Economic Impact Study

Grand Forks Air Force Base Realignment Final Report

Prepared for:

The County of Grand Forks, ND
&
The Grand Forks Region Base Realignment Impact Committee (BRIC)

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Economic Impact Study
of
Grand Forks Air Force Base Realignment

Grand Forks Region
Base Realignment Impact Committee (BRIC)

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PREFACE

The County of Grand Forks, in conjunction with the Grand Forks Region Base Realignment Impact Committee (BRIC), undertook this study to collect, research, and analyze relevant economic and demographic data and report on its findings. The County of Grand Forks and BRIC may use the products developed by this contract to refine or broaden regional strategies; develop action plans for highly impacted communities; assist in policy development aimed at ameliorating BRAC-related job losses at Grand Forks Air Force Base; and prepare for growing the opportunities associated with an anticipated Unmanned Aerial Vehicle (UAV) mission.

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EXECUTIVE SUMMARY

Introduction

Grand Forks Air Force Base (Grand Forks AFB) is one of the largest employers in the state of North Dakota. The base employs over 3,000 people, the annual payroll is $127 million, and the base typically spends around $50 million locally in contracts for construction, utilities, supplies, education, and other services. An additional 1,200 jobs in local communities depend on the needs of the base and its employees. These indirect jobs generate an annual payroll of $33 million. This Executive Summary estimates the economic impact of losing one-third to one-half of the jobs on base on the five counties that are near the base. The five counties are: Grand Forks, ND; Polk, MN; Nelson, ND; Traill, ND; and Walsh, ND. Overall, the potential loss of about 1,000 to 1,500 jobs on Grand Forks AFB will negatively affect around one percent of the annual economic activity in the five-county region, although certain locales, businesses, and schools may experience a greater impact.

Table 1: 2000 Census Population for the Five Counties near Grand Forks Air Force Base

County	Population
Grand Forks (ND)	66,109
Polk (MN)	31,369
Traill (ND)	8,477
Walsh (ND)	12,389
Nelson (ND)	3,715
Total	**122,059**

The base is the home of the 319th Air Refueling Wing and hosts several tenants. It is located in Grand Forks County, ND, about 15 miles west of the City of Grand Forks. The BRAC 2005 Commission directed that Grand Forks AFB be realigned. Consequently, the Air Force (AF) will move the KC-135 tanker aircraft to other locations by 2011, and modify the base infrastructure to accommodate a new Unmanned Aerial Vehicle (UAV) mission. The AF plans to utilize the base as an operating location for Predator (MQ-1) and Global Hawk (RQ-4) UAV.

The County of Grand Forks, in conjunction with the Grand Forks Region Base Realignment Impact Committee (BRIC), commissioned The Concourse Group to analyze the estimated economic impact of the realignment on the five-county area. The Concourse Group/NAHB Research Center team based its analysis on information provided by Grand Forks AFB, and county, state, federal and private sector data. It surveyed 496 of the 2,450 military and 140 of the 385 appropriated-fund (APF) civilians who work on the base and 151 businesses in the five-county region. It also interviewed base, Department of Defense, and Department of the Air

Force personnel, local real estate and school district officials, and others in the community. It used IMPLAN software to model the data and project the estimated economic impact for the year 2011, which is the date by which realignment of the base must be complete. Although the estimates are based on the best data available at the time of the study, Grand Forks AFB is a dynamic and transient community that is constantly changing. Moreover, these estimates do not account for any other changes in the five-county region.

Impact on Employment and Contracting

The AF currently estimates that Grand Forks AFB will lose about one-third of its 2,450 military positions by 2011 due to BRAC actions, adjusted for a gain of about 170 positions related to the new UAV mission. Economic impact modeling requires the use of specific numbers and percentages in order to develop impact estimates. Based on the best available AF estimates, the team used a 34.4 percent reduction in the military positions and applied that same percentage to the APF and NAF civilian positions and to base contracts with local private sector providers in order to model the impact on the regional economy. The 385 civilian positions that directly support the base mission, such as those dealing with aircraft operations, building maintenance, finance and accounting, and legal and personnel functions are paid with appropriated funds and referred to as APF civilians. The 215 positions that provide for the social and physical well-being of the base population are paid with non-appropriated funds (NAF). These civilians work in such places as the base aquatic and bowling centers, and the golf course.

Recognizing that the base could lose additional positions due to AF decisions unrelated to BRAC 2005, such as the recently announced reduction of 40,000 AF positions worldwide, the team also projected the findings in the Executive Summary to estimate the impact of a 50 percent reduction in both military and civilian positions on the base. As shown in Table 2, if Grand Forks AFB loses one – third of its positions, it will lose about 1,000 jobs. If Grand Forks AFB loses one – half of its positions, it will lose about 1,500 jobs.

Table 2: Estimated Loss of Military and Civilian Positions (APF and NAF) on Grand Forks AFB in the Five-County Region (2005-2011)

Types of Positions	Positions on Grand Forks AFB as of September 30, 2005	Number of Jobs Lost if One-Third of the Positions on Grand Forks AFB Are Eliminated	Number of Jobs Lost if One-Half of the Positions on Grand Forks AFB Are Eliminated
Military	2,450	(840)	(1,224)
Civilians (APF & NAF)	600	(200)	(290)
Total	**3,050**	**(1,040)**	**(1,514)**

About $17 million to $25 million of the $50 million in annual base contracts and other on-base transactions that is spent in the five-county region may be removed. These contracts are primarily in the following sectors; utilities, construction, wholesale trades, professional and scientific technical services, administrative and waste services, retail trade, and transportation and warehousing. Based on IMPLAN results, these equate to the removal of 197 to 286 jobs. These jobs are reflected in the number of indirect jobs lost shown in Table 4.

Economic Impact

The team used Minnesota IMPLAN Groups' (MIG) IMPLAN Professional software and data models of the five counties to model the impact of losing 34.4 percent of the positions on the base and the corresponding demand for goods and services in the region. The simulation scenarios were based on the conservative assumption that each job lost by someone who currently lives in the region would result in the removal of their household income from the five-county area. All impacts on economic activity are expressed in 2011 dollars.

Economic Impact on the Five-County Region and Grand Forks MSA

The model results show that between $38.4 million and $55.8 million of economic activity in the five-county region could be lost and that an estimated 649 to 943 indirect jobs may no longer be supported by the local economy. These indirect jobs are in addition to the 1,049 to 1,525 jobs that may be lost on the base. Total employment in the five-county area is about 83,500. Of these amounts, $37.7 million to $54.8 million of economic activity would be lost in the Metropolitan Statistical Area (MSA) of Grand Forks, ND and Polk County, MN. Altogether, the impact is estimated to be between 0.9 percent and 1.4 percent of the annual economic activity of $4.2 billion, in 2011 dollars, in the five-county area.

It should be noted that some table totals may not sum due to rounding.

Economic Impact by County

Table 3: Estimated Loss of Annual Economic Activity, by County

County	Estimated loss of Annual Economic Activity if Grand Forks AFB Loses About 1,000 Positions	Estimated loss of Annual Economic Activity if Grand Forks AFB Loses About 1,500 Positions
Grand Forks	($35,693,168)	($51,879,604)
Polk	($2,042,659)	($2,968,981)
Nelson	($215,879)	($313,777)
Traill	($291,059)	($423,051)
Walsh	($114,254)	($166,067)
Total	**($38,357,019)**	**($55,751,481)**

Table 4: Estimated Loss of Indirect Jobs, by County

County	Estimated Loss of Indirect Jobs if Grand Forks AFB Loses About 1,000 Positions	Estimated Loss of Indirect Jobs if Grand Forks AFB Loses About 1,500 Positions
Grand Forks	(597)	(868)
Polk	(39)	(57)
Nelson	(4)	(7)
Traill	(6)	(8)
Walsh	(2)	(3)
Total	**(649)**	**(943)**

Table 5: Estimated Annual Loss of State and Local Taxes

County	Estimated loss of State & Local Taxes if Grand Forks AFB Loses About 1,000 Positions	Estimated loss of State & Local Taxes if Grand Forks AFB Loses About 1,500 Positions
Grand Forks	($3,698,281)	($5,375,408)
Polk	($290,803)	($422,678)
Nelson	($34,321)	($49,885)
Traill	($41,040)	($59,651)
Walsh	($6,887)	($10,010)
Total	**($4,071,331)**	**($5,917,633)**

Economic Impact by City

The IMPLAN model does not allow the user to project the county-level impact to individual cities, and modeling of separate small cities could be problematic. Therefore, the team developed projections of city-level impacts using U.S. Department of Census data, residential

information provided by Grand Forks AFB, and information gathered through online surveys of military and APF civilians who work on base. Project staff used proportionate data representing categories, such as a city's share of the county's population, which seemed most likely to approximate the actual share of specific categories of county-level impact. The table below presents the results of applying such shares.

Table 6: Estimated Loss of Annual Economic Activity, by County and by City

County	City	Estimated Loss of Economic Activity if Grand Forks AFB Loses About 1,000 Positions	Estimated Loss of Economic Activity if Grand Forks AFB Loses About 1,500 Positions
Grand Forks	Emerado	($289,084)	($420,180)
	Grand Forks	($33,710,853)	($48,998,333)
	Larimore	($551,039)	($800,929)
	Northwood	($348,958)	($507,206)
	Rural Areas in Grand Forks County	($320,039)	($465,173)
	Other Cities in Grand Forks County	($473,194)	($687,782)
Polk	Crookston	($598,389)	($869,751)
	East Grand Forks	($1,193,666)	($1,734,980)
	Rural Areas in Polk County	($19,401)	($28,199)
	Other Cities in Polk County	($231,204)	($336,052)
Nelson	Lakota	($49,976)	($72,640)
	McVille	($30,855)	($44,847)
	Michigan	($61,066)	($88,759)
	Petersburg	($51,958)	($75,520)
	Rural Areas in Nelson County	($5,919)	($8,603)
	Other Cities in Nelson County	($16,105)	($23,408)
Traill	Hatton	($101,113)	($146,966)
	Hillsboro	($76,326)	($110,939)
	Mayville	($73,009)	($106,118)
	Portland	($15,928)	($23,150)
	Rural Areas in Traill County	($5,794)	($8,422)
	Other Cities in Traill County	($18,890)	($27,456)
Walsh	Edinburg	($2,819)	($4,098)
	Fordville	($7,054)	($10,253)
	Grafton	($66,039)	($95,987)
	Hoople	($2,176)	($3,163)
	Park River	($19,951)	($28,998)
	Rural Areas in Walsh County	($844)	($1,227)
	Other Cities in Walsh County	($15,370)	($22,341)
Total		**($38,357,019)**	**($55,751,481)**

Grand Forks AFB, including official and family and friends travel, accounts for about 13,000 of the 180,000 passenger arrivals and departures at Grand Forks International Airport, or about 7 percent of the passenger traffic. A portion of this traffic will be lost if the base loses about 1,000 to 1,500 positions. The base accounts for very little of the airport's cargo traffic.

The team surveyed 151 local businesses to determine in what ways they expected to be affected by the downsizing of Grand Forks AFB. Sixty-two percent expected the loss of jobs on Grand Forks AFB to affect their businesses.

Impact on the Real Estate Market

The team used both statistical and empirical data, consulted numerous sources, including local public officials, real estate brokers, real estate developers, and entrepreneurs, as well as publications and reports from national research organizations, financial rating agencies, and governmental agencies to estimate the impact on the real estate market of the base realignment. Grand Forks AFB provided information on where military and APF civilian employees currently live.

