



# OEA has been Partnering for Success With



For over two decades



- Assistance at Douglas School, Base Housing
- 1994 - Joint Land Use Planning
- 2005 – Preparation for final BRAC decisions
- 2006 – Advanced Planning Grant to establish economic diversification and JLUS implementation
- 2009 -- Implementation of Master Plan



# Moving Forward With Ellsworth Steering Committee

## Voting Members

- Governors Office
- City of Box Elder
- City of Rapid City
- Meade County
- Pennington County

## Ex-Officio Members

- Private Sector Representatives
- Ellsworth Air Force Base
- SD Congressional Delegation
- Planning Staffs of Local Jurisdictions and EAFB
- Ellsworth Task Force

*Practical Guide to*



# *Compatible Civilian Development Near Military Installations*

*July 2005*

Written by

**Office of Economic Adjustment**

In cooperation with the National Governors Association Center for Best Practices



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*“Area of Critical State Concern” is the adaptation of an old idea to a new application*

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*Practical Guide to*



## *Compatible Civilian Development Near Military Installations*

*July 2005*

**Strategy: State designation of military installations as “**Areas of Critical State Concern**” can provide a statutory basis upon which State and local governments may partner with DoD**

*Practical Guide to*



*Compatible Civilian Development  
Near Military Installations*

*July 2005*

States can influence the timing, location, and staging of local community development by annual allocation of capital expenditures in public infrastructure, including State highways and mass transit development; the location of interstate interchanges; and the extension of public utility systems (water, sewerage, etc.).

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*“Area of Critical State Concern”  
is the adaptation  
of an old  
idea to a new  
application*

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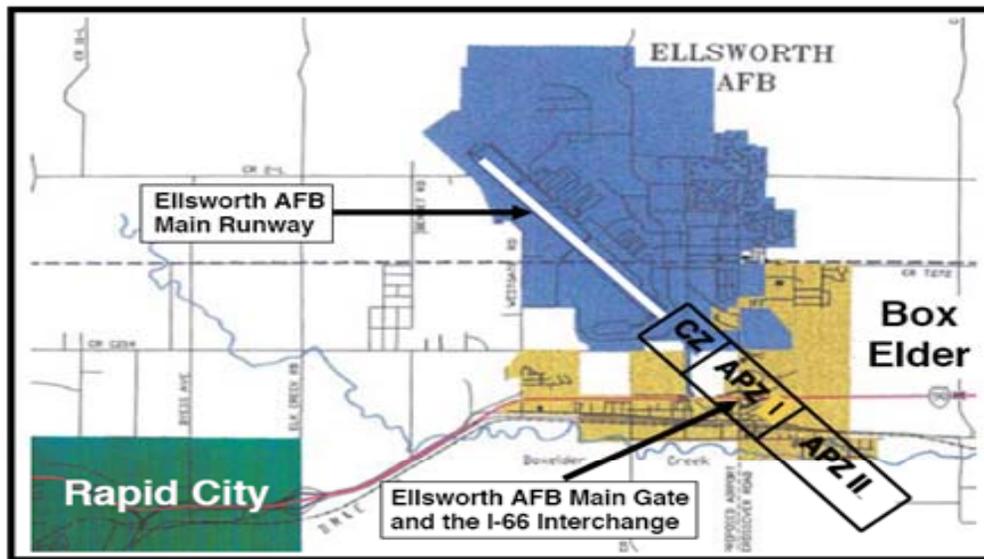
*Practical Guide to*



## *Compatible Civilian Development Near Military Installations*

*July 2005*

**Figure V-8**  
***Ellsworth AFB, SD JLUS***



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*State capital  
investment  
decisions can  
materially  
influence local  
private sector  
development  
decisions*

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# Ellsworth Air Force Base, South Dakota

