sources that are utilized by in these different sectors.

Residential Uses
Within Hall County the residential uses are provided a number of options for both power and heating and cooling. These include electrical power, natural gas, oil, propane, and wood. The most dominate of the energy sources available and used by the residents of Hall County is electricity produced from both renewable resources and fossil fuels.

The use of natural gas, oil, propane and wood will be found typically as heating sources during the winter months. The type of fuel used will depend a great deal on where a residence is located within the county. Residents located within the more urban parts of Hall County are more likely to have natural gas heating or electrical furnaces. Propane and wood stoves are most likely to be found in the rural parts of the county where natural gas infrastructure is not available.

Commercial Uses
Hall County's commercial uses also have a number of options for both power and heating and cooling. These include electrical power (both fossil fuel and renewable resources), natural gas, propane, oil and wood. The type of energy source is very dependent upon the specific commercial use and the facilities employed to house the use. The most dominate of the energy sources that are available and used by the residents of Hall County is electricity produced from both fossil fuels and renewable resources.

The use of natural gas, oil, propane and wood in commercial structures are typically used as heating sources during the winter months. The type of fuel used will depend a great deal on the type of commercial use and the construction of the building(s) involved. Similar to residential uses, commercial uses located within the more urban parts of Hall County are more likely to have natural gas heating or electrical furnaces. Propane and wood stoves are most likely to be found in the rural parts of the county where natural gas infrastructure is not available. However, in commercial uses such as repair garages and other uses in larger metal buildings, they may be dependent upon recycling used motor oils to heat their facilities.

Industrial Uses
Hall County's industrial uses also have a number of options for both power and heating and cooling. These include electrical power (both fossil fuel and renewable resources), natural gas, diesel fuel, propane, oil and wood. The type of energy source is very dependent upon the specific industrial use and the facilities employed to house the use. The

most dominate of the energy sources that are available and used by the residents of Hall County is electricity produced from both fossil fuels and renewable resources.

In some cases, diesel fuel can play a role in both power generation and heating and cooling. This is very dependent upon how a manufacturing facility is set up and how much electrical power they self-generate via diesel generators. In most cases, if diesel is used to heat and cool a building then it is done indirectly through the generation of electricity.

The use of natural gas, oil propane and wood will be found typically as heating sources during the winter months. The type of fuel used will depend a great deal on the type of industrial use and the construction of the building(s) involved. Industrial uses located within the more urban parts of Hall County are more likely to have natural gas heating or electrical furnaces. Propane is most likely to be found in the rural parts of the county where natural gas infrastructure is not available. However, in smaller industrial uses located in larger metal buildings, they may be dependent upon recycling used motor oils and such to heat their facilities.

Short-term and Long-term Strategies

As the need and even regulatory requirements for energy conservation increases, residents of communities and even rural areas will need to:

1. Become even more conservative with energy usage
2. Make use of existing and future programs for retrofitting houses, businesses, and manufacturing plants
3. Increase their dependence on renewable energy sources.

Residential Strategies

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. These strategies range from simple (less costly) to complex (costly). Unfortunately not all of the solution will have an immediate return on investment. As individual property owners, residents will need to find strategies that fit into their ability to pay for savings at the present time.

There are several ways to make a residence more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Compact Florescent or LED bulbs
- Changing air filters more regularly
- Installing additional insulation in the attic
- Keeping thermostats set a cooler levels in the winter and higher levels in the summer
- Converting standard thermostats to digital/programmable thermostats
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units
- Changing out older appliances with new energy efficient appliances

Some of the more costly ways to make a residence more energy efficient include:

- New insulation in exterior walls
- Addition of solar panels for either electrical conversion and/or water heater systems
- Adding individual scale wind energy conversion systems
- Installing geothermal heating and cooling system
- Installation of energy-efficient low-e windows

Commercial and Industrial Strategies

Strategies for energy efficiency within commercial and industrial facilities can be more difficult to achieve than those in for residential uses. Typically, these improvements will require a greater amount of investment due to the size of most of these facilities.

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. Again, not all of the solutions will have an immediate return on investment. As individual property owners, property owners will need to find strategies that will fit into their ability to pay for savings at the present time.

There are several ways to make a commercial business more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Florescent Lights or Compact Florescent Lighting on small fixtures

- Keeping thermostats set a cooler levels in the winter and higher levels in the summer
- Converting standard thermostats to digital/programmable thermostats
- Installing additional insulation in an attic space
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units

Some of the more costly ways to make a business more energy efficient include:

- Installation of energy-efficient windows and/or storefronts
- New insulation in exterior walls
- Addition of solar panels for either electrical conversion and/or water heater systems
- Adding individual scale wind energy conversion systems
- Installing geothermal heating and cooling system

Renewable Energy Sources

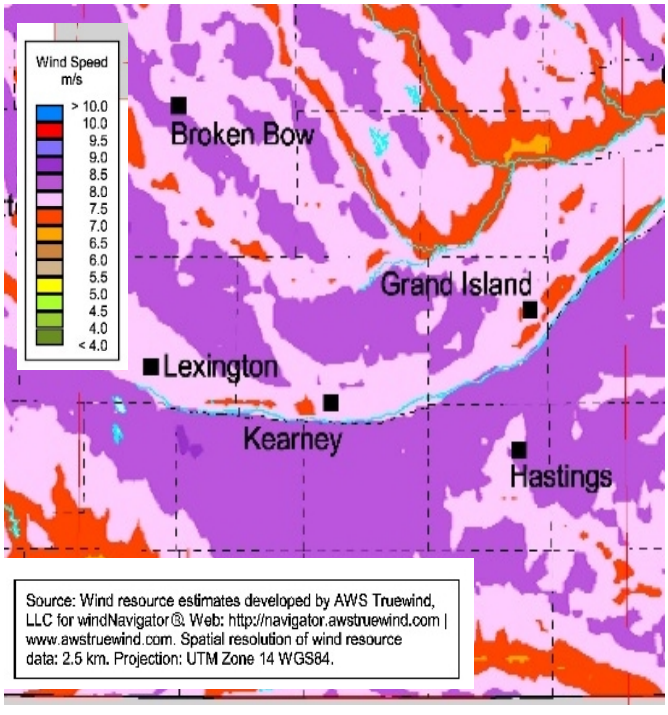
Renewable energy sources are those natural resources such as the wind, sun, water, the earth (geothermal), and even methane (from natural resources or man-made situations) that can be used over and over again with minimal or no depletion. The most common sources of renewable energy resources used in Nebraska is the wind, the sun, the water and/or the earth. The following are examples of how these renewable resources can be used to reduce our dependency on fossil fuels.

Wind

The wind is one of those resources that seem to be in abundance in Nebraska. Wind is not a new technology in Nebraska; the pioneers that settled in Nebraska used wind mills for power and to work the water wells on their farms and ranches.

Wind can be used to produce electricity through the construction of small-scale or utility/commercial grade wind conversion systems (wind turbines). However, not all areas of the state have the ideal levels needed to produce electricity on a utility or commercial level; but the use of small-scale wind turbines on homes and businesses will work in most parts of Nebraska.

Figure 3:
ANNUAL AVERAGE WIND SPEED AT 80 METERS
NEBRASKA



The wind quality in Hall County is above average, especially south of the Platte River and into Adams County. The darker purple areas are the more ideal locations for wind. However, any future wind development will be determined with the use of meteorological towers used to compile wind data for approximately a one year period prior to making any future decisions.

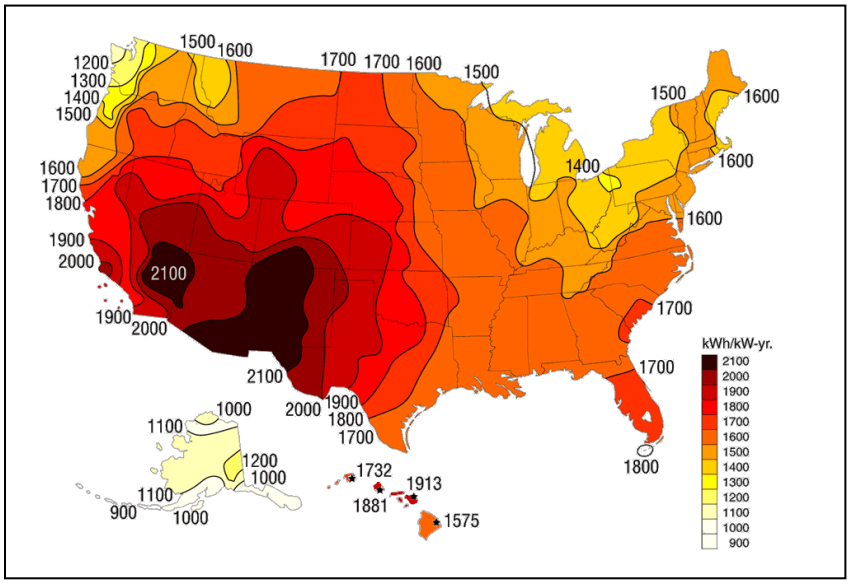
Solar

Solar energy has been around for decades and it last hit a high in popularity in the 1970's. However, today's solar energy design is much more efficient and are more aesthetically pleasing. Some of the aesthetic improvements have to do with the fact that today's systems are not as bulky as their ancestors. Today solar is being used much like wind turbines, on a small-scale level (home or business) or a much grander level (solar farms).

Solar energy includes solar water and space heating as well as taking solar photovoltaic panels to convert the sun's rays into electricity. Solar panels can typically produce between 100 and 200 watts per square meter at an installed cost of $7 to $9 per watt, but these costs are becoming less every year as more solar units are commissioned and new more cost effective technologies are developed.