In general, the Grand Forks real estate market has been robust, with the exception of the downtown office sector, exhibiting strength in the housing, industrial, and retail sectors. The weakness in the office market is largely a result of high vacancy in the Central Business District, which is beginning to slowly recover as other uses, such as retail and residential uses, are being found for vacant office space. There have been numerous real estate projects completed within the past few years, and several more are either under construction or in the planning stages. Because of the robust market, the diverse economy, and growth initiatives such as emphasis on research, technology, and aerospace, the loss of about 1,000 to 1,500 positions on Grand Forks AFB is not expected to adversely affect the commercial sectors of the real estate market.

It is anticipated that the greatest impact on real estate resulting from the Grand Forks AFB realignment will be on the housing market. Table 7 shows where 366 AFP civilians and 2,300 military households live. Table 7 does not show where NAF civilians, contractors who work on the base, and people in indirect jobs that depend on the base live. Most of these people live in the five-county region, but Grand Forks AFB does not track their residential information.

Table 7: Current Location of Military and Civilian Households (APF) by County, City, and Zip Code

County	City	Zip Code	Civilian Households	Military Households	Total Households From Grand Forks AFB
Grand Forks	Arvilla	58214	19	9	28
	Emerado	58228	25	35	60
	Gilby	58235	3	2	5
	Grand Forks	Various	200	615	815
	Grand Forks AFB	Various	0	1,449	1,449
	Larimore	58251	35	45	80
	Manvel	58256	0	4	4
	McCanna	58251	0	3	3
	Mekinock	58258	3	6	9
	Niagara	58266	3	0	3
	Northwood	58267	3	21	24
	Thompson	58278	19	6	25
	Subtotal		310	2,195	2,505
Polk	Crookston	56716	0	2	2
	East Grand Forks	56721	26	58	84
	Euclid	56722	0	5	5
	Subtotal		26	65	91
Nelson	Michigan	58259	3	0	3
	Petersburg	58272	3	9	12
	Subtotal		6	9	15
Traill	Hatton	58240	20	16	36
	Buxton	58218	2	0	2
	Hillsboro	58045	0	4	4
	Mayville	58257	0	6	6
	Subtotal		22	26	48
Walsh	Ardoch	58261	2	0	2
	Fordville	58231	0	4	4
	Grafton	58237	0	1	1
	Subtotal		2	5	7
Total			**366**[1]	**2,300**	**2,666**

[1] About 366 of the 385 APF civilians who work on base live in the five-county region; the remaining 19 live out of the five-county area. Since about 10 percent of married military personnel are married to other military personnel, the 2,450 active duty military personnel at Grand Forks AFB represent about 2,303 households. Three of these households are estimated to live out of the five-county region. A household can be a single person or a family.

As of February 2006, the vacancy in the apartment market was 5.4%, and as of May 2006, average home prices in Grand Forks are up 2.7% over 2005. Based on information provided by the Grand Forks City Planner, there are 839 new home sites currently approved or in the approval process. Additionally, there is significant housing construction activity in the downtown market, with several housing projects that have recently been completed, are planned, or are in various stages of development.

Total residential construction in the Grand Forks, ND-MN Metropolitan Statistical Area (MSA) was valued at $64,073,000 in 2005, and is projected to be $77,879,000 in 2006, representing a 22 percent increase. Single-family construction in 2005 in the Grand Forks MSA was valued at $46,121,000 and multifamily housing construction was valued at $17,952,000. In 2006, the value of single-family and multifamily construction is projected to be $45,763,000 and $32,116,000, respectively.

While the housing market is currently robust, the realignment could have a significant negative impact on the housing market if all of the losses occur within a condensed period. If the losses are staggered, the impact would be somewhat less substantial. Based on the estimated direct and indirect job losses as a result of the realignment, and the conservative assumption that every job lost will result in one less household, it is projected that up to 527 homes would come on the market for sale and 517 homes would become available on the rental market in Grand Forks County alone.

Additionally, for the surrounding counties, assuming that the same proportion of residents who lose their employment as a result of the realignment that are renters and those that are homeowners is the same as for the general population, then based on data from the 2000 Census, the resulting impact on the combined owned and rental housing vacancy rates would be as follows:

Grand Forks County – Increase in housing vacancy rate of 3.81% from 7.1% to 10.82%.
Polk County – Increase in housing vacancy rate of 0.53% from 13.8% to 14.33%.
Nelson County – Increase in housing vacancy rate of 0.55% from 19.2% to 19.75%.
Traill County – Increase in housing vacancy rate of 0.63% from 9.9% to 10.53%.
Walsh County – Increase in housing vacancy rate of 0.08% from 12.6% to 12.68%.

Table 8: Estimated Number of Households Lost Off-Base, by County

County	Estimated Military Households Lost	Estimated Civilian Households Lost	Estimated Indirect Jobs Households Lost	Estimated Households Lost if the Base Loses About 1,000 Positions
Grand Forks (off base)	(257)	(180)	(597)	(868)
Polk	(22)	(9)	(39)	(57)
Nelson	(3)	(2)	(4)	(7)
Traill	(9)	(8)	(6)	(8)
Walsh	(2)	(1)	(2)	(3)
Total	**(293)**	**(200)**	**(649)**	**(943)**

IMPACT ON SCHOOLS

Kindergarten – 12th Grade

There are currently about 1,100 students in kindergarten through 12th grade who have a military or federal civilian parent who works on Grand Forks AFB. The base has its own school district and school board. There are two schools located on the base, with 566 students in kindergarten through 8th grade. The Grand Forks AFB Public School District contracts with the Grand Forks Public School District to administer these on-base schools and to educate an additional 280 students, about 150 of whom attend Central High School in Grand Forks. About 250 more students attend schools in other public school districts and private schools in the area. There are between 80 and 100 students in each of grades K through 8, and about 60 in each of grades 9-12. The 636 respondents to the military and APF civilian surveys that the team conducted identified 38 schools that their children attended.

If one-third to one-half of these 1,100 students left, there would be 375 to 550 fewer students in area schools and a proportionate reduction in teachers, other school support positions, and revenue from local, state, federal and other sources, including Impact Aid.

The following table shows the public school districts with the highest number of federally-connected students associated with Grand Forks AFB and the amount of Impact Aid the US Department of Education paid these districts in Fiscal Year 2006. The enrollment figures for FY 2006 payments are over 4 years old. Since then, the number of students from the base has already declined by about 400. For example, the number of students from the base in the Grand Forks AFB/Grand Forks Public School Districts alone has decreased from 1,150 in the 2001-2002 school year to about 850 in the 2006-2007 school year.

Table 9: Public School Districts that Received Impact Aid in Fiscal Year 2006, Based on Enrollment in the 2001-2002 School Year

Public School District	Grand Forks AFB Military Parent	Grand Forks AFB Federal Civilian Parent	Total Grand Forks AFB Dependents (3 Years Ago)	Impact Aid (Paid in FY 2006)
Grand Forks AFB & Grand Forks	1,150	0	1,150	$6.9 Million
Emerado	12	52	64	$11,836
Hatton	31	7	38	$13,038
Larimore	34	62	96	$18,216
Northwood	21	27	48	$12,180

When a school district loses a federally-connected student, it loses more than just the Impact Aid associated with that student. In general, it loses the revenue per student derived from local, state, federal, and other sources. Table 10 shows the amount of revenue per student that the public school districts in the five-county area received. For example, if the Emerado School District loses one student, it loses about $18,000 in school revenue annually. If the Grand Forks AFB/Grand Forks School Districts lose one student they lose about $9,000 in annual revenue.

In general, the student population in North Dakota is decreasing. On average, the 5-year enrollment trend for public school districts in North Dakota is a minus 8.4 percent. However, some of the school districts in the five-county region are losing students at a faster rate. For example, Emerado enrollment dropped from the 72 students shown below in the 2004-2005 school year to 63 students in the 2006-2007 school year, Hatton dropped from 240 to 222 students this year, and Larimore dropped from 534 to 486 students last year.

Table 10: Amount of Revenue Per Student, by County and by School District (2004-2005 School Year)

County	School District	Number of Students	Total Revenue	Revenue Per Student
Grand Forks	Emerado 127	72	$1,293,942	$17,971
	Grand Forks & Grand Forks AFB	7,525	$68,660,468	$9,124
	Larimore 44	534	$3,712,127	$6,952
	Manvel 125	144	$1,658,685	$11,519
	Midway 128	265	$2,264,098	$8,544
	Northwood 129	315	$2,556,476	$8,116
	Thompson 61	416	$2,524,447	$6,068
Polk	Climax	146	$2,285,573	$15,655
	Crookston (ASE)	1,469	$14,819,202	$10,088
	East Grand Forks	1,723	$14,266,829	$8,280
	Fertile (ASE)	533	$5,830,860	$10,940
	Fisher	294	$2,996,943	$10,194
	Fosston	650	$6,399,041	$9,845
	Win-E-Mac (ASE)	542	$5,126,265	$9,458
Nelson	Dakota Prairie 1	299	$3,089,491	$10,333
	Lakota 66	232	$1,852,220	$7,984
Traill	Central Valley 3	274	$1,924,452	$7,024
	Hatton 7	240	$1,936,269	$8,068
	Hillsboro 9	411	$3,088,548	$7,515
	May-Port CG 14	583	$3,921,286	$6,726
Walsh	Adams 128	75	$874,915	$11,666
	Edinburg 106	128	$952,872	$7,444
	Fordville-Lankin 5	104	$1,161,034	$11,164
	Grafton 3	963	$5,987,369	$6,217
	Minto 20	231	$1,650,688	$7,146
	Nash 51	15	$299,836	$19,989
	Park River 78	404	$3,004,563	$7,437

Universities and Technical Schools

About 1,400 military personnel and large numbers of their spouses and dependents, as well as many civilian personnel who work on base take classes in local universities and technical schools, several of which offer classes on base.

Table 11: Percent of 636 Military and APF Civilian Survey Respondents Who Said Members of Their Households Attended Higher Education Classes in the Last 12 Months

Survey	Respondents	Spouses	Dependent(s)
Military Survey (496 respondents)	27%	16%	2%
Civilian Appropriated-Fund Employee Survey (140 respondents)	18%	20%	10%

Table 12: Amount of AF Tuition Assistance Paid to Local Universities and Technical Schools and the Number of Grand Forks AFB Students (FY 2005)

Universities & Technical Schools	Amount of Tuition Assistance the AF Paid in FY 2005	Military Students	Dependents & Grand Forks AFB Civilian Students	Total Grand Forks AFB Students
Lake Region State College	$385,417	664	350	1,014
Park University	$266,448	396	240	636
Embry-Riddle Aeronautical University	$158,718	210	1	211
University of Mary	$59,750	81	Not Available	81*
Northland Community and Technical College	$18,900	15	Not Available	15*
Central Michigan University	$12,750	17	42	59
University of North Dakota	$12,144	13	Not Available	13*
Total	**$914,127**	**1,396**		**2,029***

*Does not include all AFB dependents

For some of these schools, the students affiliated with Grand Forks AFB represent most of their student body in the region. For example, 1,014 of the 1,300 students at Lake Region State College are connected with the base; 636 of the 750 students at Park University are connected with the base; and 211 of the 287 students at Embry-Riddle Aeronautical University are connected with the base. The timing of the drawdown of current jobs on the base and the influx of new jobs to support the UAV mission, along with the potential for offering new areas of study, will be critical for most of these schools.