## AIR INSTALLATION COMPATIBLE USE ZONE (AICUZ) STUDY

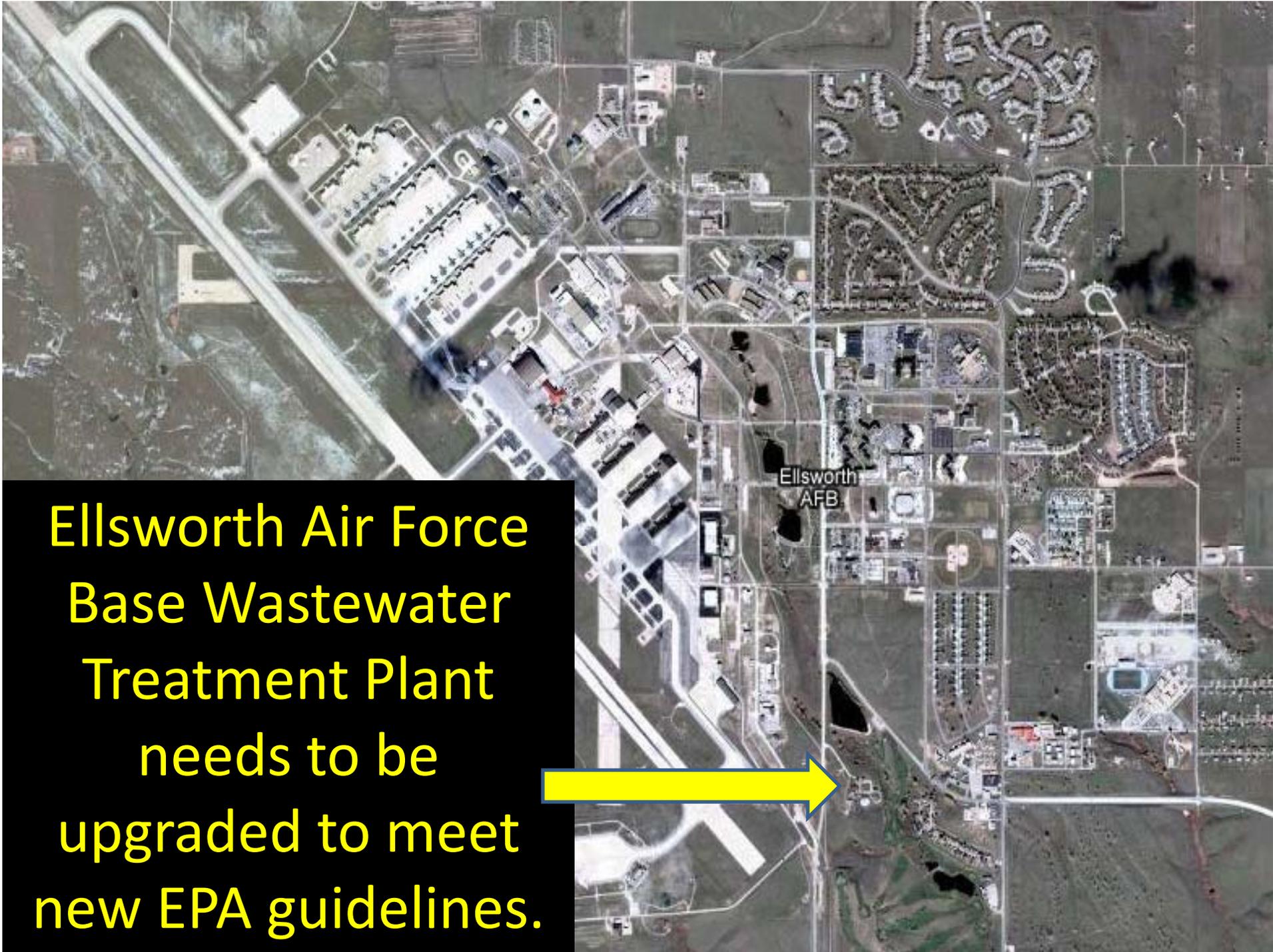


# AICUZ Land Use Compatibility Guidelines

<b>Land Use</b>	<b>Noise Zones</b>			
	<b>65-69 dBA</b>	<b>70-74 dBA</b>	<b>75-79 dBA</b>	<b>80+ dBA</b>
<b>Open Space/Low Density</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>Residential</b>	<b>Discouraged</b>	<b>Strongly Discouraged</b>	<b>No</b>	<b>No</b>
<b>Industrial</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>Commercial</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
<b>Recreational</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

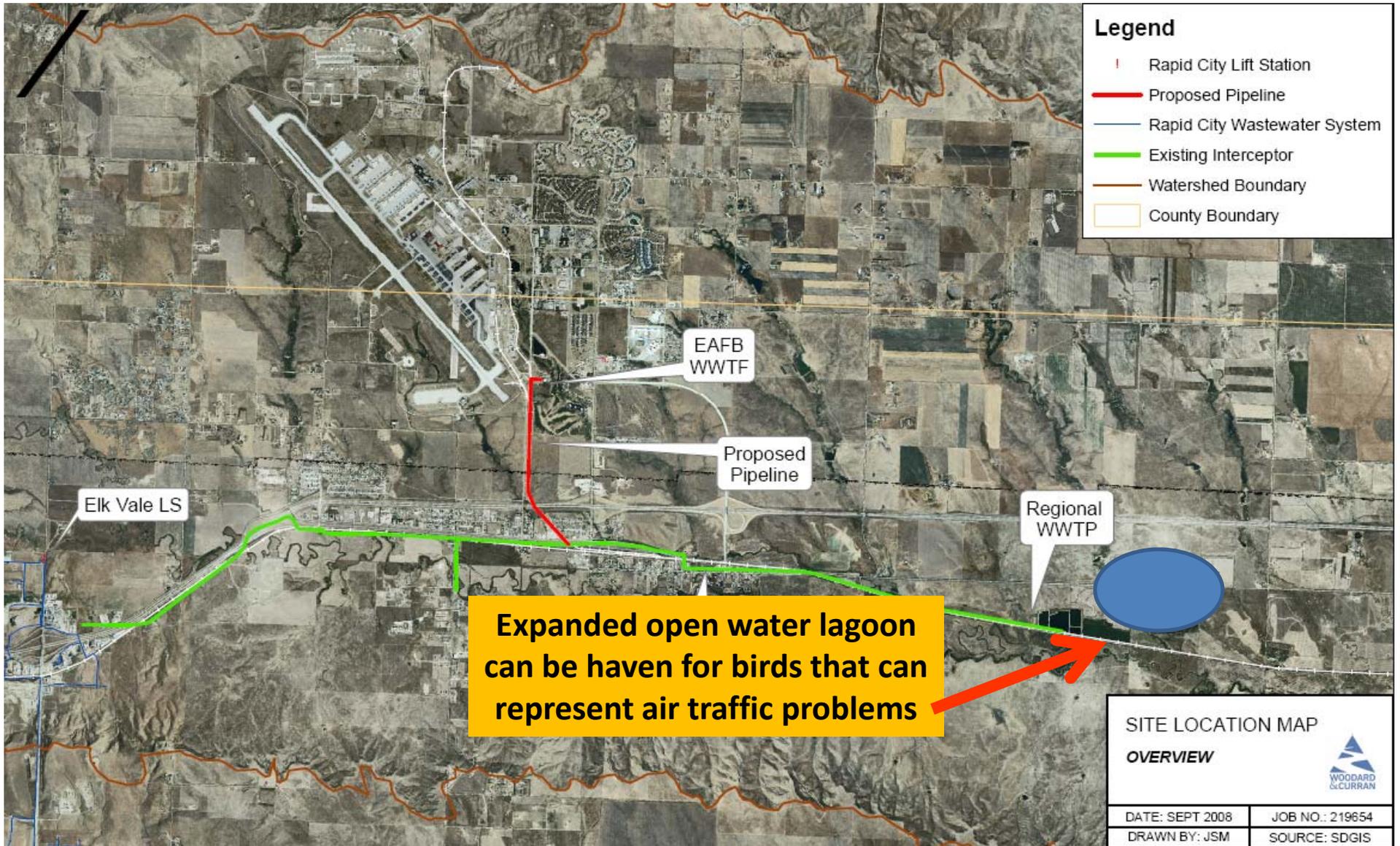
# AICUZ Land Use Compatibility Guidelines

<b>Land Use</b>	<b>Accident Potential Zones (APZ)</b>		
	<b>Clear Zones</b>	<b>APZ I</b>	<b>APZ II</b>
<b>Open Space/Low Density</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>Residential</b>	<b>No</b>	<b>No</b>	<b>Yes</b>
<b>Industrial</b>	<b>No</b>	<b>No</b>	<b>Yes</b>
<b>Commercial</b>	<b>No</b>	<b>No</b>	<b>Yes</b>
<b>Recreational</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>



**Ellsworth Air Force  
Base Wastewater  
Treatment Plant  
needs to be  
upgraded to meet  
new EPA guidelines.**

# Box Elder's alternative to using Regional Wastewater Treatment Plant is to expand its lagoon 5 X



# I-90 Corridor Wastewater Treatment Plant

10% design and feasibility study funded by EAFB & 2007 DENR appropriation

**Save  
\$8.8 million**





# Advanced Planning Grant

## Moving Forward With Ellsworth Box Elder I-90 Corridor Master Plan



## Moving Forward With Ellsworth Steering Committee



# THE BLACK HILLS TECHNOLOGY CORRIDOR

PROPOSED HOME TO OVER 1,000 TECHNOLOGY BASED COMPANIES

■ = TECHNOLOGY-BASED COMPANY

**ENDLESS OPPORTUNITY.  
IT'S ON THE MAP.**

In 2004, the greater Black Hills community formed **Black Hills Vision**. In partnership with **Governor Mike Rounds and the 2010 Initiative**, Black Hills Vision became the catalyst for **the Black Hills Technology Corridor Project**, which envisioned the Black Hills someday becoming home to over 1,000 technology-based businesses and organizations.