Based upon the diagram to the right there is great solar potential in the state of Nebraska. A majority of the state lies within some of the better areas in the country for solar potential.

Figure 4:
SOLAR POTENTIAL CONTOURS



Geothermal Energy

Geothermal energy includes a process where a series of pipes are lowered into vertical cores called heat-sink wells. The pipes carry a highly conductive fluid that either is heated or cooled by the constant temperature of the ground. The resulting heat exchange is then transferred back into the heating and cooling system of a home or other structure. This is call a geothermal heat exchange system or ground source heat pumps. The California Energy Commission estimates the costs of a geothermal system can earn net savings immediately when financed as part of a 30-year mortgage *(Source: American Planning Association, PAS Memo January/February 2009)*.

Methane Energy

The use of methane to generate electricity is becoming more cost-effective to use within the rural areas of Nebraska. Methane electrical generation can be accomplished through the use of a methane digester which takes the raw gas, naturally generate from some form of waste material, and converts the gas into electrical power.

There have been some attempts to take the methane generated from animal manure and convert it into electricity; most have been successful but were costly to develop. Another approach to methane electrical generation is to tap into the methane being generated from a solid waste landfill; instead of burning off the methane, it can be piped into a methane convertor and generated into electricity for operating a manufacturing plant or placed on the overall grid for distribution.

Methane convertors make use of unwanted gases and are able to produce a viable product. As long as humans need to throw garbage into a landfill or the production of livestock is required, there will be a source of methane to tap for electrical generation.

In addition to converting methane into electricity, it can also provide a source of power by replacing natural gas as a heating source.

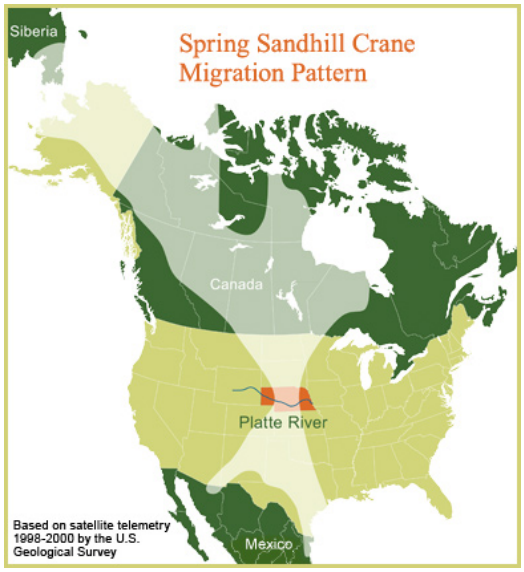
Renewable Energy in Hall County

Renewable energy in Grand Island and the Hall County area will be difficult now and into the future. The reasons for this difficulty is not rooted in the desire of the local residents or political reluctance but more due to nature itself. Nature and the lay of the land creates some very difficult situations for the use of wind energy or hydroelectric generation.

Wind generation will be difficult due to the migratory flyway that covers the Hall County area during a three to four month period in the spring and fall. Spring is the more critical period since the Hall County area is one of the major stopovers of the Sandhill Cranes and a limited number of Whooping Cranes. The Whooping Cranes are on the endangered species list and are protected. In addition, since the Whooping Cranes tend to fly north with the Sandhill Cranes, the Sandhill Cranes are afforded the same basic protections during this migratory period.

Any commercial or utility grade wind turbine development would likely need to be taken out of production during these periods. This shorter production time would likely harm the cost-effectiveness of most wind farms.

Figure 5:
SPRING SANDHILL CRANE MIGRATION PATTERN AND PRIMARY NEBRASKA LOCATIONS



Source: www.cranetrust.org and http://outdoornebraska.ne.gov/conservation/wildlife-viewing/SandhillCranes/where2watchCranes.asp

Hydroelectric generation in Hall County is essentially not possible due to the flatter topography found throughout the county. There are few to no areas that could be dammed up in order to create a large enough water reservoir to power the turbines.

However, the other types of renewable energy sources are possible within Hall County, including geothermal, methane, and solar. Solar may create an issue near the primary migratory areas of Hall County.

Energy Programs in Nebraska

The following provides a basic history and description of some newer programs in Nebraska; interested parties should contact the State of Nebraska Energy Office or their local public power district.

The following information is an excerpt from the Database of State Incentives for Renewables & Efficiency.

C-BED Program

In May 2007, Nebraska established an exemption from the sales and use tax imposed on the gross receipts from the sale, lease, or rental of personal property for use in a community-based energy development (C-BED) project. The Tax Commissioner is required to establish filing requirements to claim the exemption. In April 2008 L.B. 916 made several amendments to this incentive, including: (1) clarified C-BED ownership criteria to recognize ownership by partnerships, cooperatives and other pass-through entities; (2) clarified that the restriction on power purchase agreement payments should be calculated according to gross* and not net receipts; (3) added language detailing the review authority of the Tax Commissioner and recovery of exempted taxes; and (4) defined local payments to include lease payments, easement payments, and real and personal property tax receipts from a C-BED project.

A C-BED project is defined as a new wind energy project that meets one of the following ownership conditions:

- For a C-BED project that consists of more than two turbines, the project is owned by qualified owners with no single qualified owner owning more than 15% of the project and with at least 33% of the power purchase agreement payments flowing to the qualified owner or owners or local community; or
- For a C-BED project that consists of one or two turbines, the project is owned by one or more qualified owners with at least 33% of the power purchase agreement payments flowing to a qualified owner or local community.

In addition, a resolution of support for the project must be adopted by the county board of each county in which the C-BED project is to be located or by the tribal council for a C-BED project located within the boundaries of an Indian reservation.

A qualified C-BED project owner means:

- a Nebraska resident;
- a limited liability company that is organized under the Limited Liability Company Act and that is entirely made up of members who are Nebraska residents;
- a Nebraska nonprofit corporation;
- an electric supplier(s), subject to certain limitations for a single C-BED project; or
- a tribal council.

In separate legislation (LB 629), also enacted in May 2007, Nebraska established the Rural Community-Based Energy Development Act to authorize and encourage electric utilities to enter into power purchase agreements with C-BED project developers.

** LB 561 of 2009 established that gross power purchase agreement payments do not include debt financing if the agreement is entered into on or before December 31, 2011, and the qualified owners have a combined total of at least 33% of the equity ownership in the C-BED project.*

Local Government and Renewable Energy Policies

Local governments need to take steps to encourage greater participation in wind generation. Cities and counties can do a number of items to make these projects more attractive. Some of the things that could be done are:

- Develop or amend existing zoning regulations to allow small-scale wind turbines as an accessory use in all districts
- Develop or amend existing zoning regulations to exempt small-scale turbines from maximum height requirements when attached to an existing or new structure.
- Work with the Nebraska Public Power District and/or local public power district on ways to use wind turbines on small-scale individual projects or as a source of power for the community.

Net Metering in Nebraska

LB 436, signed in May 2009, established statewide net metering rules for all electric utilities in Nebraska. The rules apply to electricity generating facilities which use solar, methane, wind, biomass, hydropower or geothermal energy, and have a rated capacity at or below 25 kilowatts (kW). Electricity produced by a qualified renewable energy system during a month shall be used to offset any kilowatt-hours (kWh) consumed at the premises during the month.

Any excess generation produced by the system during the month will be credited at the utility's avoided cost rate for that month and carried forward to the next billing period. Any excess remaining at the end of an annualized period will be paid out to the customer. Customers retain all renewable energy credits (RECs) associated with the electricity their system generates. Utilities are required to offer net metering until the aggregate generating capacity of all customer-generators equals one percent of the utility's average monthly peak demand for that year.

State Law of Solar and Wind Easements

Nebraska's solar and wind easement provisions allow property owners to create binding solar and wind easements for the purpose of protecting and maintaining proper access to sunlight and wind. Originally designed only to apply to solar, the laws were revised in March 1997 (Bill 140) to include wind. Counties and municipalities are permitted to develop zoning regulations, ordinances, or development plans that protect access to solar and wind energy resources if they choose to do so. Local governing bodies may also grant zoning variances to solar and wind energy systems that would be restricted under existing regulations, so long as the variance is not substantially detrimental to the public good.

LB 568, enacted in May 2009, made some revisions to the law and added additional provisions to govern the establishment and termination of wind agreements. Specifically, the bill provides that the initial term of a wind agreement may not exceed forty years. Additionally, a wind agreement will terminate if development has not commenced within ten years of the effective date of the wind agreement. If all parties involved agree to extend this period, however, the agreement may be extended.

Current Renewable Energy Programs and Funding Sources

Southern Power District Incentives

Southern Power District offers several incentives for residential, commercial and agricultural customers. Some of these programs include:

- LED lamp incentives for residential customers
- Cooling system tune-ups for residential customers

- Attic insulation program for residential customers
- High-efficiency heat pump program for residential customers
- Marathon water heater program for residential customers
- Commercial HVAC program for commercial customers
- HVAC system optimization program for commercial customers
- Commercial/Industrial lighting efficiency program for commercial customers
- Variable frequency drive incentive program for commercial customers
- Irrigation pump efficiency program for irrigation customers

A number of these programs are in conjunction with programs offered by Nebraska Public Power District. Customers need to with Southern Power District for current programs and procedures in order to qualify.

Low interest Loan Program

This program makes available low interest loans for residential and commercial energy efficiency improvements. The Nebraska Energy Office administers this program, which was created in 1990 using oil overcharge funds. Only improvements to existing buildings that are at least 5 years old are eligible for loan assistance. As of March 31, 2010, 25,618 loans have been made totaling $205.3 million and financing $210.8 million in eligible projects.