If one-third to one-half of these 2,000 plus students were eliminated, it would mean a loss of 670 to 1,000 students, and some of the over $1 million in Air Force Tuition Assistance and other funding associated with them.

The 2006-2007 school year tuition rates per student are provided below as a partial indicator of revenue per student. For example, if Park University loses one military student who is taking a 3-credit hour class at $166 per credit hour, it will lose $498 in tuition, plus additional

payments for such things as lab fees, textbooks, and supplies, which depend on the course. These rates do not reflect federal and state funding which the public schools receive.

Lake Region State College
- $175 per credit hour for online learning.
- $142 per credit hour for classes on both the Devil's Lake campus and on the base.
- $2,550 full-time tuition for the academic year on the Devil's Lake campus.

Park University
- $166 per credit hour for active duty military personnel.
- $240 per credit hour for non-military students.
- $16,025 per year for the nursing program on campus.

Embry-Riddle Aeronautical University
- $184 to $865 per credit hour for undergraduate courses.
- $307 to $895 per credit hour for graduate courses, depending on the course.

University of Mary
- $350 per credit hour for undergraduate courses.
- $445 per credit hour for graduate courses.
- $375 per credit for online courses.
- $5,550 per semester for full-time undergraduate courses.
- $5,950 per semester for full-time physical therapy and occupational therapy courses.

Northland Community and Technical College
- $139 per credit hour.
- $2,426 per semester for full time.

Central Michigan University
- $286 per credit hour for undergraduate courses.
- $373 per credit hour for graduate courses.
- $250 per credit hour for active duty military personnel.

University of North Dakota (North Dakota residents)
- $303.43 per credit hour.
- $5,792 for the academic year, full time, for undergraduate courses.
- $6,154 for the academic year, full time, for graduate courses.

IMPACT ON SOCIAL SERVICES

Grand Forks AFB is a small city with over 5,000 people associated with military members (that includes both airmen and their dependents) and over 1,000 civil service and contractor personnel who work on base. The base provides for many of the social service needs of the military personnel and their family members. Because of this, the team believes a reduction of 1,000 to 1,500 military positions may have little impact on local community social services and special needs facilities.

However, people associated with the base are also contributors to local churches, social service, and non-profit organizations and the base itself plays a large role in the community.

Table 13: Estimated Annual Contributions to Religious and Social Advocacy Organizations That Will Be Lost

Types of Organizations	If 1,000 Grand Forks AFB Positions Are Lost	If 1,500 Grand Forks AFB Positions Are Lost
Religious organizations	(78,637)	(114,298)
Grant making and giving and social advocacy organizations	(44,619)	(64,853)
Total	**(123,256)**	**(179,151)**

The report provides details of the various analyses presented in this Executive Summary based on the loss of about one-third of the military jobs on base. The estimates of the economic impact of the Grand Forks AFB BRAC 2005 realignment on the five-county region are based on the most current data available for each of the topics discussed. This study presents a picture of the economic effects of currently-projected realignment actions through 2011. However, the realignment of Grand Forks AFB over the next 5 years will not be a static process. AF plans are evolving, and it may make changes in the timing and scope of the realignment. These changes may significantly alter the estimated impacts described in this report. Moreover, the report does not consider the impact of any other developments in the five-county region.

OTHER FACTORS AND THE FUTURE

When a regional economic driver is changed, the future becomes filled with uncertainties and opportunities. The future of GFAFB and the five-county region is definitely in this situation. There are numerous current opportunities that could impact the region's economic future. They include:

- The expansion of GFAFB manpower levels to support the UAV mission past 2011.
- The size and timing of manpower levels and infrastructure to support the Global Hawk mission.

- The potential of GFAFB being assigned the next generation of tankers.
- The community's work on economic diversification centering on aerospace, energy, broadband connectivity and life sciences.
- The University of North Dakota's John D. Odegard School of Aerospace Sciences' work with the FAA to develop UAS cold weather testing, research and education.

SECTION 1
INTRODUCTION

The County of Grand Forks and the Grand Forks Region Base Realignment Impact Committee (BRIC) requested this Economic Impact Study of the Realignment of Grand Forks, AFB. The Air Force estimates that the base will lose about 1,000 of its current 2,450 military positions by 2011 as a result of the BRAC 2005 Commission's decision to realign the base.

This section of the report presents information on the parameters of this study; the Grand Forks Air Force Base itself; the BRAC 2005 recommendation of the Defense Base Closure and Realignment Commission to realign the base; current and estimated military and civilian positions at the base; and the new Unmanned Aerial Vehicles that the Air Force plans to assign to the base.

To estimate the impact of the BRAC 2005 decision to move the KC-135 tanker fleet out of Grand Forks Air Force Base and to move an Unmanned Aerial Vehicle mission to the base, the project team interviewed Department of Defense, Department of the Air Force, and Grand Forks Air Force Base officials. Team members also interviewed a professor at the University of North Dakota, School of Aerospace Science, regarding the broader potential for the school's role in developing and testing Unmanned Aerial Vehicles. In addition, team members reviewed BRAC 2005 documents produced by the Department of Defense, Department of the Air Force, and the Defense Base Closure and Realignment Commission. Finally, the team used data provided by the Grand Forks Air Force Base, Public Affairs Office, as the baseline for military and civilian positions and payrolls as of September 30, 2005. Additional information was obtained through a compilation of previously collected data, as well as online surveys, interviews, and original research.

ECONOMIC IMPACT STUDY OF THE REALIGNMENT OF GRAND FORKS AIR FORCE BASE[2]

Grand Forks is the third largest city in North Dakota and a regional center for trade, healthcare, education, and entertainment, and is home to the University of North Dakota and the Grand Forks Air Force Base (Grand Forks AFB). The 2005 Base Realignment and Closure (BRAC) Commission recommended that Grand Forks Air Force Base be realigned; President Bush accepted this recommendation and it has become law. Many implementation decisions are yet to be finalized, and the region is working toward supporting and expanding emerging missions. In order to represent the region's best interests, this study was undertaken to analyze the potential impacts of the realignment and to aid in the development of appropriate strategies

[2] Request for Proposals to County of Grand Forks, North Dakota (November 1, 2005).

to both minimize negative aspects and maximize the potential for regional growth and diversification.

To this end, the County of Grand Forks, in conjunction with the local BRAC working group (represented by Rick Duquette, City of Grand Forks Administrative Coordinator; Ed Nierode, Grand Forks County Director of Administration; Klaus Thiessen, Grand Forks Region Economic Development Corporation President and CEO) contracted with the NAHB Research Center/Concourse Group team to collect, research, and analyze relevant economic and demographic data, report on findings, and work with local/regional entities to disseminate the findings. The contract utilizes funds provided through a U.S. Department of Labor grant to the State of North Dakota.

The Grand Forks Region Economic Development Corporation (EDC) has a regional economic diversification plan in place. Products developed by this contract may be used to refine and/or broaden regional strategies; develop action plans for selected/highly impacted communities; assist in policy development aimed at mitigating BRAC-related negative impacts; and preparing for/growing the opportunities associated with an anticipated Unmanned Aerial Vehicle (UAV) mission.

The 2000 Census population for the Grand Forks, North Dakota-Minnesota Metropolitan Statistical Area was 97,478. The MSA includes the counties of Grand Forks (ND) and Polk (MN). The population breakdown by counties that comprise most military and civilian housing is represented in Table 14.

Table 14: 2000 Census Population for Five Counties near Grand Forks Air Force Base

County	Population
Grand Forks (ND)	66,109
Polk (MN)	31,369
Traill (ND)	8,477
Walsh (ND)	12,389
Nelson (ND)	3,715
Total	**122,059**

STUDY DESIGN

The project team's economic impact study design includes two major components—data collection and analysis. The analysis centers around the use of input-output analysis to assess the impacts of BRAC and other potential actions mentioned in the Request for Proposals. The project team used IMPLAN Professional software to assess the impact of changes to the Grand

Forks-area economy by modeling interrelated input and output flows to produce estimates of realignment impacts in terms of labor, economic activity, and payment of taxes. The software package utilized detailed data on the makeup of industry by classification codes, number of households, and institutions in the five-county area economy in an analysis down to the county level. Spreadsheet-based analysis extended the results to the city level. The model was augmented through data collection of information specific to the Grand Forks area.

The data collection provided input for the IMPLAN models to allow for extension of the results beyond the IMPLAN software using spreadsheet analysis, and to provide background information. Grand Forks AFB provided information about where airmen and civilian employees live, along with detailed data on the value and nature of contracts in recent years. Three surveys were also conducted to obtain information about airmen, civilian employees, and local employers. The surveys solicited information about residence, income, spending patterns, school usage, and charitable activities. Various other data points about the local school system, impact aid, and utilities were also acquired from local and Internet sources.

The survey and Grand Forks AFB-supplied data concerning income and residences provided a framework for modeling the localized impact of likely airmen and civilian cutbacks resulting from the BRAC realignment. Project team members analyzed contractor data to identify the locations of firms that draw on local resources and the magnitude of the annual expenditures involved with those firms. This data was used to develop IMPLAN models for the five–county area, the two-county Grand Forks MSA area, and the five counties separately. ZIP Code data on the residences of airmen and civilian workers and the location of contractor firms were used to extend the models' county-level findings to allow an assessment of the possible economic impact at local levels. Survey data on spending patterns provided background for examination of these potential local impacts.

HISTORY OF GRAND FORKS AIR FORCE BASE[3]

In 1954, the Department of Defense selected Grand Forks as the site for an Air Defense Command base. Sixty-five thousand dollars was used to purchase a 5,400-acre tract of land 15 miles west of the city of Grand Forks. Construction of the base began in February 1956.[4] The same month, the Air Force announced it would build up Grand Forks AFB to support Strategic Air Command bombers and tankers, and the first KC-135A tankers were stationed at Grand Forks. Over time, the Grand Forks AFB mission changed to meet Air Force operational needs and base requirements. For example, the nation's first Minuteman II intercontinental ballistic missile (ICBM) wing became fully operational at Grand Forks AFB in 1966.

[3] *History of Grand Forks Air Force Base and the 319th Air Refueling Wing*, Office of History, 319th Air Refueling Wing, (Grand Forks AFB, ND: As of December 31, 2003).
[4] See http://www.globalsecurity.org/military/facility/grand-forks.htm for a more detailed history of the base.

At its peak, about 10,000 people were assigned to the base, but that number has been declining steadily over the years. Six years after the end of the Cold War, the 1995 Defense Base Closure and Realignment Commission recommended that the missile wing at the base be deactivated.[5] At the time, the Department of Defense estimated that this recommendation could result in a potential reduction of 2,113 jobs (1,625 military and civilian direct jobs on base and 488 related jobs in the community) over the 1996-to-2001 period in the Grand Forks County, ND economic area. This reduction represented 4.7 percent of the area's employment at the time.[6]

With the most recent round of base closures and realignments announced in 2005, the Department of Defense recommended further realignment of the base's mission, and the Base Closure and Realignment Commission concurred. The current realignment relocates the KC-135 tankers to other locations, and requires modification of the base infrastructure to accommodate the emerging Unmanned Aerial Vehicle (UAV) mission. The current Air Force plans are to utilize the base as an operating location for UAV Predator (MQ-1) and Global Hawk (RQ-4) aircraft.