2010  
initiative

South Dakota

BELLE FOURCHE  
SPEARFISH  
BHSU  
DEADWOOD  
STURGIS  
LEAD  
HOMESTAKE NATIONAL UNDERGROUND LABORATORY

RAPID CITY

SDSM&T

WALL

HILL CITY

CUSTER

EDGEMONT

PINE RIDGE



“Future economies of states and regions will be determined by what our private and public sector leaders chart as a vision around knowledge assets and related areas such as workforce, technology infrastructure and business climate, the mobilization of resources around that vision and a corresponding Roadmap and the commitment to its implementation over several years.”



“ The proposed Black Hills Technology Corridor Roadmap links these technology assets to new market opportunities, identifies the gaps that must be addressed, and the needed investments in near, mid and long-term timeframes.

The overall goal of such a plan, when implemented, is the creation of good, well paying jobs and retention of an in-state workforce to sustain new and growing technology companies.”

Moving Forward with  
Ellsworth Air Force Base

# Master Planning Study



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With Ellsworth  
Steering Committee



- Phase 1 – Orientation, information gathering
- Phase 2 – Rules, Regulations, AICUZ
- Phase 3 – Land Use, GIS Mapping, Transportation
- Phase 4 – Financing, Implementation Mechanism
- Phase 5 -- Implementation

## Sustained Partnering For Success

Moving Forward with  
Ellsworth Air Force Base

# Master Planning Study



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With Ellsworth  
Steering Committee**



The Phase II Report is the second of four phases of an overall master planning effort for Ellsworth Air Force Base and the I-90 Corridor.

The master planning project works with the Air Force to outline actions to protect the health, safety and welfare of the owners, occupants or users of the land surrounding Ellsworth Air Force Base (EAFB).

Land close to Air Force Bases is subject to aircraft noise and the potential for aircraft accidents, therefore certain types of development are not suitable.

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Ellsworth Air Force Base

# Master Planning Study



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### 3. Compatible Civilian Development Mechanisms

The following outline provides a strategy and mechanisms for correcting the incompatibilities surrounding Ellsworth Air Force Base. **The mechanisms should be part of a comprehensive strategy that both regulates and compensates.** These mechanisms should not be viewed in isolation; rather, they are ingredients that are combined to achieve the long term goal of preserving the positive economic impact of EAFB.

The regulatory modifications presented in the previous sections provide the foundation for compatible **future development.**

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Ellsworth Air Force Base

# Master Planning Study



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However, there should also be mechanisms that help establish current compatible civilian development and halt the potential for redevelopment of incompatible land uses in the areas of military influence.

Furthermore, even though a local jurisdiction may establish regulatory restrictions to prevent incompatible development today, the regulations alone may not be able to stand the test of time. As local governances turn over, variances and exceptions to the local ordinances can render the rules ineffective.

In order to produce the long term desired outcome of protecting EAFB from incompatible civilian development, additional mechanisms to correct the incompatibilities are needed.

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Ellsworth Air Force Base

# Master Planning Study



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### ***3.3 Implementation Mechanism / Organizational Structure***

A Special Purpose Development Authority is recommended, authorized by the South Dakota Legislature, for the intended purpose of implementing a long term, sustainable strategy to protect the economic impact of Ellsworth Air Force Base on the State.

It is recommended that the Authority be governed and administered by a Governor appointed Board of Directors; that would also provide an annual report to the South Dakota Legislature.

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Ellsworth Air Force Base

# Master Planning Study



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.....the Authority should have the ability to receive or purchase property, issue bonds and take on other methods of indebtedness to pay for the costs incurred with the negotiation and the purchase of properties, development rights, sound attenuation measures, build infrastructure, and other steps necessary to maintain Ellsworth Air Force Base as an area of critical State concern.

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Ellsworth Air Force Base

# *Master Planning Study*



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*Lessons Learned*

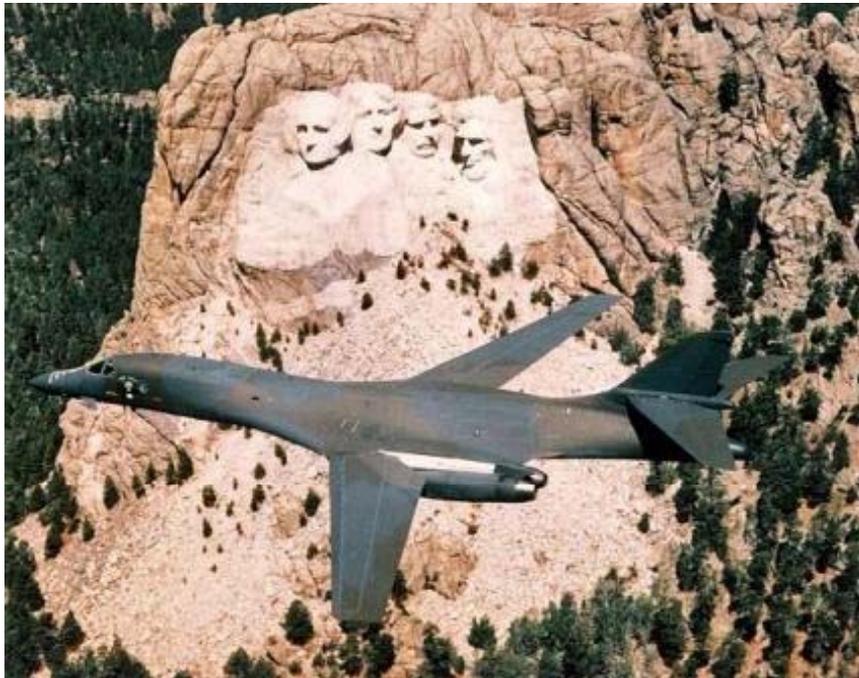
*In Partnering with Your Community for Success !*

*Be Prepared to Both*

**Regulate & Compensate**

*South Dakota*

# Ellsworth Development Authority



## Mission

*To protect and promote  
the economic impact of  
Ellsworth Air Force  
Base and associated  
industry,*

*and to promote the  
health and safety of  
those living or working  
near the base*



# Future Foundation



# Future Foundation

## Founders Corporate Council



Listed Alphabetically

- Black Hills Corporation
- Black Hills Federal Credit Union
- Black Hills Harley-Davidson
- Black Hills Power
- Derby Enterprises
- First Western / First Interstate Bank
- Gunderson Palmer Nelson Ashmore
- Golden West Technologies
- Lawrence & Schiller
- Midcontinent Communications
- Pioneer Bank & Trust
- US Bank
- West River Electric Association
- Wells Fargo Bank South Dakota, N.A.