ENERGY ELEMENT

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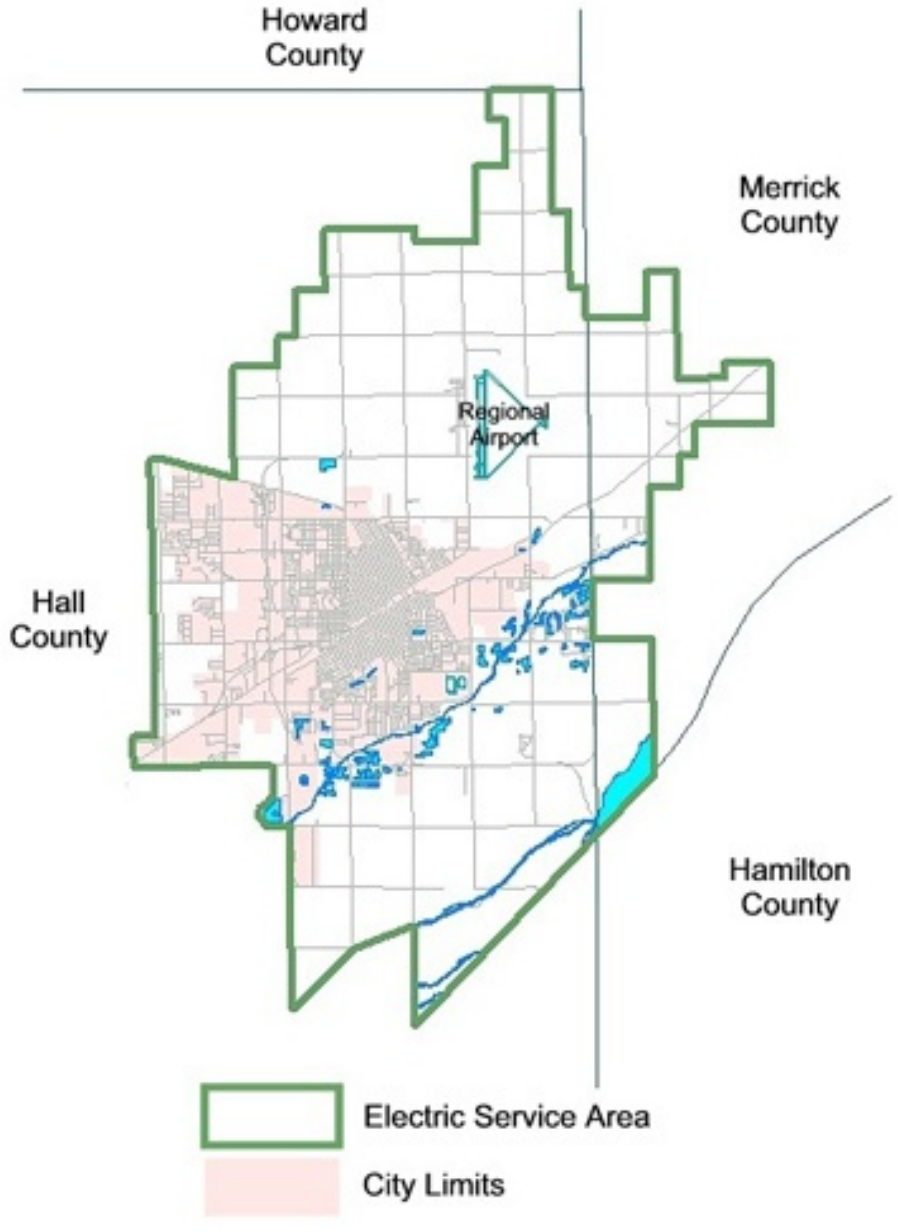
Grand Island Electric Service Area



Source: http://www.grand-island.com/index.aspx?page=214

Energy infrastructure

Electrical Power

Electrical power in Grand Island is supplied by Grand Island Utilities. Grand Island supplements their local generation by wholesale purchases from the Western Area Power Administration, the Nebraska Municipal Power Pool (MEAN), NPPD, and others through a contract with the Southwest Power Pool.

Electrical Distribution

Overhead Division

The Grand Island Utilities Department consists of seven divisions. One of these divisions is the Overhead Division. This division is responsible for the maintenance of existing overhead lines and construction of new overhead lines. All electricity delivered to our customers travels through overhead lines through at least part of its journey to homes and/or businesses.

To get electricity to our customers we generate power at one of our power plants. The power from these plants are delivered to customers via overhead power lines. Electrical power that is delivered to our customer travels via a complex path of distribution Substations, Overhead lines, Circuit Breakers, Transformers, Capacitors, Switches, Underground lines and Meters. Most of our customers are connected to power via overhead lines while newer installations are connected via underground lines.

The Grand Island Utilities Department has an on-going program to update and maintain its power distribution system. The primary distribution system voltage is 13,800 volts. The system has been upgraded over the years to increase dependability and to be able to provide a more stable supply of electricity to our customers. Included in the system upgrades were consideration for ice storms, wind storms and lightning, as well as public safety and environmental concerns. A well-engineered, heavy duty distribution system that can withstand destructive weather and yet meet the needs of a growing community using increasing amounts of electricity is a priority for us.

The Grand Island Utilities Overhead Division is responsible for 410.53 miles of overhead power lines in the service area. This system includes a total of 4,127 transformers.

Underground Division

The Underground Division of the Grand Island Utilities Department is responsible for the maintenance of existing underground power lines and the construction of new underground power lines. Almost all new services are installed underground. This includes services to both residential and commercial.

As part of the Grand Island Utilities Department's on-going efforts to update its system and increase its dependability and safety, some of the older distribution systems are being replaced with updated underground distribution systems. The City is replacing the older overhead lines with new underground lines as time allows. This is being done to improve the appearance of the area as well as improve safety and reliability to customers in the downtown business district.

The Grand Island Utilities Underground Division is responsible for 154.26 miles of underground power lines in the service area. This system includes a total of 2,301 transformers.

Source: (http://www.grand-island.com/)

Electrical Generation

C.W. Burdick Station

The C.W. Burdick Station is Grand Island's second power generating facility. It was named after Clarence W. Burdick, who was commissioner of the Grand Island Water, Light & Ice Dept. from October 6th, 1920 to November 30th, 1960. Mr. Burdick was a very progressive yet conservative director of utilities. He realized the importance of adequate and

dependable supplies of electricity and water. Burdick Station became the central location where Grand Island's electricity was generated and distributed from 1956 to 1981. Burdick Station also became the central control center for the pumping and quality control of Grand Island's domestic water supply.

Today Burdick Station is used primarily as a standby power generating facility and continues to be the central control center for Grand Island's domestic water supply. Burdick Station frequently produces power in the summer months as Nebraska's heat and humidity increases the demand for electricity above what Platte Generating Station (PGS) can supply. PGS serves the Grand Island service area as its primary power generator, as PGS uses abundant, inexpensive, low sulfur coal, and Burdick burns expensive natural gas and No. 6 fuel oil. Burdick Station has three combustion turbine units that use natural gas to operate. Generation from Burdick steam units for 2013 were 445,300 MWh while the generation from the combustion turbines was 863,210 MWh

Metered Rates Per Month	Unit No. 1	Unit No. 2	Unit No. 3	Gas Turbine No. 1	Gas Turbine No. 2	Gas Turbine No. 3
Year placed in service	1957	1963	1972	1968	2003	2003
Rated generation	16.5 mw	22 mw	54 mw	15 mw	40 mw	40 mw
Fuel	Nat. gas / No. 6 fuel oil	Nat. gas / No. 6 fuel oil	Nat. gas / No. 6 fuel oil	Nat. gas / No. 2 fuel oil	Nat. gas / No. 2 fuel oil	Nat. gas / No. 2 fuel oil
Make of turbine	Allis/Chalmers	Allis/Chalmers	General Electric	General Electric	General Electric	General Electric

Source: Grand Island Utilities

The C.W. Burdick Station will serve the citizens of Grand Island into the foreseeable future as continued maintenance and upgrades to systems at the plant are planned. New digital control systems that help maximize power production efficiency and monitor plant emissions have been installed for Unit No. 3 and gas turbine No. 1, and control upgrades have been made to Units No. 1 and No. 2.

Platte Generating Station Location

Platte Generating Station is located in Grand Island at the corner of Wildwood Drive and South Locust Street. From Interstate 80, exit 314, travel north on Locust Street for two miles. At Wildwood Drive, turn west and travel 1/2 miles to the main entrance. Platte Generating Station is open to the public by appointment only during our regular business hours of Monday through Friday (except holidays) from 7 AM to 3 PM. All visitors must check into the office located on the north side of main building (plant) immediately upon entering the site. Anyone planning to enter the plant site after regular business hours should make prior arrangements.

Platte Generating Station (PGS) was commissioned in 1982 and has provided reliable, low-cost electrical power to the community during the ensuing years.

PGS produces electrical power for approximately 60 percent of the national average cost. According to the Utility Data Institute, Platte Generating Station was ranked the 11th lowest-cost electricity producer among 707 power plants nation-wide from 1989 through 1993. PGS is consistently among the top 25 most efficient plants year-to-year. Among Nebraska cities, Grand Island's electrical rates are in the lowest fifth. The City's electrical power rate increased in 1979 and a 15% rate decrease was accomplished in 1989. The last increase was in 2007.

PGS burns approximately 364,600 tons of low-sulfur coal per year to produce about 500,000 megawatts hours.

Efficient and reliable service is attained through the acquisition of low-cost coal, and effective operation and maintenance practices. PGS has a staff of experienced, well-trained employees who have produced an enviable long-term plant operating record. The plant operates and is staffed continuously, including all holidays.