BRAC 2005 RECOMMENDATIONS[7]

While the Secretary of Defense's BRAC 2005 recommendation realigned Grand Forks AFB by moving the current aircraft, KC-135 tankers, to other bases, the base was not recommended for closure, and is going to be retained as an active installation. The Secretary's justification noted that military judgment argued for a continued strategic presence in the north central United States, and Grand Forks is one of the last remaining active military installations in the region. Military judgment also indicated the potential for emerging missions in homeland defense, particularly for border states.

The Base Closure Commission's analysis of the realignment recommendation supported the conclusion that Grand Forks AFB has ample capacity and conditions for current and future flying missions, to include the Department of Defense's intent to bed down a family of UAVs. The Commission's final recommendation directed the Air Force to modify the infrastructure at Grand Forks AFB to accommodate the emerging UAV mission.

The Commission also found that the Secretary of Defense's overall intent and concept of realigning KC-135s out of Grand Forks AFB was supportable. The Commission found reason to maintain a limited KC-135 presence on the base during the period of the mission realignment to facilitate an effective and cost-efficient mission conversion pending the start of UAV operations.

[5] Defense Base Closure and Realignment Commission Report to the President, July 1, 1995, pages 1-101 to 1-103.
[6] Department of Defense Base Closure and Realignment Report, March 1995, page 5-124.
[7] The Commission's complete recommendations for Grand Forks Air Force Base and Hector International Airport Air Guard Station, Fargo, ND, are in Appendix 4.

The Commission's recommendations for Grand Forks AFB included the following:

- Modify infrastructure to accommodate the emerging UAV mission.
- Maintain eight KC-135 tanker aircraft to facilitate an efficient and cost-effective commencement of UAV operations. The Secretary will keep the tankers in place until the UAVs are operational at Grand Forks, but not later than Dec 31, 2010 unless otherwise required by the Department of Defense for national emergencies.
- Remain an active Air Force installation with a new active-duty Air National Guard association unit (Fargo) created in anticipation of emerging missions at Grand Forks.

In a related recommendation, the Commission recommended that Hector International Airport Air National Guard Station, Fargo, ND, also be realigned.[8] The 119th Fighter Wing (ANG) will be re-designated as an Unmanned Aerial Vehicle wing. The Armed Forces Reserve Center planned for construction on Hector Field will be expanded to include sufficient facilities to accommodate the UAV ground control and intelligence analysis functions and expeditionary combat support elements of the wing. The Air Force will retain, adapt, or construct appropriate facilities on Grand Forks AFB to launch, recover, maintain, and support the UAVs assigned to the 119th Wing Air National Guard in Fargo.

While the Grand Forks community contended that DoD underestimated Grand Forks' value as a tanker base, it welcomed the future UAV mission recommended by the Secretary and the Commission. The community noted its strong relationship with the base, even more so since the 1997 flood, and cited its selection twice for the Abilene Trophy for most outstanding community support within the Air Mobility Command.

BRAC COMMISSION'S ESTIMATE OF ECONOMIC IMPACT ON GRAND FORKS COMMUNITY

As noted previously, the 2005 BRAC realignment recommendation created significant reductions in the number of personnel at Grand Forks AFB.[9] Based on economic impact statistics as of September 30, 2003, the Commission estimated that the Grand Forks AFB realignment recommendation could result in a potential reduction of 4,929 jobs (2,645 direct jobs and 2,284 indirect jobs) between 2006 and 2011 in the Grand Forks, ND-MN, Metropolitan Statistical Area. The Department of Defense estimated that this reduction represented 7.4 percent of the economic area's employment in 2005.

[8] *Defense Base Closure and Realignment Commission Report to the President*, September 8, 2005, Volume I, Recommendation #105 (Air Force 38), "Hector International Airport Air Guard Station, ND" pages 153-154.
[9] *Defense Base Closure and Realignment Commission Report to the President*, September 8, 2005, Volume I, Recommendation #104 (Air Force 37), "Grand Forks Air Force Base, ND" pages 151-153.

ESTIMATED REDUCTION IN MILITARY AND CIVILIAN POSITIONS

The Commission's recommendations became law in November 2005, and these recommendations must be implemented by September 2011. However, other reductions in base positions, which impact the BRAC personnel reductions, have occurred as well. Prior to April 2006, the Air Force assigned 12 KC-135s to a squadron as Primary Assigned Aircraft (PAAs), and four squadrons to the wing at Grand Forks AFB, for a total of 48 aircraft. In April 2006, independent of the BRAC recommendation, the Air Force decreased the number of KC-135 aircraft assigned to a squadron from 12 to nine. This structure revision decreased the total number of KC-135 tanker aircraft assigned to Grand Forks AFB squadrons from 48 to 36.

As part of the BRAC recommendation, the Air Force will relocate the remaining 36 KC-135 tanker aircraft from Grand Forks AFB to other locations by 2011. While some reductions will occur in 2007, most of the positions associated with this action will be transferred or eliminated in 2009 and 2011.[10] The Air Force currently estimates that, as the mission of the base changes over the next five years, over 800 of the current military positions on Grand Forks AFB will be eliminated or moved to another installation. However, the new Predator mission will add about 170 new jobs. In total, the base will have about 1,860 authorized military and appropriated-fund civilian positions by September 2011, down from the current 2,835.[11] An undetermined number of the 700 additional non-appropriated fund contract civilians and private business employees on base will be lost.

BASE EMPLOYMENT AS OF SEPTEMBER 30, 2005

Table 15 provides a further breakdown of the baseline jobs used to consider the impact of the projected loss of 1,000 of the jobs on base. The table shows the payroll associated with many of those jobs. The table also shows the 700 non-appropriated fund civilian contractor positions.

[10] Air Force Cost of Base Realignment Actions (COBRA) data as of September 1, 2005. Report created September 2, 2005. COBRA Personnel Summary Report (COBRA v6.10 – Page 3).
[11] Air Force BRAC Office, personnel requirements for Grand Forks AFB, June 14, 2006.

Table 15: Authorized Positions as of September 30, 2005
by Classification, Housing Location, and Annual Payroll[12]

Classification	Living On Base	Living Off Base	Civilians	Total	Annual Payroll
1. Appropriated Fund Military Active Duty	1,541	909		2,450	$98.2 Million
2. Active Duty Military Family Members	2,045	745		2,790	
3. Appropriated Fund Civilians					
▪ General Schedule			284		
▪ Federal Wage Board			99		
▪ Other (Audit Agency/OSI)			2		
Total				385	$22.8 Million
4. Non-Appropriated Fund Contract Civilian and Private Business					
▪ Civilian NAF			215		$3.5 Million
▪ Civilian BX			54		$.7 Million
▪ Civilian DeCA (Commissary)[13]			37		$1.3 Million
▪ Contract Civilians			221		Note[14]
▪ Contract Civilians-Other					
o Envision			5		
o Grand Forks School District			142		
o C/FM LAN Office			3		
Private Businesses-By Type					$.4 Million
▪ Credit Union			15		
▪ Armed Forces Bank			8		
Total				700	
Total Personnel				**6,325**	

OPPORTUNITIES FOR GRAND FORKS RELATED TO UNMANNED AIRCRAFT SYSTEMS

The current generation of Unmanned Aircraft Systems (UAS) has been in development for Defense applications since the 1980s. As of February 2006, the Department of Defense had more than 3,000 unmanned aircraft, about 2,000 of which are supporting ongoing operations in Iraq. As a point of comparison, DoD had less than 50 unmanned aircraft in 2000.[15] Over 88 percent of the unmanned aircraft currently in the inventory are small, weigh less than 10

[12] *Economic Impact Analysis, Fiscal Year 2005*, page 3-4.
[13] DeCA employees are government Civil Service /Wage Grade employees, but are included under non-appropriated fund employees in the Air Force Economic Analysis.
[14] Payroll costs for contractors are included in the overall cost of their contracts and cannot be broken out by payroll alone.
[15] The total number represents the number of unmanned aircraft, rather than unmanned aircraft systems, and includes test and training assets.

pounds, have an airspeed of less than 100 knots, and are launched by hand or by bungee.[16] Others, such as the Air Force RQ-4 Global Hawk, are large unmanned aircraft with a range of over 12,000 miles at speeds over 300 miles an hour, and perform missions similar to Low Earth Orbit (LEO) satellites.

DoD's 2006 Quadrennial Defense Review validates the importance of unmanned systems and establishes plans to significantly expand investment in unmanned systems and their use in military operations over the next several years. Total UAS funding is over $2 billion in fiscal year 2006, and is projected to grow to over $3 billion in 2011. DoD plans to nearly double unmanned aircraft coverage by accelerating the acquisition of the Air Force's Predator and Global Hawk systems.[17]

The University of North Dakota, School of Aerospace Sciences, is in an ideal position to promote private sector UAV-industry job growth. Possibilities include specialized training in UAV studies, providing UAV technical information, and developing a working relationship with the Air Force and its UAV contractors.

For example, The John D. Odegard School of Aerospace Sciences is developing, through the DoD UAV Center of Excellence, a ground-based, ganged phased array radar system (GPARS). With such a system, the Air Force would be able to launch and recover their UASs from Grand Forks AFB without the need to "chase" them with manned aircraft.

The John D. Odegard School is also prepared to work with the Air Force in identifying solutions to airspace issues and human factors related issues related to the long-term operation of UAVs.

A discussion of the types of jobs and the skills needed to support the UAS mission can be found at the end of Section 5, Impact on Schools. The Grand Forks Region has a number of education and training institutions that are preparing to train people for jobs associated with the UAV mission at Grand Forks Air Force Base and for different jobs in the community. Appendix 8, Local Colleges and Universities, provides more information about these institutions.

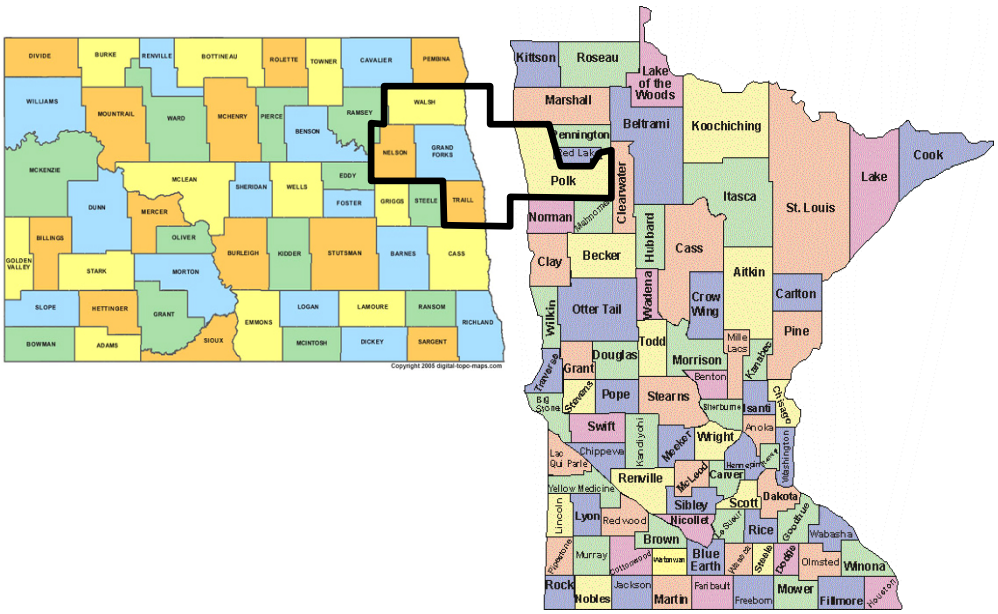
[16] GAO, *Unmanned Aircraft Systems: Improved Planning and Acquisition Strategies Can Help Address Operational Challenges*, GAO-06-610T (Washington, D.C.: Apr 6, 2006). Pages 5-6.
[17] Neall, Ray. Air Force BRAC Program Officer for Grand Forks Air Force Base. Interview with Bob Meyer, June 16, 2006. The number of military positions includes 170 positions for the new Predator mission. (703) 697-4577.