# South Dakota

## Ellsworth Development Authority

### Master Plan Implementation



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Steering Committee**



# Box Elder, South Dakota

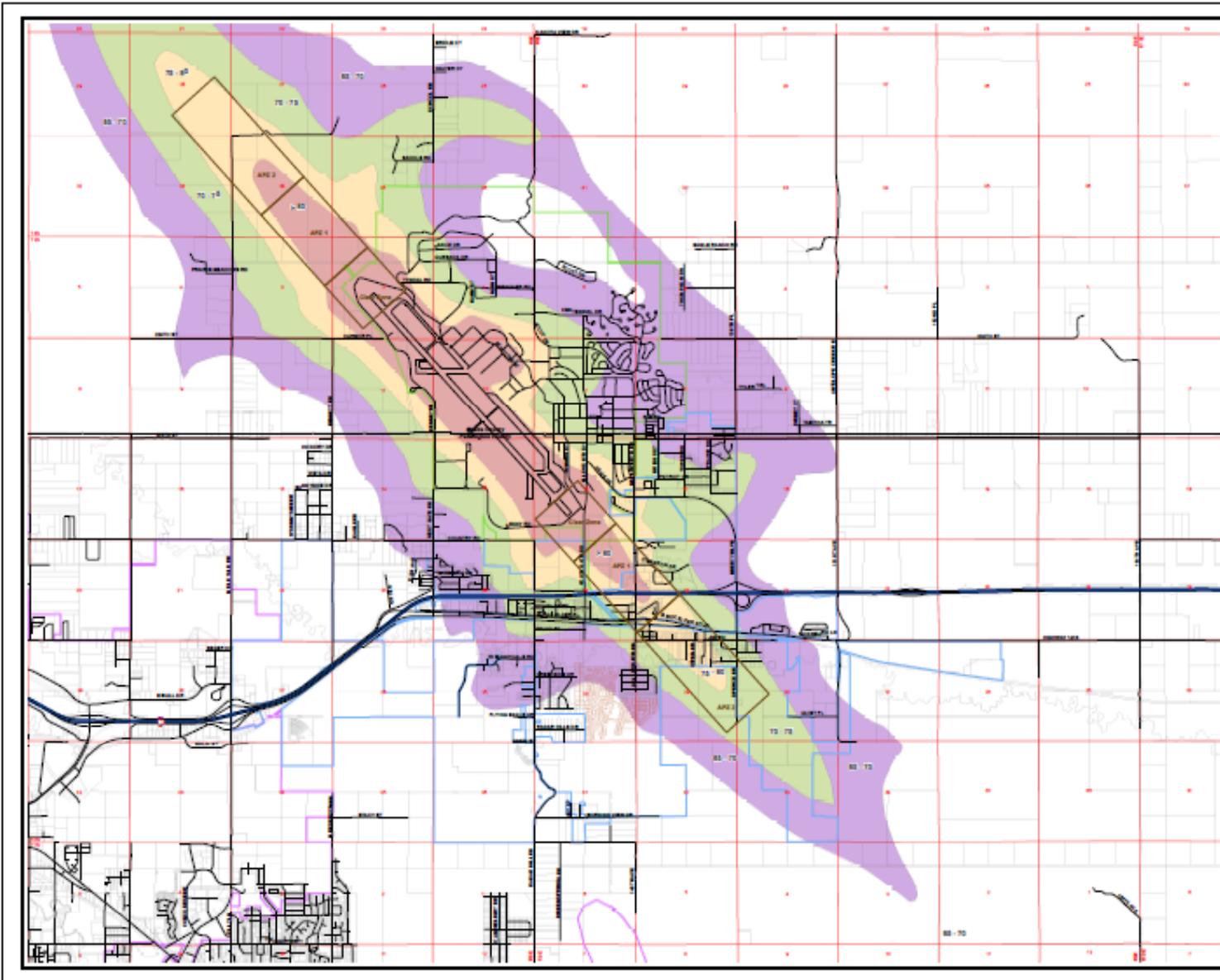
Ellsworth Air Force Base  
APZ Boundaries  
and  
2008 Mission Model  
AICUZ Boundaries

February 2008

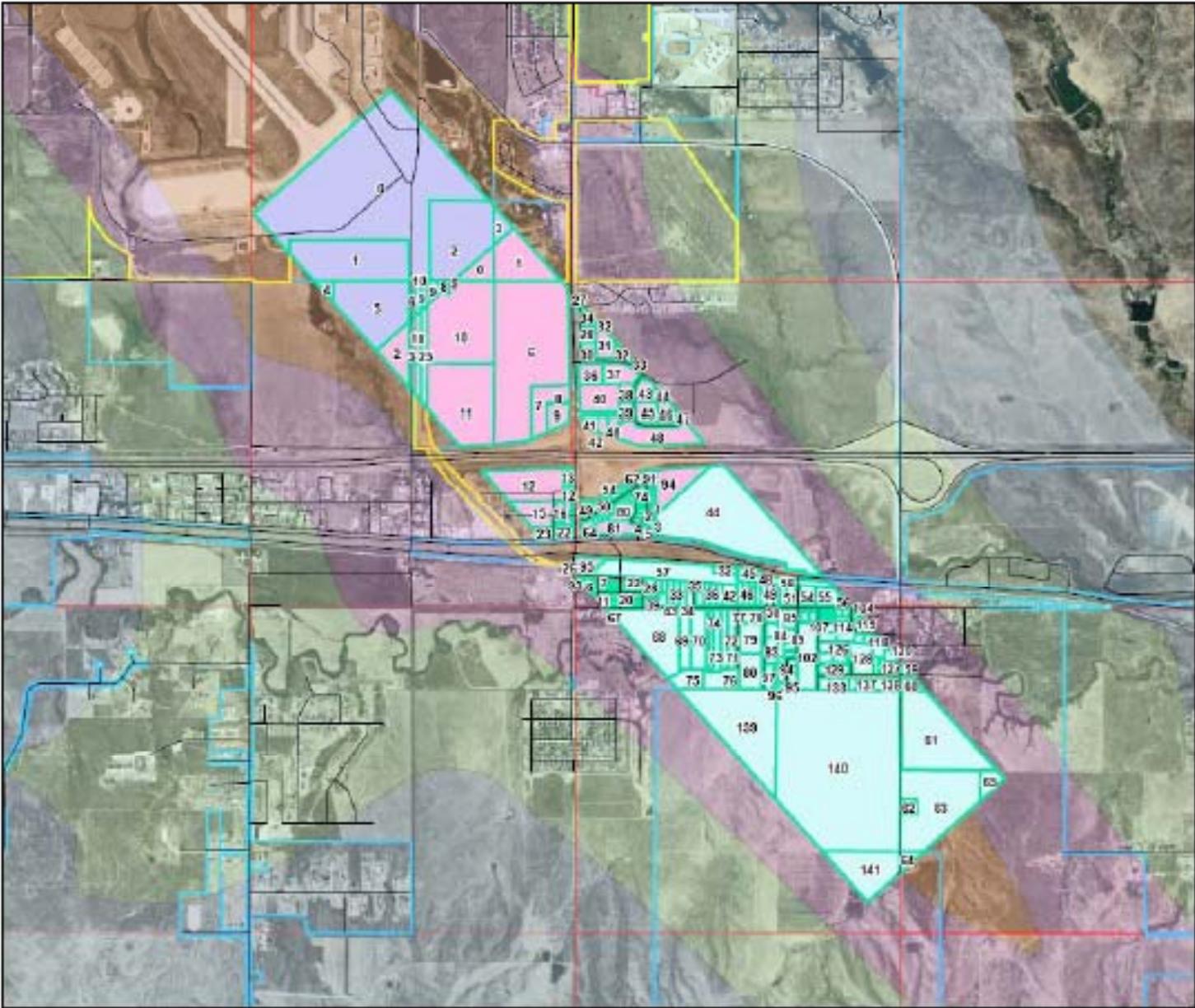
- Legend**
- Box Elder City Limits
  - NAPS Limits
  - Neighborhood City Limits
  - Parcels Boundaries
  - Proposed Development
  - APZ Boundaries
  - 2008 AICUZ Boundaries
  - 85 - 70 DNL
  - 75 - 75 DNL
  - 75 - 80 DNL
  - 70 - 80 DNL