At full capacity, PGS produces 100 megawatts of electrical power which is enough to illuminate one million, 100 watt light bulbs. During most of the year, PGS provides enough power to satisfy customer demand. However, during peak demand periods, additional power is generated at the Burdick Power Station or purchased from other power producers.

Electrical power is generated at PGS in strict compliance with local, state, and federal environmental regulations. In fact, PGS's air emissions remain well below required levels. In order to produce "clean" electrical power, low sulfur coal from Wyoming's Powder River Basin is burned. Low sulfur coal reduces the formation of air pollutants. Additionally, an electrostatic precipitator is used at PGS to remove more than 99 percent of the ash created during the coal combustion process. Since January 1, 1995, a continuous emissions monitor (CEM) has been in service which documents PGS's minute-by-minute compliance with clean air regulations.

Most water used at PGS is ultimately returned to the Platte River, following verification that acceptable water discharge standards have been met. Plant systems are designed for water conservation. For example, steam used in the turbine is condensed back into water and reused, and water used for transporting ash is returned to the plant for re-cycling.

Power Control
F. E. Phelps Control Center
The F. E. Phelps Control Center houses the Grand Island Utilities Departments power and water dispatch center as well as engineering and surveying departments of the Utilities Department. The center is named after past Utilities Director Frank E. Phelps.

The Phelps Control Center is manned 24 hours a day, seven days a week, including holidays. Primary electrical circuits that distribute power throughout Grand Island's Service Area is monitored and controlled from this location along with power that is sold to other utilities. In the event of a power outage within the Grand Island Utilities Department service area, customers call the Phelps control center to report the outage.

Electrical energy that is used in your home or business follows a complex system starting with an electric power generating plant or "power plant" located in Grand Island and other places here in Nebraska. The power plant sends power to high voltage power lines. These lines are controlled with large switches called circuit breakers. The power is then reduced to a lower voltage with large transformers, then passes through more circuit breakers. Before the power is distributed to your home or business, another transformer is used to reduce the voltage down to a usable level.

The Phelps Control Center coordinates this process from beginning to end and monitors power at various points throughout the power grid via computer. Operation of system circuit breakers are operated by computer from Phelps Control as well.

Substation supervision and engineering, electrical distribution engineering and design, and water distribution engineering and design for the Grand Island Utilities Department share offices with the dispatching center at the Phelps Control Center.

The previous three sections are direct excerpts taken from the Grand Island Utilities website
Source: (http://www.grand-island.com/)

Natural Gas Service
Natural gas is available in Grand Island is supplied by NorthWestern Energy.

Energy Use by Sector
This section analyzes the energy use by residential, commercial, and industrial and other users. This section will examine the different types of energy sources that are utilized by these different sectors.

Table 1 shows the overall electricity usage by all consumers in Grand Island. The categories are reflective of the ones established by the City. The categories are defined as:
Residential = all connections and demand by households in Grand Island
Commercial = all retail and office users within Grand Island
Industrial = all industrial users within Grand Island

Table 1: Total Electrical Usage
Grand Island 2010 through 2012

	2010	2011	2012
Residential kWH	217,745,672	216,330,992	216,200,092
Residential % of Total	30.6	30.3	29.5
Commercial kWH	176,787,889	178,453,418	182,384,334
Commercial % of Total	24.9	24.9	24.9
Industrial kWH	316,163,022	320,264,771	333,611,638
Industrial % of Total	44.5	44.8	45.6
TOTAL kWH	710,696,383	715,049,181	732,196,064
Annual Change		0.61%	2.40%
Customer by Class:			
Residential	20,071	20,152	20,278
Commercial	4,249	4,280	4,308
Industrial	84	87	92
TOTAL	**24,404**	**24,519**	**24,678**

Source: Grand Island Utilities

Table 1 shows the usage of electricity throughout the Grand Island corporate limits from 2010 through 2012. The data indicate the usage by residential, commercial and industrial uses for the time period. In addition, the Table indicates the number of customers per sector.

Overall, from 2010 to 2012, the total consumption increased by 2.4% while the customer base increased by 1.12%, which would indicate some of the newer customers added during this period had larger electric consumption or that some of the existing customers increased their usage through additional floor area (commercial or industrial) or there was an increase in the production levels (industrial).

Residential Uses

The data indicate the percent of total used by sector. The Table shows the overall percentage of the total electrical usage for residential customers went from 30.6% in 2010 to 29.5% in 2012; while the overall number of residential customers increased by 207 connections. From 2010 to 2012, the residential demand saw a decrease every year (-0.65% and -0.06% respectively).

The overall residential demand for this period decreased by -0.71%; however, the average per customer for the period saw a -1.71% change going from 10,848 kW in 2010 to 10,662 kW in 2012. These decreases would tend to suggest the following:

- More residential customers are becoming more conservation oriented
- More residential in turn are purchasing products which consume less energy
- More residential customers are making the switch between incandescent bulbs to Compact Fluorescent lights (CFL) or Light Diode Emitting bulbs (LED).
- Better energy efficiency measures are be implemented in construction and remodels.
- A combination of all these items.

Commercial Uses

Grand Island's commercial customers from 2010 to 2012 remained steady as to the proportion of the energy used, holding at 24.9% of the total consumption. Based upon the data from Grand Island Utilities, the overall commercial consumption increased by 3.17% while the total customer base increased by 1.39% during the time period indicated. These data indicate that the increased consumption was nearly double that of the increase in customer base. This indicates a couple of different dynamics may be occurring:

- Existing commercial customers are increasing the amount of electricity they require.
- Existing commercial customers have increased their space used to provide goods and services.
- The new commercial customers are higher than average electric consumers.
- A combination of all these items.

Industrial Uses

Industrial electrical consumption in Grand Island went from 44.5% of the total consumption in 2010 to 45.6% in 2012. The data in Table 1 indicate that the total consumption increased by 5.52% between 2010 and 2012; while the total number of industrial customers increased by 9.5%. Therefore, the increasing consumption actually grew at a slower rate than the number of customers. This indicates several potential possibilities:

- The new industrial customers were low consumption businesses.
- A combination of new industrial customers and existing industrial customers implementing conservation measures.
- Existing customers implementing conservation measures
- A combination of all these items.

Short-term and Long-term Strategies

As the need and even regulatory requirements for energy conservation increases, residents of communities and even rural areas will need to:

1. Become even more conservative with energy usage
2. Make use of existing and future programs for retrofitting houses, businesses, and manufacturing plants
3. Increase their use of renewable energy sources.

Residential Strategies

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. These strategies range from simple (less costly) to complex (costly). Unfortunately not all of the solution will have an immediate return on investment. As individual property owners, residents will need to find strategies that fit into their ability to pay for savings at the present time.

There are several ways to make a residence more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Compact Florescent or LED bulbs
- Changing air filters more regularly
- Installing additional insulation in the attic
- Keeping thermostats set a cooler levels in the winter and higher levels in the summer
- Converting standard thermostats to digital/programmable thermostats
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units
- Changing out older appliances with new Energy Star appliances

Some of the more costly ways to make a residence more energy efficient include:

- New insulation in exterior walls
- Addition of solar panels for either electrical conversion and/or water heater systems in cooperation with Grand Island Utilities and in compliance with the local zoning codes.
- Adding individual scale wind energy conversion systems in cooperation with Grand Island Utilities and in compliance with the local zoning codes.
- Installing geothermal heating and cooling system in cooperation with Grand Island Utilities and in compliance with the local zoning codes.
- Installation of energy-efficient low-e windows

Commercial and Industrial Strategies

Strategies for energy efficiency within commercial and industrial facilities can be more difficult to achieve than those for residential uses. Typically, these improvements will require a greater amount of investment due to the size of most of these facilities.

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. Again, not all of the solutions will have an immediate return on investment. As individual property owners, property owners will need to find strategies that will fit into their ability to pay for savings at the present time.

There are several ways to make a commercial business more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Florescent Lights, Compact Florescent Lighting, or LED on small fixtures
- Keeping thermostats set a cooler levels in the winter and higher levels in the summer
- Converting standard thermostats to digital/programmable thermostats
- Installing additional insulation in an attic space
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units

Some of the more costly ways to make a business more energy efficient include:

- Installation of energy-efficient windows and/or storefronts
- New insulation in exterior walls, if possible
- Addition of solar panels for either electrical conversion and/or water heater systems in cooperation with Grand Island Utilities and in compliance with the local zoning codes.

- Adding individual scale wind energy conversion systems in cooperation with Grand Island Utilities and in compliance with the local zoning codes.
- Installing geothermal heating and cooling system in cooperation with Grand Island Utilities and in compliance with the local zoning codes.