SECTION 2
ECONOMIC BACKGROUND AND ANTICIPATED BRAC REDUCTIONS IN EMPLOYMENT AND CONTRACTING

INTRODUCTION

This section sets the background for the BRAC realignment. It provides the reader with information concerning: the local area and the makeup of its economy; Grand Forks AFB, its airmen, civilian employees and contractors; and the estimated reductions that are likely to occur as a part of BRAC realignment.

DEMOGRAPHICS



The study area for this analysis consists of the five-county area surrounding Grand Forks Air Force Base. The five counties are Grand Forks County, Nelson County, Traill County, and Walsh County in North Dakota, and Polk County in Minnesota. According to 2000 Census data, together they form an area that measures 6,534 square miles in eastern North Dakota and western Minnesota. The population of the five-county area was 120,425 in 2005. The population in Grand Forks County represents 55 percent of that total and, together with Polk County, accounts for 80 percent of the total five-county population. Nelson is the least densely settled county, with only 3 people per square mile. Walsh and Traill are more densely populated with 9 and 10 people per square mile respectively. Grand Forks and Polk County reflect a less rural population with 46 and 16 people per square mile, respectively.

Project staff examined the results of a survey conducted as part of a 2004 labor study[18] of the Grand Forks area and compared it to national level Census[19] data. The comparison indicates

[18] Grand Forks Community and the Surrounding Area – Labor Availability Study, A collaboration of North Dakota Department of Commerce, University of North Dakota – Social Science Research Institute and Job Service North Dakota.
[19] http://www.census.gov/prod/2003pubs/c2kbr-25.pdf.

that the workforce/occupational structure of the area has a higher proportion of Managerial, Professional and Related Occupations than the U.S. in general. A similar comparison of median salaries indicates that local wages are lower than the national median.[20] At the same time, it is a well educated labor force. As the study points out, over 35 percent of the available labor force are graduates of post-secondary programs. Based on these observations, the area appears to have a well-educated labor pool of appropriate occupations with attractive wage rates, so that the area is well positioned for opportunities after BRAC.

Table 16: Comparison of Composition of Occupation

Occupation Of Those Employed	Grand Forks Area	U.S.
Occupational Group	Share	
Managerial, Professional and Related Occupations	41.1%	33.6%
Service Occupations	12.2%	14.9%
Sales and Office Occupations	17.5%	26.7%
Farming and Related Occupations	4.6%	0.7%
Construction and Extraction and Repair	9.5%	9.4%
Production, Transportation and Material Moving	9.6%	14.6%
Military and Other Occupations	5.5%	N/A
Total	**100%**	**100%**

Table 17: Comparison of Wages by Occupation

Occupation Of Those Employed	Grand Forks Area	U.S.
Occupational Group	Median Wage	
Managerial, Professional and Related Occupations	$14.00	$21.39
Service Occupations	$9.00	$10.45
Sales and Office Occupations	$10.28	$13.78
Farming and Related Occupations	$10.00	$9.95
Construction and Extraction and Repair	$12.75	$15.92
Production, Transportation and Material Moving	$11.00	$14.33
Military and Other Occupations	$10.00	N/A

[20] Please note that the U.S. estimates are based on year 2000 annual median salaries, assuming full-time 40 hours per week employment.

Table 18: Educational Attainment

Educational Attainment Of Available Labor Force	Grand Forks Area
Educational Level	Share
Below HS Diploma or GED	8.8%
HS Diploma or GED	27.0%
Some College/Vo-Tech	28.5%
Vo-Tech Graduate	9.4%
College Degree	18.2%
Advanced Degree	8.1%
Total	**100.0%**

LOCAL ECONOMY

Based on IMPLAN 2003 model data, Table 19 presents an economic overview of the five-county area as a whole. IMPLAN software produces descriptions of market areas and estimates of the economic impact of changes in the market area in terms of several economic measures that may need explanation. In order for the reader to better understand the data in Table 19, a brief explanation of the economic measures used follows.

The most basic measures are Employee Compensation, Proprietor Income, Other Property Income, and Indirect Business Tax. Employee Compensation is the payroll costs, including benefits, of each industry located in the market area. It includes the wages, salaries and benefits of workers paid by employers. Proprietor Income is the payments received by the self-employed as income. Other Property Income includes rents paid on properties, royalties on contracts and dividends paid by corporations, as well as profits earned by corporations. Indirect Business Taxes include excise taxes, property taxes, fees, licenses, and sales tax paid by businesses. They do not include taxes on profits or income.

Employee Compensation, Proprietor Income, Other Property Income, and Indirect Business Tax, taken together as a group, are termed Value Added. Value Added is a measure of the value created by the economic activity in the market area. This valuation is reflected in the IMPLAN breakdown of the amount that must be paid for the factors needed to add that value (labor, including self-employed, properties, dividends for investors, royalties required under existing contracts, profits to the corporation and taxes needed to conduct business).

The most comprehensive measure produced by IMPLAN is "Industry Output." It is composed mainly of Value Added, the cost of inputs to production (for example, iron ore), and other taxes.

The other measure produced by IMPLAN is Employment. It is an expression of the number of jobs, by industry, in the market under analysis.

Table 19 indicates that the Total Industry Output of the five-county area in 2003 was valued at a little over $7 billion. Of that amount, internal resources accounted for almost $3.8 billion, as shown in the Total Value Added column. Not shown in the table is that imports of industrial inputs from outside the area accounted for the other $3.2 million of Industry Output. Employee Compensation ($2.2 million) accounted for 59 percent of Total Value Added. Other Property Income ($1.0 million) accounted for another 25 percent. Proprietor Income and Indirect Business Taxes accounted for the remaining 16 percent of Value Added. Employment is estimated to be 83,491.4 jobs. The decimal place is a result of the IMPLAN computations, and can be taken as a reflection of the presence of partial work weeks or part-time labor.

The Manufacturing Sector accounted for the largest share of the area's output at $1.5 billion; however, it contributed only $350 million in terms of Value Added. Next largest in terms of Industry Output is Government & Non-NAICS at $1.1 billion. Its Value Added component was about $1.0 billion, a much larger proportionate share than that found in the Manufacturing Sector. These differences between the size of Industry Output and the resulting size of Value Added serve to illustrate an important concept. A given industry may be large in terms of Industry Output, but if it contributes little to Value Added, it may be less important to the local market than one with a somewhat smaller Industry Output but a proportionately larger Value Added share. Instead, much of the value is actually flowing out of the area to pay for importing of raw inputs. Thus Value Added is a more reliable measure of local economic activity. Given that fact, Value Added will be used throughout this report in lieu of Industry Output to express the value of local market economic activity.

Returning to Table 19, the five largest Industry Sectors, in descending Value Added order, are: Government & Non-NAICS; Agriculture, Forestry, Fishing & Hunting; Health & Social Services; Manufacturing; and Retail Trade. Together they account for 2/3 of the total Value Added for the five-county area.

In terms of the number of jobs provided by sector, the Government & Non-NAICS category ranked first, followed by: Agriculture, Forestry, Fishing, & Hunting; Health & Social Services; Retail Trade; and Accommodations & Food Services. Manufacturing ranked sixth. Differences between this ranking and that for Value Added can be attributed to variations in the level of compensation paid employees or self-proprietors and income earned by "properties" within each Sector.

It should be noted that IMPLAN-based estimates of Employment, Industry Output, Value Added and its components can be noticeably larger than estimates based on Bureau of Labor Statistics (BLS) data. BLS employment data is derived from responses to the Quarterly Census of

Employment and Wages, known as QCEW or ES202, and reflects only "covered workers," those reported by social insurance. IMPLAN data is based on Regional Economic Information System (REIS) data. REIS makes use of ES202 data and adds data on "uncovered workers" including some agricultural workers, railroad workers (that have a separate retirement plan), employees of religious organizations and of private elementary and secondary education, and non-covered domestic employment. Further, REIS adds self-employment from IRS data. Since labor is a part of Value Added and Value Added is a component of Total Output, IMPLAN-based estimates of those parameters are similarly increased.

Table 19: 2003 Five-County Economy

Industry	Industry Output*	Employment	Employee Compensation*	Proprietor Income*	Other Property Income*	Indirect Business Tax*	Total Value Added*
11 Ag, Forestry, Fishing, Hunting	$835.23	11,160	$81.43	$160.72	$181.53	$23.59	$447.28
21 Mining	$34.10	244	$9.03	$2.35	$9.01	$1.25	$21.64
22 Utilities	$128.18	259	$21.23	$6.14	$47.52	$13.96	$88.85
23 Construction	$355.29	3,642	$119.58	$20.22	$17.69	$1.91	$159.40
31-33 Manufacturing	$1,550.40	5,092	$196.96	$40.87	$103.58	$9.49	$350.89
42 Wholesale Trade	$273.45	2,757	$112.35	$4.23	$46.46	$44.95	$207.99
48-49 Transportation & Warehousing	$264.97	2,642	$94.68	$16.41	$35.37	$5.22	$151.68
44-45 Retail Trade	$429.20	9,467	$179.49	$16.74	$60.87	$63.09	$320.18
51 Information	$231.76	906	$32.44	$2.16	$30.53	$5.45	$70.58
52 Finance & Insurance	$269.42	2,107	$66.44	$7.68	$95.56	$4.08	$173.76
53 Real Estate & Rental	$82.42	728	$10.07	$6.65	$27.93	$7.15	$51.80
54 Professional–Scientific & Tech Services	$185.47	1,931	$65.68	$17.43	$20.51	$1.65	$105.27
55 Management of Companies	$16.43	139	$6.39	$0	$1.79	$0.14	$8.32
56 Administrative & Waste Services	$128.08	2,617	$32.21	$7.97	$9.66	$1.62	$51.47
61 Educational Services	$25.82	656	$10.03	$0.42	$0.23	$0.48	$11.16
62 Health & Social Services	$658.14	10,543	$313.13	$20.46	$36.77	$4.44	$374.79
71 Arts–Entertainment & Recreation	$23.39	668	$6.95	$1.75	$2.12	$1.26	$12.08
72 Accommodations & Food Services	$233.68	6,000	$64.96	$2.70	$19.99	$10.51	$98.16
81 Other Services	$195.96	3,850	$52.20	$15.31	$12.57	$7.91	$87.99
92 Government & Non-NAICS	$1,120.81	18,085	$770.14	$0	$194.27	$40.42	$1,004.84
Totals	**$7,042.21**	**83,491**	**$2,245.38**	**$350.20**	**$953.96**	**$248.55**	**$3,798.09**

* Millions of 2003 Dollars

Table 20 provides another view of the local industrial structure. The table presents the value of expenditures made by industries in the five-county area to other sectors and the value of receipts from those same sectors within the economy going to industry. As can be seen, compensation of employees, payments to entities outside the area but within the U.S. (domestic imports), and payments between industry for intermediate inputs within the area account for the majority of outlays (76 percent). Industry receipts for goods sold to other parts of the U.S. (domestic exports), purchases by households and purchases by industries within the area dominate industry receipts (75 percent).