APZ = Airport Protection Zone  
AICUZ = Airspace Compatibility Use Zone  
DNL = Day/Night Average Sound Level

1:25,000

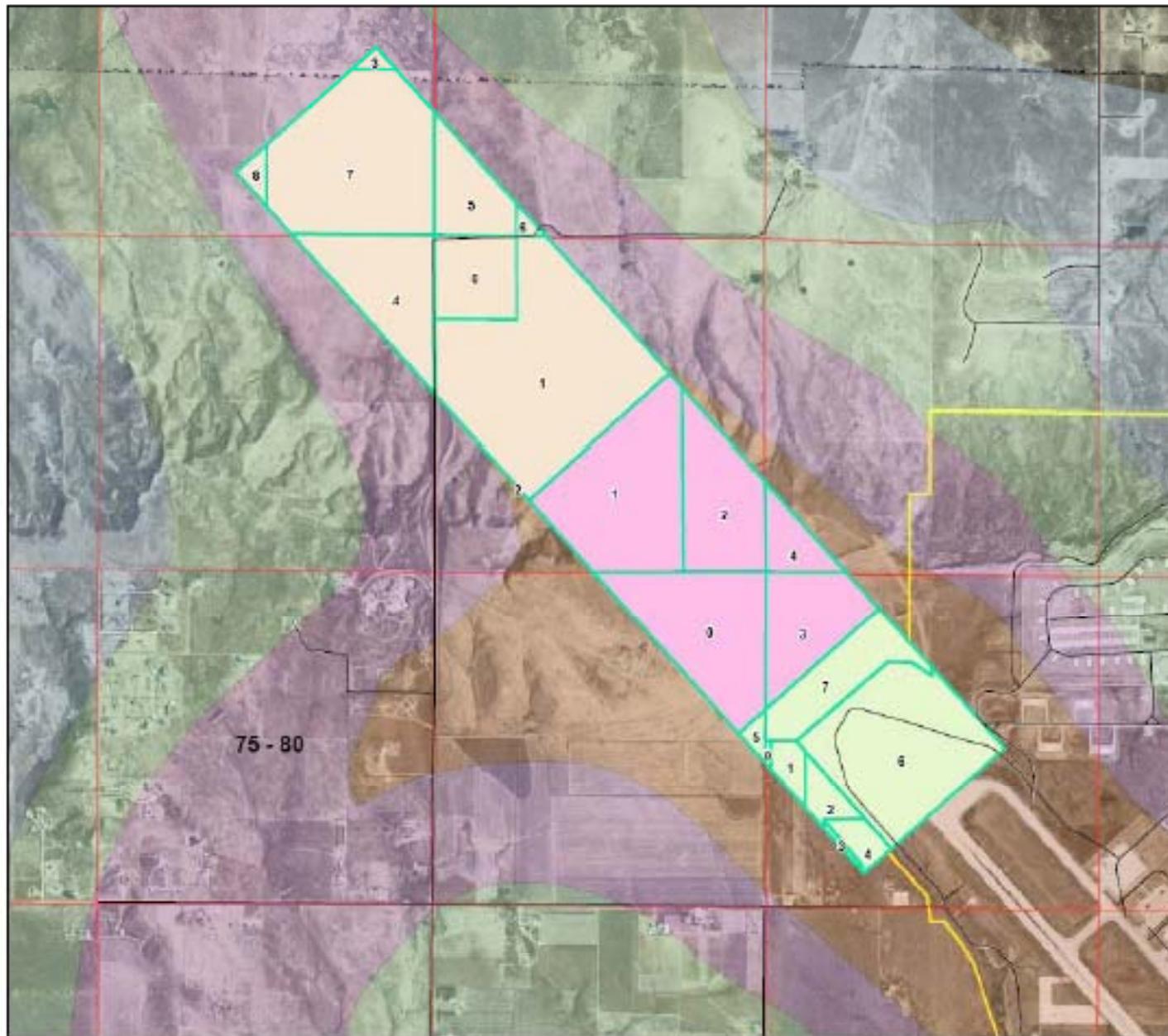


**Figure 1.2.4. Parcels in the South End of the Runway**



Source: FourFront Design, 2008

**Figure 1.2.3. Parcels in the North End of the Runway**



Source: FourFront Design, 2008

**Table B1.a: Northern APZ Parcel Information**

1994 ALCUZ		Parcel ID #	Map # Key	Total Acres	Assessed Value	Acres within Zone	Percent in Zone	Assessed Value in Zone	Owner Name	Easement	Local Land Use Regulation (Meade County)	Existing Land Use	Developable Rights	Maximum Buildout
Zone	Noise Contour													
C2	80 + DNL	26.02.322	0	6.06	\$105,203	0.95	15.68%	\$16,495.83	Dikoff, Shawn L ETUX	157-E Permanent Restrictive Easement	Subdivision Regulations	Agriculture/Ranching	None	0
C2	80 + DNL	26.02.323	1	33.31	\$73,764	9.35	28.07%	\$20,705.55	Deborah I & Marty L Larson & Daniel M Larson	155-E Permanent Restrictive Easement	Subdivision Regulations	Agriculture/Ranching	None	0
C2	80 + DNL	26.60.02	2	20.98	\$61,431	11.88	56.62%	\$34,782.23	Donald P Hollis ETUX	127-E Permanent Clearance Easement	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	3 residential units & 11 commercial units
C2	80 + DNL	26.60.0A	3	13.86	\$97,098	1.64	11.83%	\$11,486.69	Edward B & Tamlyn M Stubbelfield	158-E Permanent Restrictive Easement	Subdivision Regulations	Agriculture/Ranching	None	0
C2	80 + DNL	26.60.08	4	18.17	\$40,198	10.22	56.62%	\$22,780.11	Bitzer Creek Pipeline LLC	~30% 127-E Permanent Clearance Easement & ~70% 158-E Permanent Restrictive Easement	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	1 residential unit & 3 commercial units
C2	80 + DNL	26.03.11*	5	641.76	\$174,849	3.96	0.62%	\$1,084.06	Darrell Lee Ensen ETAL	129-E Permanent Clearance Easement	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	1 residential unit & 3 commercial units
C2	80 + DNL	ELLSWORTH AFB	6	425.48	0	132.52	26.36%	\$0.00	USA	N/A	Subdivision Regulations	Agriculture/Ranching	None	0
C2	80 + DNL	26.02.21*	7	123.98	\$14,058	45.68	36.96%	\$5,181.78	Marvin J Kammerer	158E-2 Permanent Restrictive Easement	Subdivision Regulations	Agriculture/Ranching	None	0
AP2 I	80 + DNL	26.03.11*	0	641.76	\$174,849	96.42	15.02%	\$26,279.80	Darrell Lee Ensen ETAL	129-E Permanent Clearance Easement	Subdivision Regulations	Agriculture/Ranching	None	0
AP2 I	80 + DNL	27.34.12*	1	401.82	\$48,154	111.67	27.79%	\$13,382.00	Irene Joy Kammerer	129E Permanent Clearance Easement & 128E-2 Permanent Spoil Area Easement & partially uncovered	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	37 residential units & 111 commercial units