Renewable Energy Sources

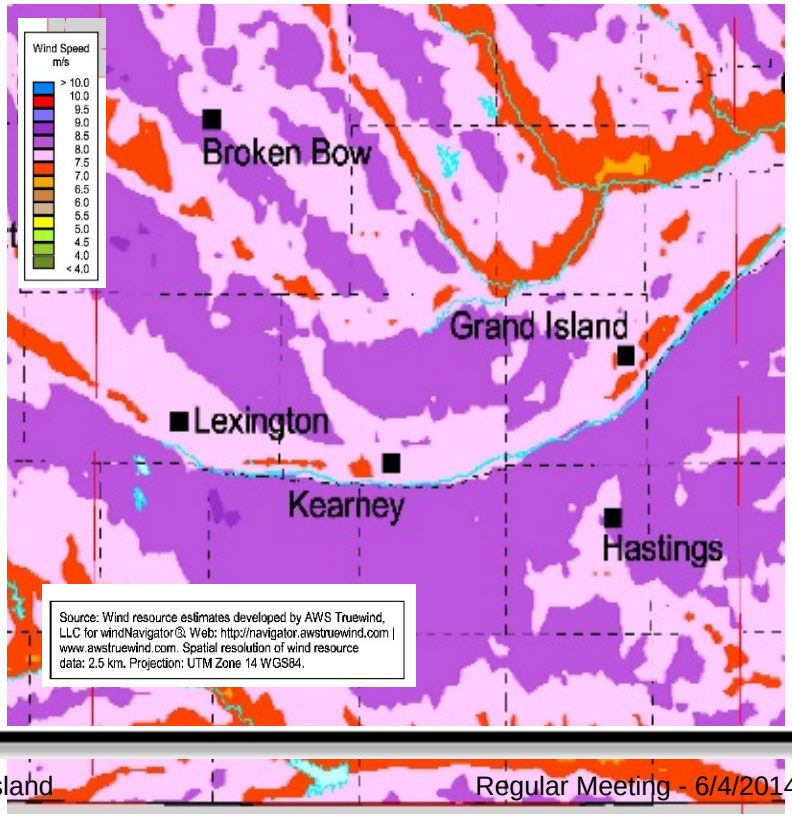
Renewable energy sources are those natural resources such as the wind, sun, water, the earth (geothermal), and even methane (from natural resources or man-made situations) that can be used over and over again with minimal or no depletion. The most common sources of renewable energy resources used in Nebraska is the wind, the sun, the water and/or the earth. The following are examples of how these renewable resources can be used to reduce our dependency on fossil fuels.

Wind

The wind is one of those resources that seem to be in abundance in Nebraska. Wind is not a new technology in Nebraska; the pioneers that settled in Nebraska used wind mills for power and to work the water wells on their farms and ranches.

Wind can be used to produce electricity through the construction of small-scale or utility/commercial grade wind conversion systems (wind turbines). However, not all areas of the state have the ideal levels needed to produce electricity on a utility or commercial level; but the use of small-scale wind turbines on homes and businesses will work in most parts of Nebraska.

Figure 3:
ANNUAL AVERAGE WIND SPEED AT 80 METERS
NEBRASKA



The wind quality in Grand Island and Hall County is average to above average, especially south of the Platte River and into Adams County. The darker purple areas are the more ideal locations for wind. However, any future wind development will be determined with the use of meteorological towers used to compile wind data for approximately a one year period prior to making any future decisions.

Solar

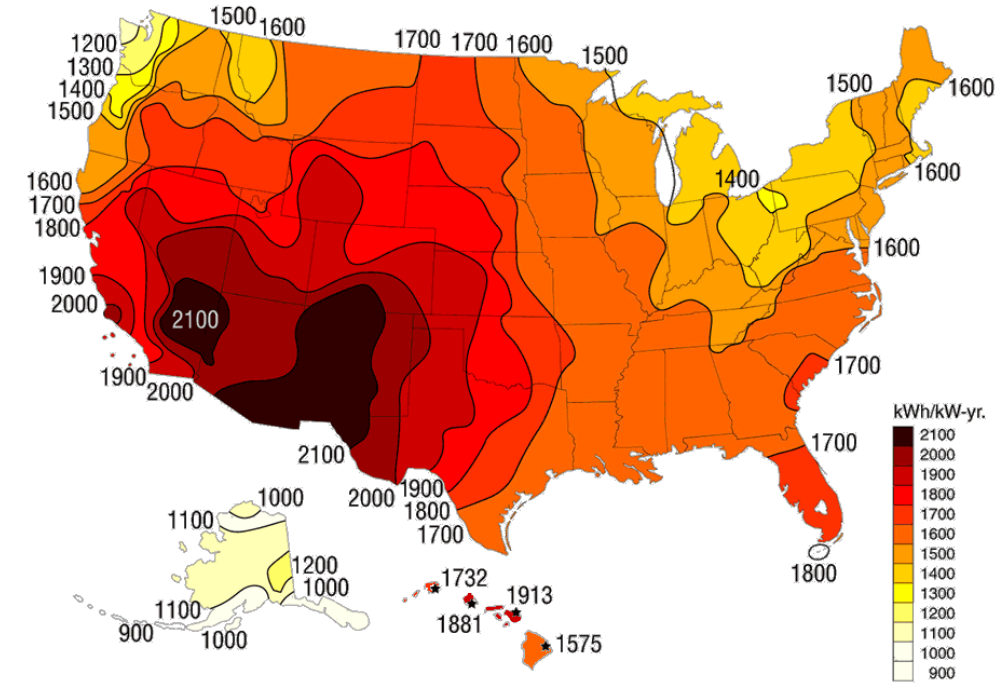
Solar energy has been around for decades and it last hit a high in popularity in the 1970's. However, today's solar energy design is much more efficient and are more aesthetically pleasing. Some of the aesthetic improvements have to do with the fact that today's systems are not as bulky as their ancestors. Today solar is being used much like wind turbines, on a small-scale level (home or business) or a much grander level (solar farms).

Solar energy includes solar water and space heating as well as taking solar photovoltaic panels to convert the sun's rays into electricity. Solar panels can typically produce between 100 and 200 watts per square meter at an installed cost of $7 to $9 per watt, but these costs are becoming less every year as more solar units are commissioned and new more cost effective technologies are developed.

Based upon the diagram to the right there is great solar potential in the state of Nebraska. A majority of the state lies within some of the better areas in the country for solar potential.

Figure 4:

SOLAR POTENTIAL CONTOURS



Source: Solar Energy Industries Association

Geothermal Energy

Geothermal energy includes a process where a series of pipes are lowered into vertical cores called heat-sink wells. The pipes carry a highly conductive fluid that either is heated or cooled by the constant temperature of the ground. The resulting heat exchange is then transferred back into the heating and cooling system of a home or other structure. This is call a geothermal heat exchange system or ground source heat pumps. The California Energy Commission estimates the costs of a geothermal system can earn net savings immediately when financed as part of a 30-year mortgage *(Source: American Planning Association, PAS Memo January/February 2009)*.

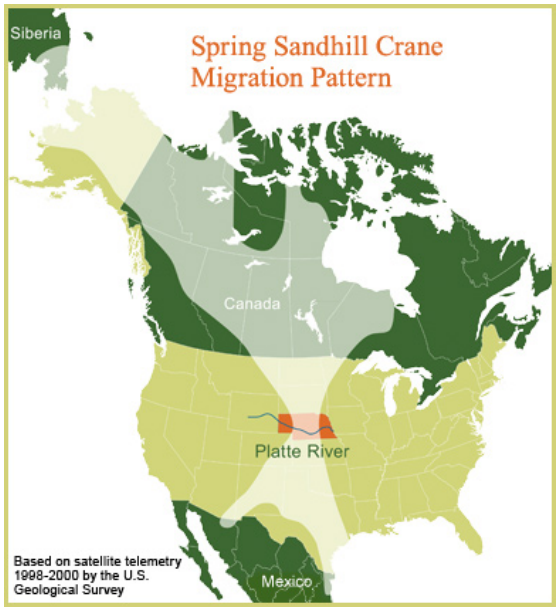
Renewable Energy in Hall County

Renewable energy in Grand Island and the Hall County area will be difficult now and into the future. The reasons for this difficulty is not rooted in the desire of the local residents or political reluctance but more due to nature itself. Nature and the lay of the land creates some very difficult situations for the use of wind energy or hydroelectric generation.

Wind generation will be difficult due to the migratory flyway that covers the Hall County area during a three to four month period in the spring and fall. Spring is the more critical period since the Hall County area is one of the major stopovers of the Sandhill Cranes and a limited number of Whooping Cranes. The Whooping Cranes are on the endangered species list and are protected. In addition, since the Whooping Cranes tend to fly north with the Sandhill Cranes, the Sandhill Cranes are afforded the same basic protections during this migratory period.

Any commercial or utility grade wind turbine development would likely need to be taken out of production during these periods. This shorter production time would likely harm the cost-effectiveness of most wind farms.

Figure 5:
SPRING SANDHILL CRANE MIGRATION PATTERN AND PRIMARY NEBRASKA LOCATIONS



Source: www.cranetrust.org and http://outdoornebraska.ne.gov/conservation/wildlife-viewing/SandhillCranes/where2watchCranes.asp

Hydroelectric generation in Grand Island and Hall County area is not practical and is nearly impossible due to the flatter topography found throughout the area. There are few to no areas that could be dammed up in order to create a large enough water reservoir to power the turbines.

Geothermal systems, due to the prevalence of a high water table and extensive industrial ground water contamination in and around Grand Island requires that caution, and good engineering controls should be implemented when considering geothermal installations.

However, the other types of renewable energy sources are possible within Hall County, including geothermal (with special engineering considerations), methane, and solar. Solar may create some issues closer to the primary migratory areas of Hall County.

Energy Programs in Nebraska

The following provides a basic history and description of some newer programs in Nebraska; interested parties should contact the State of Nebraska Energy Office or their local public power district.

The following information is an excerpt from the Database of State Incentives for Renewables & Efficiency.

C-BED Program

In May 2007, Nebraska established an exemption from the sales and use tax imposed on the gross receipts from the sale, lease, or rental of personal property for use in a community-based energy development (C-BED) project. The Tax Commissioner is required to establish filing requirements to claim the exemption. In April 2008 L.B. 916 made several amendments to this incentive, including: (1) clarified C-BED ownership criteria to recognize ownership by partnerships, cooperatives and other pass-through entities; (2) clarified that the restriction on power purchase agreement payments should be calculated according to gross* and not net receipts; (3) added language detailing the review authority of the Tax Commissioner and recovery of exempted taxes; and (4) defined local payments to include lease payments, easement payments, and real and personal property tax receipts from a C-BED project.