Table 20: Five County Economy Sector Expenditures by Recipient and Receipts by Source

Category	Expenditures	Receipts
Industry Total	$1,365.19	$1,365.19
Employee Compensation	$2,245.38	$0.00
Proprietor Income	$350.20	$0.00
Other Property Income	$953.96	$0.00
Indirect Business Taxes	$248.55	$0.00
Households	$0.14	$1,743.79
Federal Government NonDefense	$0.27	$47.18
Federal Government Defense	$0.00	$320.35
Federal Government Investment	$0.00	$8.07
State/Local Govt NonEducation	$6.86	$159.49
State/Local Govt Education	$0.00	$394.39
State/Local Govt Investment	$0.00	$66.55
Enterprises (Corporations)	$0.00	$0.00
Capital	$0.00	$290.36
Inventory Additions/Deletions	$0.13	$6.68
Foreign Trade	$143.38	$314.66
Domestic Trade	$1,728.16	$2,325.50
Total	**$7,042.21**	**$7,042.21**

*Millions of 2003 Dollars

BRAC REALIGNMENT – THE STARTING POINT

Grand Forks AFB is an important part of the economy of the five-county area. BRAC 2005 is likely to reduce the size of the role that Grand Forks AFB plays through a reduction of: military personnel stationed at the base; civilian employees of the base; and procurement of services and materials through contracts with firms in the surrounding area and other transactions.

According to the 2005 Grand Forks Air Force Base Economic Impact Report, 2,450 active-duty military are assigned to the base—909 airmen live off base and 1,541 reside on base. They are accompanied by 2,790 family members. The report also indicates that the base directly

employs around 600 federal employees, including both appropriated and non-appropriated fund positions. In 2005, the salaries of these employees accounted for $26.2 million. Another 485 civilians, working for Defense Commissary Agency (DeCA), the Base Exchange, and private businesses, also work on Grand Forks AFB. The base is supported by a large variety of vendors and contractors. According to the Grand Forks AFB report, expenditures for construction, services, materials, equipment, and supplies accounted for $193 million dollars.

The scope of the BRAC-related reduction as it relates to the local economy, and the timing of it, is yet to be defined. Based on current information, it was assumed that, with the anticipated addition of a UAV mission, the base will experience a 34.4 percent reduction in the number of airmen stationed at Grand Forks AFB by the year 2011. Specific information on the reductions of civilian employees and contractual procurements was not available, so project staff assumed that the same 34.4 percent reduction will occur among the civilian employees and in contract procurements. Less is known about the scheduling of specific reductions and additions. Given this fact, the research has modeled the change as if it occurs in a single year (2011).

Not all of the reductions of personnel and contracted procurements will have an impact on the five-county area. Some airmen and civilian employees reside outside the five-county area. Likewise, some of the contracted procurements are with firms located elsewhere. Project staff conducted a variety of information gathering activities to develop the more detailed information concerning airmen, civilian employees and contractor activity needed for the projection of losses for each of the counties, both separately and combined, and to extend the projections to major cities within the counties. A brief discussion of the data gathering, associated processing and analysis and the implications for BRAC associated reductions follows. A more detailed explanation can be found in Appendix 1.

USE OF SURVEY AND OTHER DATA REGARDING AIRMEN, CIVILIAN EMPLOYEES AND CONTRACT PROCUREMENTS

Project staff, with input from BRIC and with the cooperation of Grand Forks AFB, developed and conducted surveys of both active-duty members of the Air Force and civilian employees of Grand Forks AFB. The responses served as a source of information for various facets of this research project. Response data concerning location of local residences, including on-base/off-base status, was used in conjunction with rank and income from part-time employment and incomes from spouse and dependent employment. This data was combined with limited ZIP Code listings of airmen and appropriated-fund civilian employees supplied by the base, to develop projections of where the population of airmen and civilian employees reside (Counties) and their associated household incomes. This information served as the basis of the data used in the IMPLAN analysis of airmen and civilian employee reductions. The residence data indicated that a 34.4 percent share would translate into a loss of 840 Air Force military positions and 200 civilian positions from the five-county area.

Projections of the value and nature of annual expenditures by Grand Forks AFB on contractor services and goods were based primarily on two sources – detailed annual vendor records for FY2001 through FY2005 acquired from Grand Forks AFB and summary contractor data contained in annual editions of the Grand Forks AFB Economic Impact Reports for the years 2003 through 2005. The Economic Impact Reports provided summary-level, comprehensive accounting of expenditures on contracted materials and services provided by private sector firms for Grand Forks AFB. The data was presented at a somewhat summary level so that no location information was associated with any of the categorical data entries. The vendor data contained annual and fairly detailed firm-by-firm records related to goods and services provided by vendors and the associated cost. The records also contained address and industry related information for each firm. Unfortunately, it did not provide comprehensive recounts of procurement costs as in the Economic Impact Report data. Given this situation, project staff blended data from both sources to develop industry sector estimates of the typical annual expenditures on contractor services and goods. A brief summary of the process follows, along with the results. Appendix 1 provides a more in-depth description of the process.

Members of the project team began the process by analyzing the vendor records for FY2001 through FY2005. Total expenditures were: $37.3, $41.6, $66.5, $63.8, and $36.6 million, respectively. The address data allowed identification of the firms located in the five-county area. Further inquires to BRIC and elsewhere resulted in the identification of other vendors that either have a local office or that draw on the local labor force. The next phase entailed classifying each of the identified firms into IMPLAN categories for entry into the Grand Forks AFB models. This entailed a multi-step approach. Once all records were coded with an IMPLAN Code, the vendor-level expenditure data for each year FY2001 – FY2005 was consolidated by IMPLAN Code, adjusted to eliminate unusual expenditures and inflated to 2006 dollars to provide a common basis for computation of averages. The average in 2006 dollars for firms in the five-county region was estimated to be $17.7 million. The 34.4 percent share came to about $6.1 million.

Next, project staff analyzed the summary contract data. The summary form of the information provided no means of either associating or differentiating these costs from specific cost items addressed in the vendor data or of identifying work associated with businesses in the five-county area. Project staff attempted to obtain further details with the base through the BRIC POC. While comprehensive detailed data was not available, Grand Forks AFB was able to provide some guidance on the applicability of the cost data and potential adjustments. For example, communication with the Grand Forks AFB resulted in the removal of unusual O&M costs not likely to repeat so that annual estimates were more representative. After making this adjustment and inflating the three years' contract costs entries to 2006 dollars, staff computed an average expenditure for the three year period. Next, project staff deducted an amount equivalent to average annual vendor costs to avoid double-counting.

Data that would aid in identifying the location of the firms reflected in the contract summary data was not available. As a consequence, project staff adopted a simplifying assumption. The assumption is that, based on vendor data experience, the proportion of contractor expenditures going to firms in the five-county area is estimated to be approximately 45 percent. Project staff made the appropriate adjustments to exclude out of area costs. This yielded a projection of $22 million dollars in contractor expenditures within the five-country area. 34.4 percent of this amount comes to about $7.8 million. This amount was assumed to be distributed similarly to the vendor data: 98.5 percent of the costs to Grand Forks County firms and 1.5 percent to firms in Polk County.

Combining this amount with the $6.1 million vendor expenditures yields $13.9 million. This is the average amount of contractor expenditures projected to be lost as part of BRAC directly and the amount to be removed from the five-county model. In addition, project staff assembled data from the Economic Impact Reports regarding payrolls of Base Exchange and DeCA and on-base private businesses, such as the bank and the credit union. Project staff added 34.4 percent of these results and of school impact aid (estimated during original research conducted for the purposes of this project) to the contractor data. Combined with the vendor and contract data, these expenditures came to approximately $17.1 million. These costs, broken down by sector, are presented in Table 21.

Table 21: 34.4 Percent of Grand Forks AF Associated Expenditures in the 5 County Area Classified by NAICS Codes

NAICS Code	Industry	2006 Dollars Removed
11	Ag, Forestry, Fishing and Mining	$0
21	Mining	$0
22	Utilities	($4,492,362)
23	Construction	($3,692,351)
31-33	Manufacturing	($1,779)
42	Wholesale Trade	($1,933,192)
48-49	Transportation and Warehousing	($203,920)
44-45	Retail Trade	($229,760)
51	Information	($249)
52	Finance and Insurance	($137,380)
53	Real Estate and Rental	($940)
54	Professional and Scientific Tech Services	($984,696)
55	Management of Companies	$0
56	Administrative and Waste Services	($840,924)
61	Educational Services	$0
62	Health and Social Services	($22,663)
71	Arts, Entertainment, Recreation	($16)
72	Accommodations and Food Services	($13,789)
81	Other Services	($5,437)
92	Government & Non-NAICS	($4,522,562)
	Total	**($17,082,020)**

Together with the salaries of the airmen and appropriated and non-appropriated fund civilian employees, they form the amount of income removed from the local economy to simulate the BRAC realignment.

It is not known precisely which civilian positions will be eliminated due to BRAC. The jobs that base civilian employees hold provide various support services for the base mission, or the social and physical well being of the base population. Depending on what the job is, an employee is paid from either appropriated funds or non-appropriated funds. The civilian employees that are employed in direct support of the base mission (e.g., building maintenance, aircraft operations, finance and accounting, personnel, etc.) are paid from appropriated funds. Jobs that provide for the social and physical well being of the base population (e.g., aquatic center, Dakota Bowling Center, Outdoor Recreation, Golf Course, etc.) are paid from non-appropriated funds. In many cases, the required skills are the same. In other cases, however, the skills are unique to one type of funding or the other.

A summary sample of skills possessed by civilians working at Grand Forks AFB, both appropriated-fund employees and non-appropriated fund employees is as follows:[21]

Administrative

- Clerical
- IT administrative support
- Legal support services
- Secretarial
- Training specialists
- Records management
- Purchasing
- Budget and finance
- General office
- Human resources and personnel services
- Contracting services
- Medical support
- Security support services

Maintenance and Construction Services

- Aircraft maintenance technicians-electrical and mechanical
- Building maintenance mechanics
- Electricians
- Engineers-general, mechanical and electrical
- Structures/ HVAC mechanics
- Maintenance service workers
- Vehicle maintenance
- Quality control specialists
- Utility service maintenance and repair

Social and Physical Well Being

- Child development assistant
- Automotive mechanics-auto skills center
- Food service workers/cooks
- Custodial workers
- Laborers
- Motor vehicle operators
- Recreation assistants and lifeguards
- Library services
- Golf course operations and maintenance
- Veterinary clinic
- Bartenders and club managers

[21] A more complete list of appropriated-fund job skills is included in Appendix 4.

Table 22 presents county-level summary projections of the number of BRAC-related removal of airmen and civilians and cuts in the level of expenditures on contracts, on-base businesses and impact aid that resulted from the above analysis of survey, vendor, and other data. Project staff entered corresponding data into IMPLAN models of each of the five counties, the two-county model and the overall five-county model. Based on these inputs, the IMPLAN software package produced estimates of the impact on each of the economies. The resulting estimated impacts, along with county-to-city extensions of the results, are presented and discussed in the next section of this report.