AP2 I	80 + DNL	27.34.11	2	148.24	\$15,436	45.32	46.70%	\$6,536.84	Marvin J Kammerer	129E Permanent Clearance Easement & 128E-2 Permanent Spoil Area Easement & partially uncovered	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	21 residential units & 65 commercial units
AP2 I	80 + DNL	26.02.21*	3	123.98	\$14,058	55.06	44.41%	\$6,243.16	Marvin J Kammerer	158E-2 Permanent Restrictive Easement	Subdivision Regulations	Agriculture/Ranching	None	0
AP2 I	80 + DNL	27.35.21	4	315.33	\$32,174	21.1	6.69%	\$2,152.44	Marvin J Kammerer	129E Permanent Clearance Easement & 128E-2 Permanent Spoil Area Easement	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	7 residential units & 21 commercial units
AP2 II	75-80/80 + DNL	27.34.22	0	40.48	\$10,120	40.48	100.00%	\$10,120.00	Daryl D Sandine ETAL	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	13 residential units & 40 commercial units
AP2 II	75-80/80 + DNL	27.34.12*	1	401.82	\$48,154	190.4	47.38%	\$22,815.37	Irene Joy Kammerer	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	63 residential units & 190 commercial units
AP2 II	80 + DNL	27.34.23	2	40.29	\$5,989	1.34	3.32%	\$198.83	Edward J Kammerer	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	1 commercial unit
AP2 II	75-80 DNL	27.28.11	3	160.37	\$33,909	2.89	1.80%	\$610.36	Lisa Mason Stone	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	2 commercial units
AP2 II	75-80/80 + DNL	27.33.11	4	205.09	\$33,883	65.73	32.05%	\$10,891.55	Daryl D Sandine ETAL	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	21 residential units & 65 commercial units
AP2 II	75-80/80 + DNL	27.27.12	5	159.91	\$58,133	38.05	23.79%	\$13,829.84	Daryl D Sandine ETAL	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	12 residential units & 38 commercial units
AP2 II	75-80 DNL	27.27.31	6	160.42	\$35,780	2.9	1.81%	\$647.62	Irene Joy Kammerer	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	2 commercial units
AP2 II	75-80/80 + DNL	27.28.21	7	241.68	\$90,693	135.93	56.24%	\$28,509.74	Arfred E Kammerer	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	45 residential units & 135 commercial units
AP2 II	75-80 DNL	27.28.23	8	241.01	\$61,638	5.61	2.33%	\$1,435.70	Liberty NB Bank % Lisa Mason Stone	N/A	Subdivision Regulations	Agriculture/Ranching	1 unit / 3 acres residential & 1 unit / 1 acre commercial	1 residential unit & 5 commercial units

\* Indicates a parcel that is shared between two zones.

\*\* Unprotected parcels are parcels which are not under a restrictive easement or owned by a public entity.

**\$195,039 Total Assessed Value of Unprotected Parcels within North Accident Potential Zone\*\***

Indicates a restrictive easement over the property

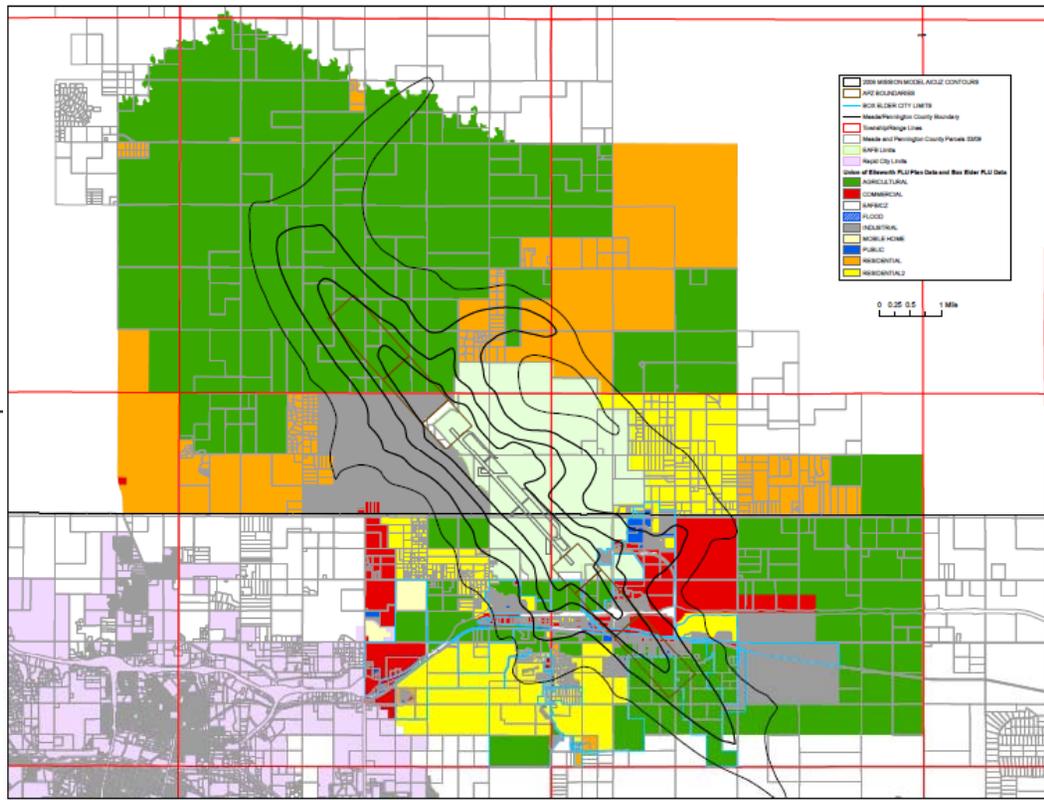
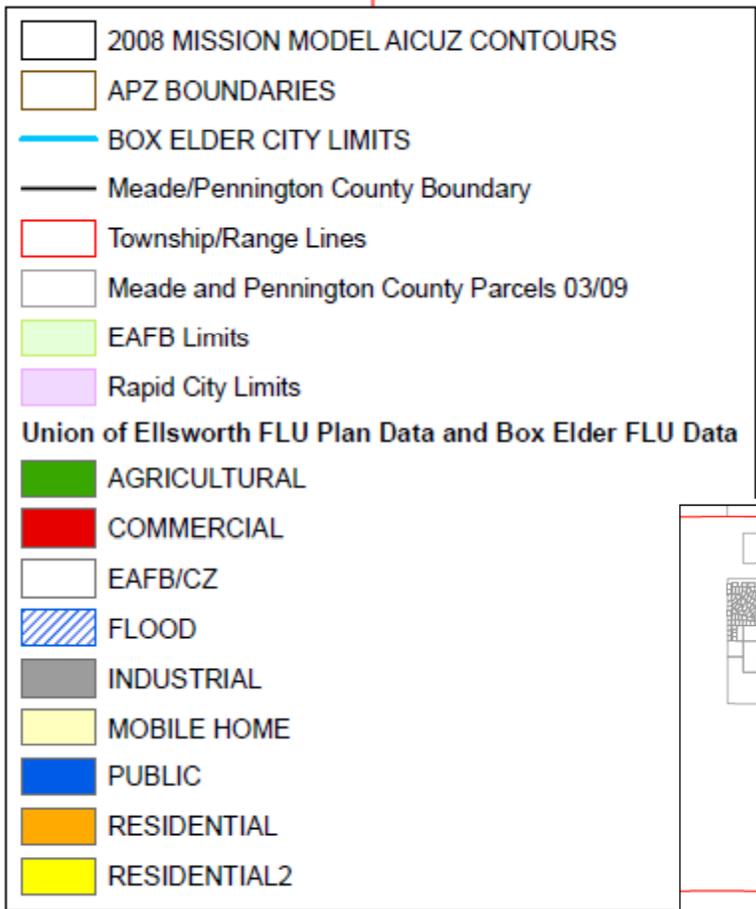
**\$883,643 Total Assessed Value of Unprotected Parcels**