A C-BED project is defined as a new wind energy project that meets one of the following ownership conditions:

- For a C-BED project that consists of more than two turbines, the project is owned by qualified owners with no single qualified owner owning more than 15% of the project and with at least 33% of the power purchase agreement payments flowing to the qualified owner or owners or local community; or
- For a C-BED project that consists of one or two turbines, the project is owned by one or more qualified owners with at least 33% of the power purchase agreement payments flowing to a qualified owner or local community.

In addition, a resolution of support for the project must be adopted by the county board of each county in which the C-BED project is to be located or by the tribal council for a C-BED project located within the boundaries of an Indian reservation.

A qualified C-BED project owner means:
- a Nebraska resident;
- a limited liability company that is organized under the Limited Liability Company Act and that is entirely made up of members who are Nebraska residents;
- a Nebraska nonprofit corporation;
- an electric supplier(s), subject to certain limitations for a single C-BED project; or
- a tribal council.

In separate legislation (LB 629), also enacted in May 2007, Nebraska established the Rural Community-Based Energy Development Act to authorize and encourage electric utilities to enter into power purchase agreements with C-BED project developers.
** LB 561 of 2009 established that gross power purchase agreement payments do not include debt financing if the agreement is entered into on or before December 31, 2011, and the qualified owners have a combined total of at least 33% of the equity ownership in the C-BED project.*

Local Government and Renewable Energy Policies
Local governments need to take steps to encourage greater participation in wind generation. Cities and counties can do a number of items to make these projects more attractive. Some of the things that could be done are:
- Develop or amend existing zoning regulations to allow small-scale wind turbines as an accessory use in all districts
- Develop or amend existing zoning regulations to exempt small-scale turbines from maximum height requirements when attached to an existing or new structure.
- Work with the local public power utility on ways to use wind turbines on small-scale individual projects or as a source of power for the community.

Net Metering in Nebraska
LB 436, signed in May 2009, established statewide net metering rules for all electric utilities in Nebraska. The rules apply to electricity generating facilities which use solar, methane, wind, biomass, hydropower or geothermal energy, and have a rated capacity at or below 25 kilowatts (kW). Electricity produced by a qualified renewable energy system during a month shall be used to offset any kilowatt-hours (kWh) consumed at the premises during the month.

Any excess generation produced by the system during the month will be credited at the utility's avoided cost rate for that month and carried forward to the next billing period. Any excess remaining at the end of an annualized period will be paid out to the customer. Customers retain all renewable energy credits (RECs) associated with the electricity their system generates. Utilities are required to offer net metering until the aggregate generating capacity of all customer-generators equals one percent of the utility's average monthly peak demand for that year.

State Law of Solar and Wind Easements
Nebraska's solar and wind easement provisions allow property owners to create binding solar and wind easements for the purpose of protecting and maintaining proper access to sunlight and wind. Originally designed only to apply to solar, the laws were revised in March 1997 (Bill 140) to include wind. Counties and municipalities are permitted to develop zoning regulations, ordinances, or development plans that protect access to solar and wind energy resources if they choose to do so. Local governing bodies may also grant zoning variances to solar and wind energy systems that would be restricted under existing regulations, so long as the variance is not substantially detrimental to the public good.

LB 568, enacted in May 2009, made some revisions to the law and added additional provisions to govern the establishment and termination of wind agreements. Specifically, the bill provides that the initial term of a wind agreement may not exceed forty years. Additionally, a wind agreement will terminate if development has not

commenced within ten years of the effective date of the wind agreement. If all parties involved agree to extend this period, however, the agreement may be extended.

Current Renewable Energy Programs and Funding Sources

Grand Island Utility Incentives
Grand Island Utilities has one incentive program available, which eliminates older refrigerators and freezers. By doing so the Utility will pay customers for removing these older appliances.

Low interest Loan Program
This program makes available low interest loans for residential and commercial energy efficiency improvements. The Nebraska Energy Office administers this program, which was created in 1990 using oil overcharge funds. Only improvements to existing buildings that are at least 5 years old are eligible for loan assistance. As of March 31, 2010, 25,618 loans have been made totaling $205.3 million and financing $210.8 million in eligible projects.

Energy Element

Energy Element

Energy usage in the early 21st Century is becoming a critical issue throughout Nebraska as well as the entire United States. Our dependency on energy sources that are not renewable has increased significantly over the past 100 years. Energy usage comes in several forms, such as:

- Lighting our homes and businesses
- Heating our homes and businesses
- Heating our water for homes and businesses
- Food preparation
- Transportation – both personal and business related
- Recreation and Entertainment – vehicular, computers, music, etc.

The 21st Century ushered in an increased concern for energy usage and its impacts on the environment. With the increased concern for the environment came an increased understanding of the carbon footprint generated by any one individual as well as striving towards modifying our behavior patterns in order to lessen that footprint. In addition, the phrase and concept of sustainability has become more widely used, even in the smaller communities of Nebraska and United States.

Energy and the issues connected to the different sources are becoming more critical every year. The need for the Energy Element in the Wood River Comprehensive Development Plan was established by the Nebraska Unicameral and Governor when LB997 was passed and signed during the 2010 legislative session. All communities and counties, with the exception of villages, in Nebraska are required to have an energy element in their comprehensive development plan (if they have one) by January 1 of 2015. This additional requirement forces communities to look at their energy usage and needs and plan that into the future development of the community. This makes the comprehensive development plan more comprehensive and therefore more meaningful. The passage of LB 997 appears to be a first step toward new comprehensive plans addressing the entire issue of Sustainability.

Sustainability

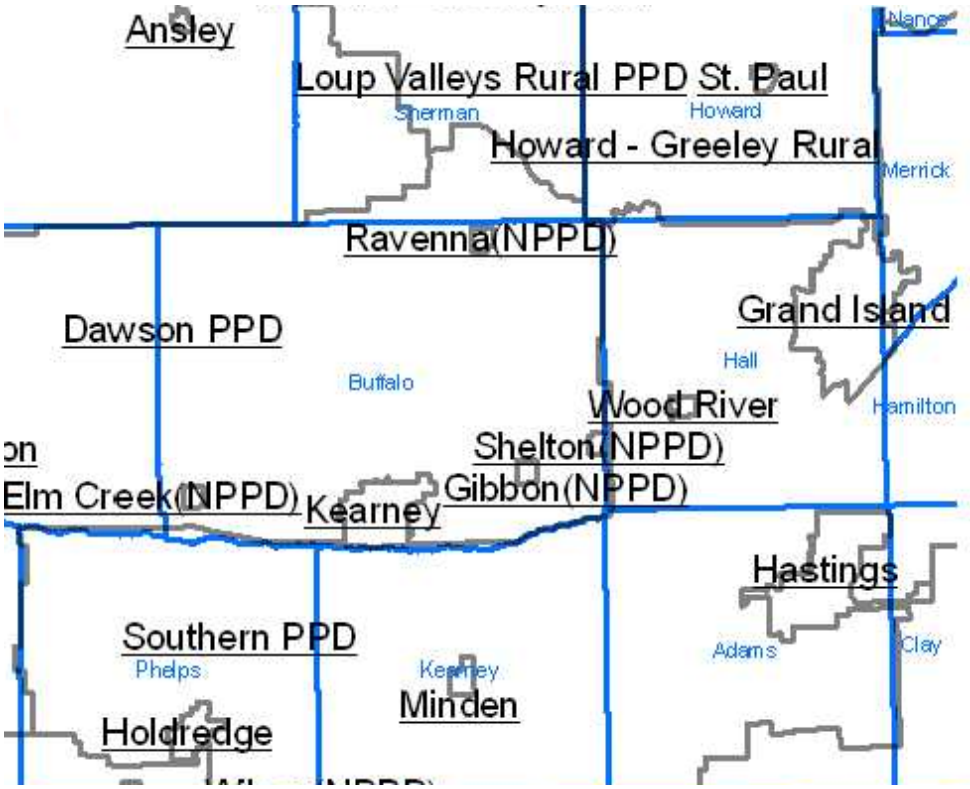
Sustainability, in today's discussions, has a number of meanings. According to Webster's Third International Dictionary, the verb "sustain" is defined as "to cause to continue...to keep up especially without interruption, diminution or flagging". However, the Brundtland Commission Report in 1987,[1] described sustainability as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs". In other words, sustainability is the ability of the present generation to live without jeopardizing the ability of future generations to sustain life as we know it today.

Our world's ability to stabilize and begin to make the switch to cleaner and more renewable resources will aid future generations with their quality of life. The more renewable energy sources become the norm for our world, the more likely these sources will be second nature and common place in the future.

Americans have grown to rely heavily on electricity. However, state and federal policies have been increasingly more insistent on curbing this reliance; especially, those sources that are produced by non-renewable fossil fuels such as oil and coal. Federal policy has set a goal that 20% of all electricity, by 2030, in the United States be from renewable sources. Renewable sources would include solar, wind, water,

geothermal and any number of other sources that have not yet been discovered or brought to production levels.

Figure 1
Wood River Electric Service Area



Source: http://www.powerreview.nebraska.gov/maps/South%20Central%20Munis%20Map%20_5-1-09_.pdf

Energy infrastructure

Electrical Power

The electrical power distribution system in Wood River is owned and operated by Wood River Utility Department. The city purchases their wholesale electricity from the Nebraska Energy Agency of Nebraska (MEAN) which is an entity Nebraska Municipal Power Pool and the Western Area Power Administration (WAPA).