Table 22: BRAC-Related Reductions of Airmen, Civilian Employees, and Contractor Expenditures, On-Base Business and Enterprise Payrolls and Impact Aid

County	Airmen & Civilians	Contracts, etc.*
Grand Forks	982	$15,615
Polk	34	$1,461
Nelson	5	$0
Traill	17	$4
Walsh	3	$1
Total	**1,041**	**$17,082**

* Thousands of 2006 Dollars

SECTION 3
ECONOMIC IMPACT

The analysis of the impact of BRAC related changes in staffing at Grand Forks Air Force Base presented in this report is based primarily on the results of input-output modeling of the economies of the five surrounding counties. Input-output modeling is a widely accepted economic tool used to simulate the impact of a change in demand on all constituent sectors of an economy. An input-output model is a numerical representation of the flows of goods and services between industries that occur during the process of responding to final demand from both within and outside the selected economy. Project team members used the widely accepted IMPLAN Professional Software package and IMPLAN-supplied data[22] for each of the five counties to construct a series of models that embodied their baseline economies. The ensuing research produced information on the impact at several geographical levels: the overall five-county level; the two-county MSA level; the individual county level; and some zip code areas. The impacts at the county and multi-county levels were modeled by removing the appropriate number of households representing the corresponding number of airmen and civilian employee families and appropriate level of industry to reflect the cancellation of Air Force contracts, as discussed in Section 2. Estimates of county-level impacts were extended to city-level projections using spreadsheet-analysis of IMPLAN-modeled results, combined with data from survey responses and other sources. More about the input-output modeling process and data-related issues can be found in Appendix 1.

Three Internet-based surveys were conducted in support of this research. One was a survey of active-duty military assigned to Grand Forks AFB; the second was a survey of civilian employees of Grand Forks AFB; and the third was a survey of employers in the Grand Forks AFB area. The airman and civilian employee surveys are discussed in Appendix 4 of this report. The employer survey is discussed later in this section to provide details of local business reactions. As discussed in Section 2, the airman and civilian employee survey results provided information that, together with other information provided by Grand Forks AFB, was used with IMPLAN data to develop geographical models of the potential losses caused by BRAC, adjusted for UAV additions.

In constructing the model, the project staff made use of the following assumptions and computations, based on an assumed 34.4 percent proportional net loss of airmen.

- The net number of airmen to be lost by 2011 is 843. 840 are lost from the five-county region.

[22] Minnesota IMPLAN Group, Inc., IMPLAN System (data and software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55082, www.IMPLAN.com.

- The number of civilian employees lost is 206. 200 are lost from the five-county region.
- $17.1 million dollars of contracting and other expenditure is estimated to be lost (in 2006 dollars) from the five-county region.

SUMMARY OF IMPACTS

Table 23 presents the estimated impact of BRAC, based on IMPLAN results. The total impact on Value Added is $38.4 million. This measure is used as the best measure of the value of economic activity as explained in Section 2. As can be seen, Grand Forks accounts for most of the impact, with $35.7 million. Polk accounts for the next largest amount, $2.0 million followed by Traill, Nelson and then Walsh. The impact at the five-county level accounts for almost one percent of the annual value of its economy. The impact on Grand Forks County accounts for 1.3 percent of Economic Activity (Value Added), while the impact on each of the other four counties is 0.3 percent or less. All monetary impacts in Section 3 are given in terms of year 2011 dollars unless otherwise noted.

Table 23: Impact of BRAC by Counties, 2 County MSA and 5 County Regions

County	5 County Region	2 County MSA	Grand Forks	Polk	Nelson	Traill	Walsh
Value Added	($38,357,019)	($37,735,827)	($35,693,168)	($2,042,659)	($215,879)	($291,059)	($114,254)
Percent of Economy Value Added	-0.9%	-1.0%	-1.3%	-0.2%	-0.3%	-0.1%	0.0%
Employment	(648.6)	(636.5)	(597.2)	(39.2)	(4.5)	(5.8)	(1.9)
Percent of Economy Employment	-0.8%	-0.9%	-1.2%	-0.2%	-0.2%	-0.1%	0.0%
State and Local Taxes	(4,071,331)	(3,989,083)	(3,698,281)	(290,803)	(34,321)	(41,040)	(6,887)
Percent of State and Local Taxes	-0.9%	-1.1%	-1.5%	-0.3%	-0.3%	-0.1%	0.0%

The impact on Employment follows the same pattern. Grand Forks accounts for most of the results, followed by Polk. The relative impact is somewhat less than on Value Added at 0.8 percent. The impact on Grand Forks accounts for 1.3 percent of jobs in the county. It should be noted that these losses do not include the direct reduction in airmen or appropriated or non-appropriated civilian employees.

The estimated impact on taxes is stated in terms of the anticipated State and Local Taxes. The pattern is much the same as Value Added or Employment.

The above impacts are based on a BRAC reduction scenario that assumes a 34.4 percent reduction in 2011. This simplified assumption was made necessary by the uncertainty surrounding the timing of the BRAC changes. While it is possible that reductions could get underway sooner, multiple timing alternatives are possible. Table 24 presents one possible time path for the changes: the 34.4 percent reduction occurs in equal segments between 2007 and 2011. This scenario would translate into a 6.88 percent reduction of the initial base numbers each year. As can be seen in the table, the size of the impact grows and the amount lost from the economy accumulates. Unless the positions and contracts are offset by further growth or build ups at Grand Forks AFB, the losses are permanent, culminating in the loss of $38.4 million in economic activity annually in 2001 and beyond.

Table 24: Possible Annual Impact on Value Added

Impact Level	2007	2008	2009	2010	2011
Grand Forks	($7,138,634)	($14,277,267)	($21,415,901)	($28,554,534)	($35,693,168)
Polk	($408,532)	($817,064)	($1,225,596)	($1,634,127)	($2,042,659)
Nelson	($43,176)	($86,352)	($129,527)	($172,703)	($215,879)
Traill	($58,212)	($116,424)	($174,636)	($232,847)	($291,059)
Walsh	($22,851)	($45,702)	($68,552)	($91,403)	($114,254)
2 County MSA	($7,547,165)	($15,094,331)	($22,641,496)	($30,188,662)	($37,735,827)
5 County Region	($7,671,404)	($15,342,808)	($23,014,211)	($30,685,615)	($38,357,019)

It should also be noted that the county level impacts are based on data concerning where airmen and civilians live and where contractors and other firms doing business with the base are located. Over the years, airmen and their families are transferred out and their replacements can choose to live elsewhere. Likewise, civilian employees can move, and local businesses can relocate. As this happens during the intervening period between the current year and 2011, the nature of the actual local impact of BRAC realignment could change.

The remainder of this section deals with the impact of BRAC in more detail. First, the impact on the five-county area as a whole is covered. Subsequently, data on the two-county area and

each of the five separate counties is presented. Impact data on selected industries is presented so that the nature of the impact can be understood. The impact is presented in terms of Value Added (local economic activity), Employment (in terms of the positions that the economy will no longer support and thus are likely lost) and Taxes.

Subsequently, the IMPLAN county level data is extended to estimates of the impact on selected major cities within each of the five counties. This extension was performed using government and survey data to develop proxies of the geographical dispersion of the impacts by industry sector.

Additional material in this section contains a discussion of the impact on utilities and air transportation. Finally, the results of a survey of local businesses are presented. This material serves to explore another aspect of the impact of BRAC – business expectations and their adjustments based on their expectations.

It should be noted that some table totals may not sum due to rounding.

FIVE-COUNTY REGION

Summary results of IMPLAN modeling on the impact at the five-county level are presented in Tables 25-27. This table presents data on direct, indirect, and induced impacts on the five-county area based on Value Added at an aggregated level. Value Added consists of the payments made by industry to workers, interest, profits, and indirect business taxes. Indirect business taxes are sales, excise and other taxes paid during normal operation of industry, not including taxes paid on net income.[23] Two subsequent tables present impacts on labor usage and taxes.

Based on the analysis, the impacts on Value Added and Employment are estimated to account for a little less than one percent of the five-county base amounts. The remainder of this section is devoted to exploring the details and nature of the impacts. Much of the information is presented in tabular form.

This analysis captures flows of goods and services between the five counties. As such, it captures a higher proportion of the impact than analyses examining the five counties separately. Performing the analysis on each county separately results in the loss of flows of goods and services among the five counties as domestic exports, precluding any subsequent multiplier effect.

[23] ® 1996 MIG, Inc. All rights reserved.

Table 25: Total Value Added Impact, Five-County Area

Industry	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fishing & Hunting	($82,777)	($52,539)	($36,488)	($171,804)
21 Mining	($3,129)	($163,468)	($13,597)	($180,193)
22 Utilities	($4,188,541)	($218,490)	($213,808)	($4,620,839)
23 Construction	($1,817,255)	($152,745)	($29,732)	($1,999,732)
31-33 Manufacturing	($120,870)	($184,399)	($64,517)	($369,785)
42 Wholesale Trade	($1,496,847)	($471,411)	($421,769)	($2,390,026)
48-49 Transportation & Warehousing	($295,791)	($519,001)	($129,972)	($944,763)
44-45 Retail Trade	($3,758,803)	($320,085)	($1,115,689)	($5,194,578)
51 Information	($264,142)	($276,071)	($132,927)	($673,139)
52 Finance & Insurance	($903,310)	($541,669)	($352,358)	($1,797,337)
53 Real Estate & Rental	($280,008)	($218,583)	($134,731)	($633,322)
54 Professional–Scientific & Tech	($839,028)	($682,904)	($162,815)	($1,684,748)
55 Management of Companies	$0	($46,496)	($11,129)	($57,625)
56 Administrative & Waste Services	($462,391)	($310,422)	($68,382)	($841,195)
61 Educational Services	($145,396)	($4,291)	($37,333)	($187,021)
62 Health & Social Services	($3,926,806)	($1,931)	($1,157,409)	($5,086,146)
71 Arts–Entertainment & Recreation	($150,406)	($12,904)	($42,353)	($205,664)
72 Accommodations & Food Services	($1,035,407)	($125,600)	($309,738)	($1,470,746)
81 Other Services	($755,637)	($142,162)	($233,038)	($1,130,837)
92 Government & Non-NAICS	($7,820,614)	($71,095)	($825,810)	($8,717,518)
Total	**($28,347,160)**	**($4,516,266)**	**($5,493,593)**	**($38,357,018)**

As Table 25 shows, a total impact of $38.4 million is projected, with the impact spread throughout the economy. The category - Government & Non-NAICS - accounts for the largest impact. Other major impacts are projected to occur in Utilities, Retail Trade, and Health & Human Services.

The impacts are presented in terms of direct, indirect, and induced. Direct impacts are the expenditures applied to the predictive model for impact analysis. Indirect impacts are additional impacts that reflect the change in industry purchasing from other industries in the analysis. Induced impacts are impacts that reflect changes in household expenditures. As the table shows, the direct impact is the most significant.