Indicates property owned by the AFB

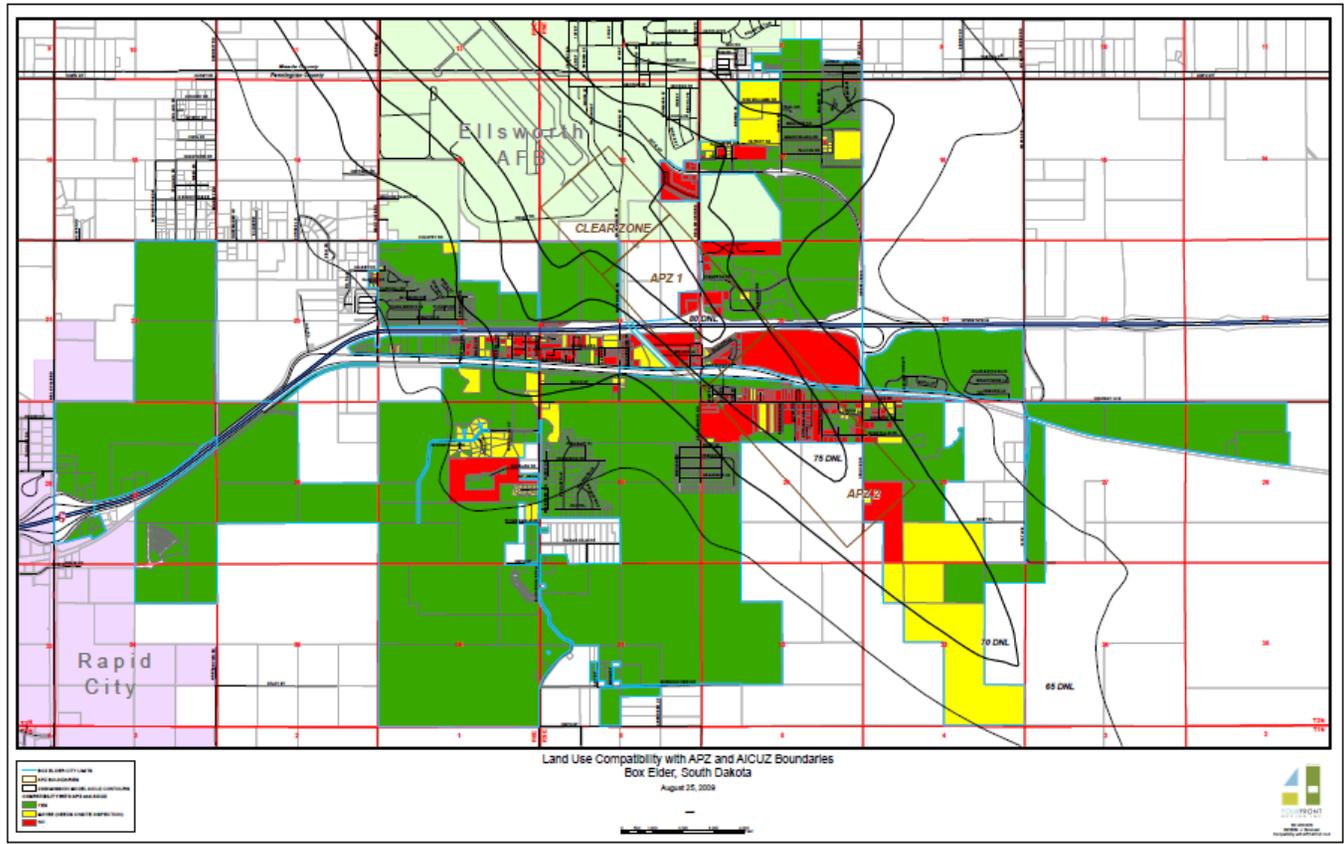
**804 Total Acres of Unprotected Parcels within North Accident Potential Zone**