Natural Gas Service

Natural gas is available in Wood River is supplied by Source Gas.

Energy Use by Sector

This section analyzes the energy use by residential, commercial, and industrial and other users. This section will examine the different types of energy sources that are utilized by these different sectors.

Table 1 shows the overall electricity usage by all consumers in Wood River. The categories are reflective of the ones established by the City. The categories are defined as:
Residential = all connections and demand by households in Wood River
Commercial = all retail and office users within Wood River
Industrial = all industrial users within Wood River

Table 1: Total Electrical Usage
Wood River 2011 through 2013

	2011	2012	2013
Residential kWH	6,310,088	6,096,841	6,193,882
Residential % of Total	52.4%	51.6%	50.4%
Commercial kWH	5,729,422	5,713,986	6,093,765
Commercial % of Total	47.6%	48.4%	49.6%
Industrial kWH	0	0	0
Industrial % of Total	0	0	0
TOTAL kWH	12,039,510	11,810,827	12,287,647
Annual Change		-1.9%	4.0%
Customer by Class:			
Residential	509	512	538
Commercial	152	144	161
Industrial	0	0	0
TOTAL	**661**	**656**	**699**

Source: Wood River Utilities

Table 1 shows the usage of electricity throughout the Wood River service area from 2011 through 2013. The data indicate the usage by residential, commercial and industrial uses for the time period. In addition, the Table indicates the number of customers per sector.

Overall, from 2011 to 2013, the total consumption increased by 4.0% while the customer base increased by 5.7%, which indicates that the number of customers increased a greater level than the overall electrical consumption. This would typically indicate that there were conservation measures being taken by consumers.

Residential Uses

The data indicate the percent of total used by sector. The Table shows the overall percentage of the total electrical usage for residential customers went from 52.4% in 2011 to 50.4% in 2013; while the overall number of residential customers increased by 29 connections. From 2011 to 2013, the residential demand saw an overall decrease; however, there was an increase of consumption from 2012 to 2013.

The overall residential demand for this period changed by -1.8%; however, the average per customer for the period saw a -7.6% change going from 12,397 kW in 2011 to 11,513 kW in 2013. These decreases would tend to suggest the following:

- More residential customers are becoming more conservation oriented
- More residential in turn are purchasing Energy Star products which consume less energy
- More residential customers are making the switch between incandescent bulbs to Compact Fluorescent lights (CFL) or Light Diode Emitting bulbs (LED).
- Better energy efficiency measures are be implemented in construction and remodels.
- A combination of all these items.

Commercial Uses

Wood River's commercial customers from 2011 to 2013 increased slightly from 47.6% of the total consumption to nearly 50% of the consumption. Based upon the data from Wood River Utilities, the overall commercial consumption increased by 6.4%% while the total customer base increased by 2.1% during the same time period. These data indicate that the increased consumption was over triple the increase in customer base. This indicates a couple of different dynamics may be occurring:

- Existing commercial customers are increasing the amount of electricity they require.
- Existing commercial customers have increased their space used to provide goods and services.
- The new commercial customers are higher than average electric consumers.
- A combination of all of these.

Short-term and Long-term Strategies

As the need and even regulatory requirements for energy conservation increases, residents of communities and even rural areas will need to:

1. Become even more conservative with energy usage
2. Make use of existing and future programs for retrofitting houses, businesses, and manufacturing plants

3. Increase their use of renewable energy sources.

Residential Strategies

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. These strategies range from simple (less costly) to complex (costly). Unfortunately not all of the solution will have an immediate return on investment. As individual property owners, residents will need to find strategies that fit into their ability to pay for savings at the present time.

There are several ways to make a residence more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Compact Florescent or LED bulbs
- Changing air filters more regularly
- Installing additional insulation in the attic
- Keeping thermostats set a cooler levels in the winter and higher levels in the summer
- Converting standard thermostats to digital/programmable thermostats
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units
- Changing out older appliances with new more energy-efficient appliances

Some of the more costly ways to make a residence more energy efficient include:

- New insulation in exterior walls
- Addition of solar panels for either electrical conversion and/or water heater systems in cooperation with Wood River Utilities and in compliance with the local zoning codes.
- Adding individual scale wind energy conversion systems in cooperation with Wood River Utilities and in compliance with the local zoning codes.
- Installing geothermal heating and cooling system in cooperation with Wood River Utilities and in compliance with the local zoning codes.
- Installation of energy-efficient low-e windows

Commercial Strategies

Strategies for energy efficiency within commercial facilities can be more difficult to achieve than those for residential uses. Typically, these improvements will require a greater amount of investment due to the size of most of these facilities.

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. Again, not all of the solutions will have an immediate return on investment. As individual property owners, property owners will need to find strategies that will fit into their ability to pay for savings at the present time.

There are several ways to make a commercial business more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Florescent Lights, Compact Florescent Lighting, or LED on small fixtures
- Keeping thermostats set a cooler levels in the winter and higher levels in the summer
- Converting standard thermostats to digital/programmable thermostats
- Installing additional insulation in an attic space
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units

Some of the more costly ways to make a business more energy efficient include:

- Installation of energy-efficient windows and/or storefronts
- New insulation in exterior walls, if possible
- Addition of solar panels for either electrical conversion and/or water heater systems in cooperation with Wood River Utilities and in compliance with the local zoning codes.
- Adding individual scale wind energy conversion systems in cooperation with Wood River Utilities and in compliance with the local zoning codes.
- Installing geothermal heating and cooling system in cooperation with Wood River Utilities and in compliance with the local zoning codes.

Renewable Energy Sources

Renewable energy sources are those natural resources such as the wind, sun, water, the earth (geothermal), and even methane (from

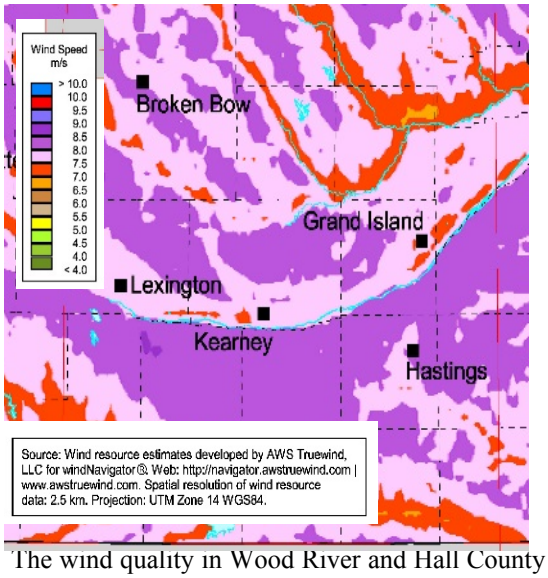
natural resources or man-made situations) that can be used over and over again with minimal or no depletion. The most common sources of renewable energy resources used in Nebraska is the wind, the sun, the water and/or the earth. The following are examples of how these renewable resources can be used to reduce our dependency on fossil fuels.

Wind

The wind is one of those resources that seem to be in abundance in Nebraska. Wind is not a new technology in Nebraska; the pioneers that settled in Nebraska used wind mills for power and to work the water wells on their farms and ranches.

Wind can be used to produce electricity through the construction of small-scale or utility/commercial grade wind conversion systems (wind turbines). However, not all areas of the state have the ideal levels needed to produce electricity on a utility or commercial level; but the use of small-scale wind turbines on homes and businesses will work in most parts of Nebraska.

Figure 3:
ANNUAL AVERAGE WIND SPEED AT 80 METERS
NEBRASKA



The wind quality in Wood River and Hall County is average to slightly above average, especially south of the Platte River and into Adams County. The darker purple areas are the more ideal locations for wind. However, any future wind development will be determined with the use of meteorological towers used to compile wind data for approximately a one year period prior to making any future decisions.

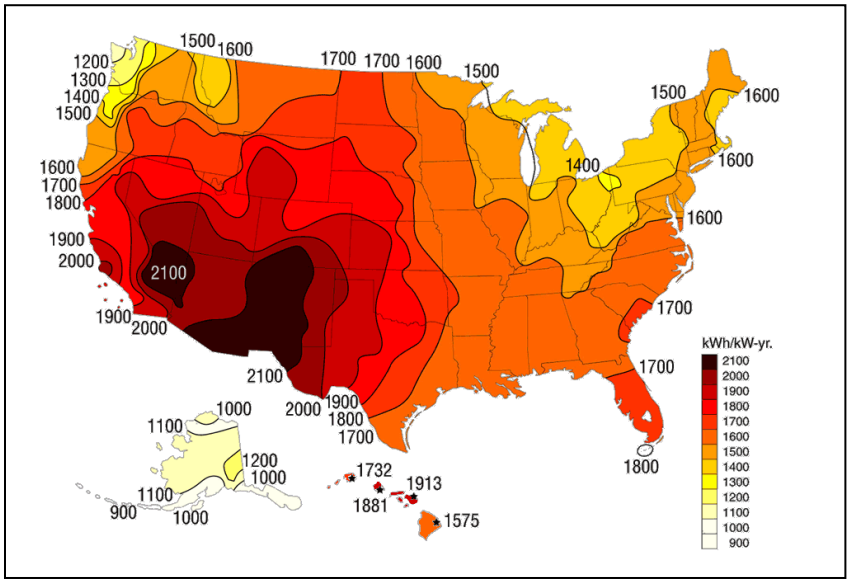
Solar

Solar energy has been around for decades and it last hit a high in popularity in the 1970's. However, today's solar energy design is much more efficient and are more aesthetically pleasing. Some of the aesthetic improvements have to do with the fact that today's systems are not as bulky as their ancestors. Today solar is being used much like wind turbines, on a small-scale level (home or business) or a much grander level (solar farms).

Solar energy includes solar water and space heating as well as taking solar photovoltaic panels to convert the sun's rays into electricity. Solar panels can typically produce between 100 and 200 watts per square meter at an installed cost of $7 to $9 per watt, but these costs are becoming less every year as more solar units are commissioned and new more cost effective technologies are developed.

Based upon the diagram to the right there is great solar potential in the state of Nebraska. A majority of the state lies within some of the better areas in the country for solar potential.

Figure 4:
SOLAR POTENTIAL CONTOURS



Geothermal Energy

Geothermal energy includes a process where a series of pipes are lowered into vertical cores called heat-sink wells. The pipes carry a highly conductive fluid that either is heated or cooled by the constant temperature of the ground. The resulting heat exchange is then transferred back into the heating and cooling system of a home or other structure. This is call a geothermal heat exchange system or ground source heat pumps. The California Energy Commission estimates the costs of a geothermal system can earn net savings immediately when financed as part of a 30-year mortgage *(Source: American Planning Association, PAS Memo January/February 2009)*.

Renewable Energy in Wood River and the Hall County area

Renewable energy in Wood River and the Hall County area will be difficult now and into the future. The reasons for this difficulty is not rooted in the desire of the local residents or political reluctance but more due to nature itself. Nature and the lay of the land creates some very difficult situations for the use of wind energy or hydroelectric generation.

Wind generation will be difficult due to the migratory flyway that covers the Hall County area during a three to four month period in the spring and fall. Spring is the more critical period since the Hall County area is one of the major stopovers of the Sandhill Cranes and a limited number of Whooping Cranes. The Whooping Cranes are on the endangered species list and are protected. In addition, since the Whooping Cranes tend to fly north with the Sandhill Cranes, the Sandhill Cranes are afforded the same basic protections during this migratory period.

Any commercial or utility grade wind turbine development would likely need to be taken out of production during these periods. This shorter production time would likely harm the cost-effectiveness of most wind farms.

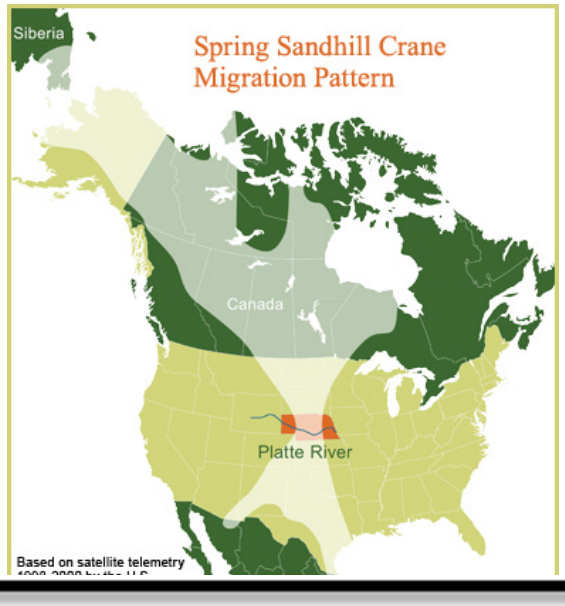
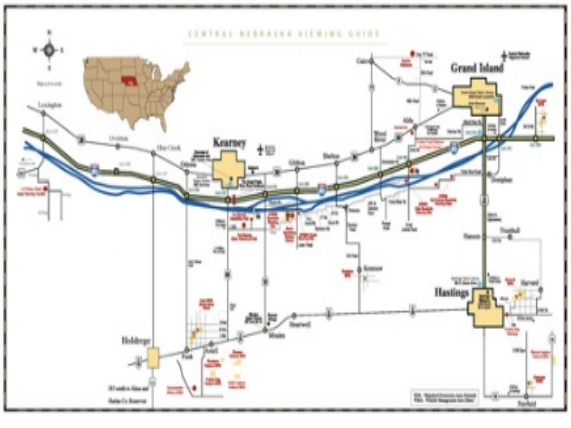


Figure 5:
SPRING SANDHILL CRANE MIGRATION PATTERN AND PRIMARY NEBRASKA LOCATIONS

Source: www.cranetrust.org and



http://outdoornebraska.ne.gov/conservation/wildlife-viewing/SandhillCranes/where2watchCranes.asp

Hydroelectric generation in Wood River and Hall County area is not practical and is nearly impossible due to the flatter topography found throughout the area. There are few to no areas that could be dammed up in order to create a large enough water reservoir to power the turbines.

However, the other types of renewable energy sources are possible within Hall County, including geothermal, methane, and solar. Solar may create some issues closer to the primary migratory areas of Hall County.

Energy Programs in Nebraska

The following provides a basic history and description of some newer programs in Nebraska; interested parties should contact the State of Nebraska Energy Office or their local public power district.

The following information is an excerpt from the Database of State Incentives for Renewables & Efficiency.

C-BED Program

In May 2007, Nebraska established an exemption from the sales and use tax imposed on the gross receipts from the sale, lease, or rental of personal property for use in a community-based energy development (C-BED) project. The Tax Commissioner is required to establish filing requirements to claim the exemption. In April 2008 L.B. 916 made several amendments to this incentive, including: (1) clarified C-BED ownership criteria to recognize ownership by partnerships, cooperatives and other pass-through entities; (2) clarified that the restriction on power purchase agreement payments should be calculated according to gross* and not net receipts; (3) added language detailing the review authority of the Tax Commissioner and recovery of exempted taxes; and (4) defined local payments to include lease payments, easement payments, and real and personal property tax receipts from a C-BED project.

A C-BED project is defined as a new wind energy project that meets one of the following ownership conditions:

- For a C-BED project that consists of more than two turbines, the project is owned by qualified owners with no single qualified owner owning more than 15% of the project and with at least 33% of the power purchase agreement payments flowing to the qualified owner or owners or local community; or
- For a C-BED project that consists of one or two turbines, the project is owned by one or more qualified owners with at least 33% of the power purchase agreement payments flowing to a qualified owner or local community.

In addition, a resolution of support for the project must be adopted by the county board of each county in which the C-BED project is to be located or by the tribal council for a C-BED project located within the boundaries of an Indian reservation.

A qualified C-BED project owner means:

- a Nebraska resident;
- a limited liability company that is organized under the Limited Liability Company Act and that is entirely made up of members who are Nebraska residents;
- a Nebraska nonprofit corporation;
- an electric supplier(s), subject to certain limitations for a single C-BED project; or
- a tribal council.

In separate legislation (LB 629), also enacted in May 2007, Nebraska established the Rural Community-Based Energy Development Act to authorize and encourage electric utilities to enter into power purchase agreements with C-BED project developers.

** LB 561 of 2009 established that gross power purchase agreement payments do not include debt financing if the agreement is entered into on or before December 31, 2011, and the qualified owners have a combined total of at least 33% of the equity ownership in the C-BED project.*

Local Government and Renewable Energy Policies

Local governments need to take steps to encourage greater participation in wind generation. Cities and counties can do a number of items to make these projects more attractive. Some of the things that could be done are:

- Develop or amend existing zoning regulations to allow small-scale wind turbines as an accessory use in all districts
- Develop or amend existing zoning regulations to exempt small-scale turbines from maximum height requirements when attached to an existing or new structure.
- Work with the Nebraska Public Power District and/or local public power district on ways to use wind turbines on small-scale individual projects or as a source of power for the community.

Net Metering in Nebraska

LB 436, signed in May 2009, established statewide net metering rules for all electric utilities in Nebraska. The rules apply to electricity generating facilities which use solar, methane, wind, biomass, hydropower or geothermal energy, and have a rated capacity at or below 25 kilowatts (kW). Electricity produced by a qualified renewable energy system during a month shall be used to offset any kilowatt-hours (kWh) consumed at the premises during the month.

Any excess generation produced by the system during the month will be credited at the utility's avoided cost rate for that month and carried forward to the next billing period. Any excess remaining at the end of an annualized period will be paid out to the customer. Customers retain all renewable energy credits (RECs) associated with the electricity their system generates. Utilities are required to offer net metering until the aggregate generating capacity of all customer-generators equals one percent of the utility's average monthly peak demand for that year.

State Law of Solar and Wind Easements

Nebraska's solar and wind easement provisions allow property owners to create binding solar and wind easements for the purpose of protecting and maintaining proper access to sunlight and wind. Originally designed only to apply to solar, the laws were revised in March 1997 (Bill 140) to include wind. Counties and municipalities are permitted to develop zoning regulations, ordinances, or development plans that protect access to solar and wind energy resources if they choose to do so. Local governing bodies may also grant zoning variances to solar and wind energy systems that would be restricted under existing regulations, so long as the variance is not substantially detrimental to the public good.

LB 568, enacted in May 2009, made some revisions to the law and added additional provisions to govern the establishment and termination of wind agreements. Specifically, the bill provides that the initial term of a wind agreement may not exceed forty years. Additionally, a wind agreement will terminate if development has not commenced within ten years of the effective date of the wind agreement. If all parties involved agree to extend this period, however, the agreement may be extended.

Current Renewable Energy Programs and Funding Sources

Low interest Loan Program

This program makes available low interest loans for residential and commercial energy efficiency improvements. The Nebraska Energy Office administers this program, which was created in 1990 using oil overcharge funds. Only improvements to existing buildings that are at least 5 years old are eligible for loan assistance. As of March 31, 2010, 25,618 loans have been made totaling $205.3 million and financing $210.8 million in eligible projects.