Indicates property owned by the City of Bow Rider

**3,944 Total Acres of Unprotected Parcels**



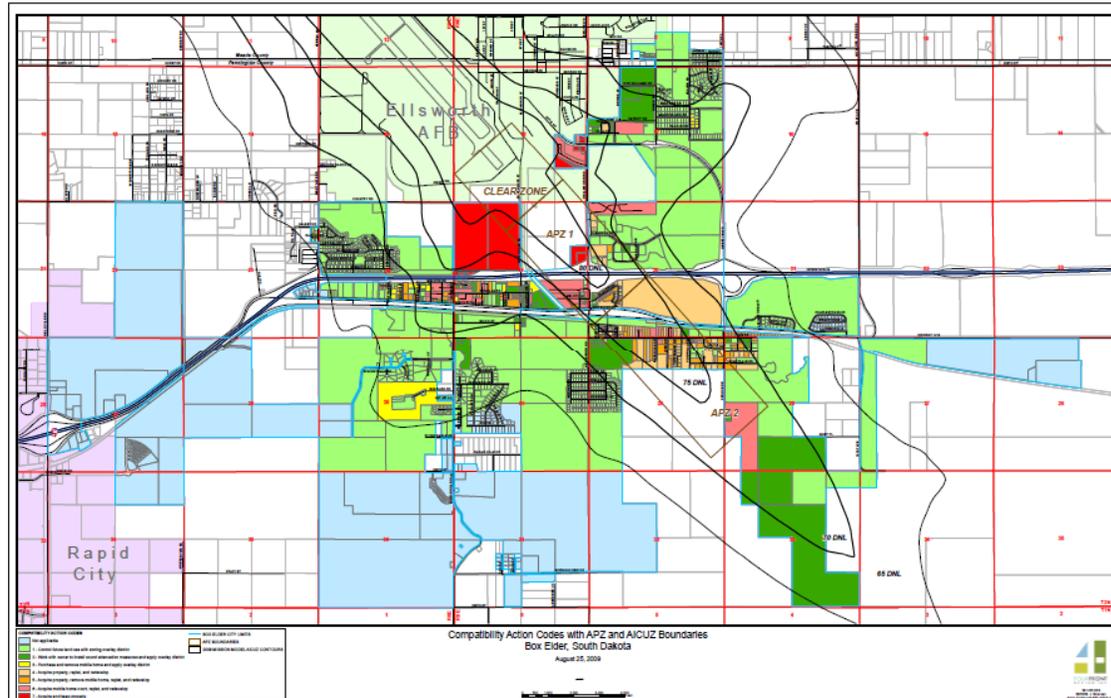
— BOX ELDER CITY LIMITS  
 APZ BOUNDARIES  
 2008 MISSION MODEL AICUZ CONTOURS  
**COMPATIBILITY WITH APZ and AICUZ**  
 YES  
 MAYBE (NEEDS ONSITE INSPECTION)  
 NO



### COMPATIBILITY ACTION CODES

- Not applicable
- 1 - Control future land use with zoning overlay district
- 2 - Work with owner to install sound attenuation measures and apply overlay district
- 3 - Purchase and remove mobile home and apply overlay district
- 4 - Acquire property, replat, and redevelop
- 5 - Acquire property, remove mobile home, replat, and redevelop
- 6 - Acquire mobile home court, replat, and redevelop
- 7 - Acquire and keep property

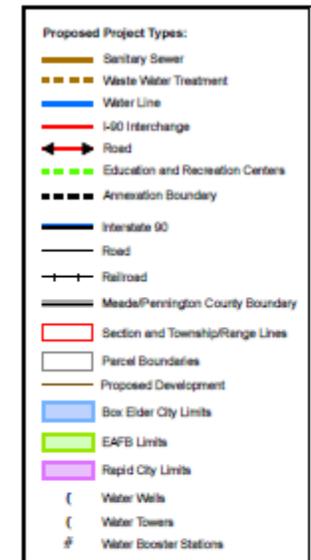
- BOX ELDER CITY LIMITS
- APZ BOUNDARIES
- 2008 MISSION MODEL AICUZ CONTOURS



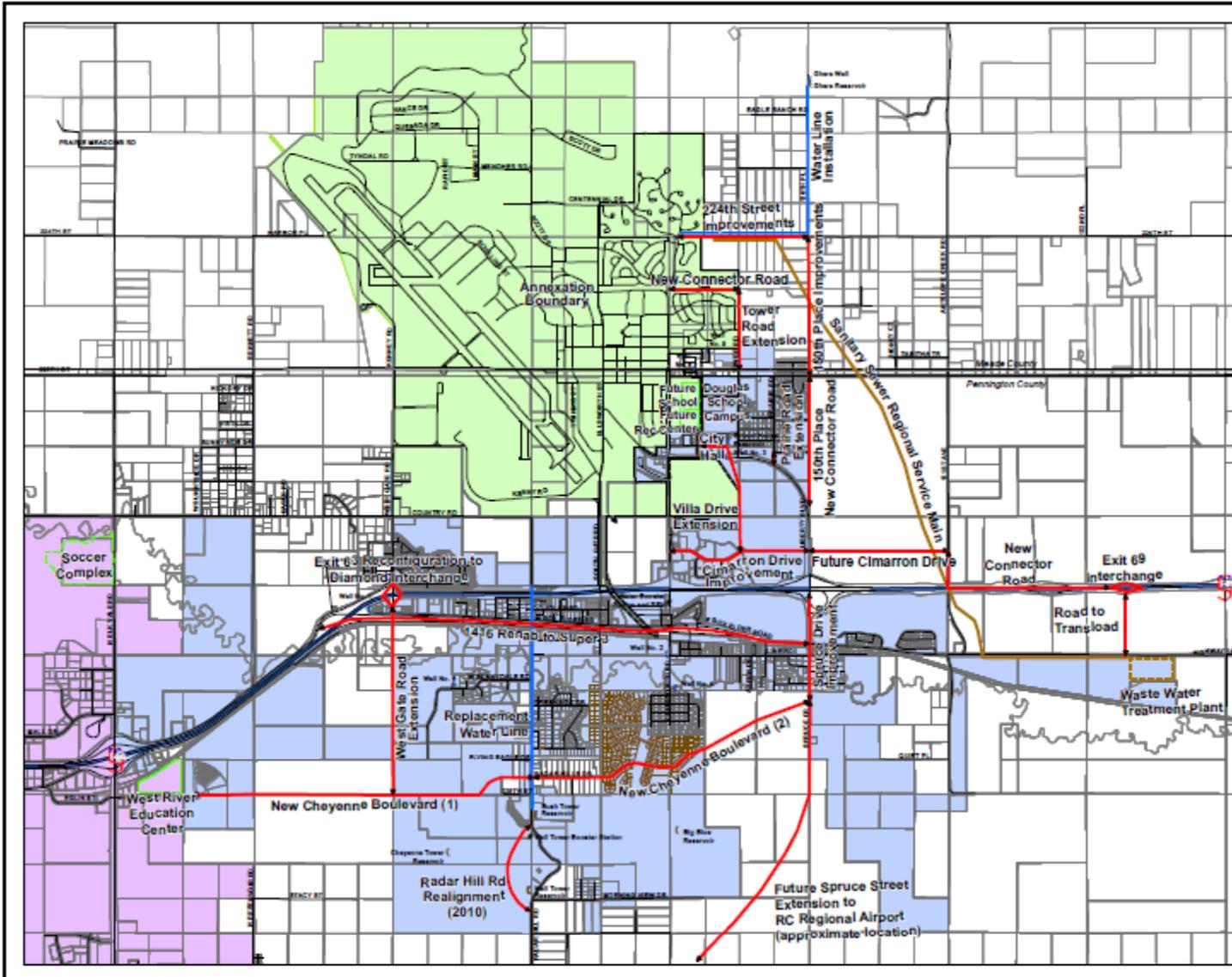
Box Elder, South Dakota

Future Street, Sewer,  
and Water Plans

May 2009



5/20/09  
 08:14:05:002  
 Box Elder Future Projects Map 03\_17\_09 11x17.mxd  
 J. Sorenson



# Sustained Partnering for Success

*South Dakota*

**Ellsworth  
Development Authority**



**Moving Forward With Ellsworth  
Steering Committee**