Table 26: Employment Impact, Five-County Area

Industry	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fishing & Hunting	(1.5)	(1.7)	(0.9)	(4.1)
21 Mining	0.0	(0.7)	(0.1)	(0.8)
22 Utilities	(10.3)	(0.5)	(0.5)	(11.4)
23 Construction	(37.9)	(3.0)	(0.6)	(41.4)
31-33 Manufacturing	(2.2)	(3.1)	(1.1)	(6.3)
42 Wholesale Trade	(16.5)	(5.2)	(4.6)	(26.3)
48-49 Transportation & Warehousing	(6.0)	(7.3)	(2.3)	(15.6)
44-45 Retail Trade	(89.4)	(7.5)	(26.3)	(123.3)
51 Information	(2.0)	(3.6)	(1.3)	(6.9)
52 Finance & Insurance	(9.1)	(6.5)	(3.9)	(19.6)
53 Real Estate & Rental	(3.5)	(2.2)	(1.6)	(7.3)
54 Professional–Scientific & Tech Services	(13.0)	(9.9)	(2.6)	(25.4)
55 Management of Companies	0.0	(0.6)	(0.1)	(0.7)
56 Administrative & Waste Services	(15.2)	(12.1)	(2.7)	(29.9)
61 Educational Services	(7.1)	(0.2)	(1.8)	(9.1)
62 Health & Social Services	(78.1)	(0.1)	(22.7)	(100.8)
71 Arts–Entertainment & Recreation	(6.7)	(1.0)	(2.0)	(9.6)
72 Accommodations & Food Services	(52.5)	(6.0)	(15.8)	(74.2)
81 Other Services	(31.6)	(4.3)	(9.3)	(45.2)
92 Government & Non-NAICS	(88.3)	(1.2)	(1.2)	(90.7)
Total	**(470.8)**	**(76.6)**	**(101.2)**	**(648.6)**

Table 26 reflects the change in the number of jobs supported by the local area. These positions lost are in addition to the military and civilian employee positions directly eliminated as part of the 34.4 percent total reduction. The direct jobs represent those that are lost as a direct result of the drop in demand by their households, plus those associated with a reduction in contractor spending. The induced jobs are the jobs lost as a result of a fall in other household spending. The indirect losses are those associated with a ripple through industries as demand for inputs to produce products falls off. About 650 jobs are projected to be impacted. As shown in the table, Retail Trade accounts for the largest loss, followed by Health and Social Services; Government & Non-NAICS; and Accommodations & Food Services.

Table 27: Tax Impact, Five-County Area

Govt. Level	Total	Employee Compensation	Proprietor Income	Household Expenditure	Enterprises (Corporations)	Indirect Business Taxes	Total
Federal Government Non-Defense	Corporate Profits Tax	$0	$0	$0	($821,553)	$0	($821,553)
	Indirect Bus Tax: Custom Duty	$0	$0	$0	$0	($82,981)	($82,981)
	Indirect Bus Tax: Excise Taxes	$0	$0	$0	$0	($264,841)	($264,841)
	Indirect Bus Tax: Fed NonTaxes	$0	$0	$0	$0	($89,960)	($89,960)
	Personal Tax: Estate and Gift Tax	$0	$0	$0	$0	$0	$0
	Personal Tax: Income Tax	$0	$0	($5,677,413)	$0	$0	($5,677,413)
	Personal Tax: NonTaxes (Fines- Fees)	$0	$0	$0	$0	$0	$0
	Social Ins Tax- Employee Contribution	($1,306,515)	($110,466)	$0	$0	$0	($1,416,981)
	Social Ins Tax- Employer Contribution	($1,350,717)	$0	$0	$0	$0	($1,350,717)
	Total	**($2,657,232)**	**($110,466)**	**($5,677,413)**	**($821,553)**	**($437,782)**	**($9,704,445)**
State/Local Government Non-Education	Corporate Profits Tax	$0	$0	$0	($147,912)	$0	($147,912)
	Dividends	$0	$0	$0	($277,687)	$0	($277,687)
	Indirect Bus Tax: Motor Vehicle Lic	$0	$0	$0	$0	($49,074)	($49,074)
	Indirect Bus Tax: Other Taxes	$0	$0	$0	$0	($150,206)	($150,206)
	Indirect Bus Tax: Property Tax	$0	$0	$0	$0	($1,256,614)	($1,256,614)
	Indirect Bus Tax: S/L NonTaxes	$0	$0	$0	$0	($403,735)	($403,735)
	Indirect Bus Tax: Sales Tax	$0	$0	$0	$0	($1,139,833)	($1,139,833)
	Indirect Bus Tax: Severance Tax	$0	$0	$0	$0	($299,643)	($299,643)
	Personal Tax: Estate and Gift Tax	$0	$0	$0	$0	$0	$0
	Personal Tax: Income Tax	$0	$0	($145,212)	$0	$0	($145,212)
	Personal Tax: Motor Vehicle License	$0	$0	($34,965)	$0	$0	($34,965)
	Personal Tax: NonTaxes (Fines- Fees)	$0	$0	($61,530)	$0	$0	($61,530)
	Personal Tax: Other Tax (Fish/Hunt)	$0	$0	($24,403)	$0	$0	($24,403)
	Personal Tax: Property Taxes	$0	$0	($10,678)	$0	$0	($10,678)
	Social Ins Tax- Employee Contribution	($16,456)	$0	$0	$0	$0	($16,456)
	Social Ins Tax- Employer Contribution	($53,383)	$0	$0	$0	$0	($53,383)
	Total	**($69,839)**	**$0**	**($276,788)**	**($425,599)**	**($3,299,105)**	**($4,071,331)**
Total		**($2,727,071)**	**($110,466)**	**($5,954,201)**	**($1,247,153)**	**($3,736,887)**	**($13,775,777)**

At the five-county level, the BRAC changes will result in a reduction in tax revenues associated with the five-county area of $13.8 million. Federal taxes account for the majority of that total; $4.1 million is the projected loss of state and local government taxes. Indirect business taxes account for the overwhelming majority of state and local taxes. It should be noted that Grand Forks Sales Taxes are reduced by 25% to reflect the impact of tax-exempt on-base spending. This proportion is based on airmen survey responses regarding on-base spending. Income tax was adjusted to reflect the assumption that airmen were not residents of North Dakota or Minnesota. Additionally, all subsequent tax tables will present only the impacts on state and local government taxes, since they represent losses of tax revenues that go to the state and local governments.

TWO-COUNTY REGION

Project staff also modeled the impact at the two-county MSA level. This area contains Grand Forks AFB, Grand Forks City, the largest commercial center in the market area, and East Grand Forks. Not surprisingly, the impact on the two-county area is very large, and is not much less than the $38.4 million impact on the five-county region. While Grand Forks and East Grand Forks play a prominent role in the life of Grand Forks AFB personnel, the economy of the other three counties and their interplay with the five is lost in the IMPLAN output.

In this section, tables containing data on the two-county impact and the tables containing the impact on each of the five counties are based on adjusted models. The adjustment is prompted by the nature of the IMPLAN model. When each county is modeled separately, the total impact is less than the impact reflected in the five counties modeled together. With the separate county modeling approach, goods flow out as exports to the other counties, but all of the resultant iterative flows modeled in the five-county approach can not be captured, since they have become external to the economy being modeled. To resolve this problem, project team members developed a spreadsheet model of an adjusted impact for each of the counties and the two-county model. Computations take into consideration each county's share of the sum of the impacts on each of the five counties, computed separately, and the discrepancy between that sum and the impact as estimated in the combined five-county model.

Table 28 presents the adjusted impact on Value Added. A $37.7 million impact is indicated, with the same categories – Utilities; Retail, Health and Social Services; and Government & Non-NAICS – accounting for large shares of the impact. Many of the points made about the five counties are mirrored for employment and taxes in the two-county model.

Table 28: Adjusted Value Added Impact, Two-County Area

Industry	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fishing & Hunting	($73,387)	($50,441)	($35,422)	($159,250)
21 Mining	($3,129)	($163,464)	($13,597)	($180,190)
22 Utilities	($4,175,940)	($215,997)	($211,534)	($4,603,471)
23 Construction	($1,816,680)	($150,494)	($29,561)	($1,996,735)
31-33 Manufacturing	($107,465)	($145,844)	($57,488)	($310,797)
42 Wholesale Trade	($1,446,862)	($462,816)	($416,705)	($2,326,384)
48-49 Transportation & Warehousing	($290,987)	($515,460)	($129,301)	($935,748)
44-45 Retail Trade	($3,688,774)	($318,232)	($1,109,544)	($5,116,550)
51 Information	($254,902)	($270,548)	($131,497)	($656,946)
52 Finance & Insurance	($870,823)	($535,703)	($349,331)	($1,755,857)
53 Real Estate & Rental	($276,432)	($217,204)	($134,350)	($627,986)
54 Professional–Scientific & Tech Services	($835,180)	($675,072)	($161,686)	($1,671,938)
55 Management of Companies	$0	($46,496)	($11,129)	($57,625)
56 Administrative & Waste Services	($462,086)	($308,656)	($68,220)	($838,962)
61 Educational Services	($145,097)	($4,285)	($37,307)	($186,690)
62 Health & Social Services	($3,853,532)	($12,312)	($1,156,865)	($5,022,709)
71 Arts–Entertainment & Recreation	($126,037)	($2,468)	($34,409)	($162,914)
72 Accommodations & Food Services	($1,013,826)	($124,422)	($307,847)	($1,446,095)
81 Other Services	($737,324)	($140,737)	($231,445)	($1,109,507)
92 Government & Non-NAICS	($7,682,915)	($70,508)	($816,051)	($8,569,473)
Total	**($27,861,379)**	**($4,431,160)**	**($5,443,288)**	**($37,735,827)**

Table 29: Adjusted Employment Impact, Two-County Area

Industry	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fishing & Hunting	(1.4)	(1.6)	(0.8)	(3.9)
21 Mining	0.0	(0.7)	(0.1)	(0.8)
22 Utilities	(10.3)	(0.5)	(0.5)	(11.3)
23 Construction	(37.8)	(2.9)	(0.6)	(41.3)
31-33 Manufacturing	(1.9)	(2.4)	(1.0)	(5.3)
42 Wholesale Trade	(15.9)	(5.1)	(4.6)	(25.6)
48-49 Transportation & Warehousing	(5.9)	(7.2)	(2.3)	(15.4)
44-45 Retail Trade	(87.3)	(7.5)	(26.1)	(120.9)
51 Information	(1.9)	(3.5)	(1.3)	(6.7)
52 Finance & Insurance	(8.8)	(6.4)	(3.9)	(19.1)
53 Real Estate & Rental	(3.5)	(2.2)	(1.5)	(7.2)
54 Professional–Scientific & Tech Services	(12.9)	(9.7)	(2.5)	(25.1)
55 Management of Companies	0.0	(0.6)	(0.1)	(0.7)
56 Administrative & Waste Services	(15.1)	(12.0)	(2.6)	(29.8)
61 Educational Services	(7.1)	(0.2)	(1.8)	(9.1)
62 Health & Social Services	(77.3)	(0.9)	(23.1)	(101.2)
71 Arts–Entertainment & Recreation	(4.8)	(0.1)	(1.3)	(6.3)
72 Accommodations & Food Services	(50.8)	(5.9)	(15.6)	(72.3)
81 Other Services	(30.6)	(4.3)	(9.2)	(44.1)
92 Government & Non-NAICS	(88.1)	(1.2)	(1.2)	(90.5)
Total	**(461.4)**	**(74.9)**	**(100.2)**	**(636.5)**

Table 30: Adjusted Tax Impact, Two-County Area

Govt. Level	Total	Employee Compensation	Proprietor Income	Household Expenditure	Enterprises (Corporations)	Indirect Business Taxes	Total
State/Local Government Non-Education	Corporate Profits Tax	$0	$0	$0	($145,765)	$0	($145,765)
	Dividends	$0	$0	$0	($273,725)	$0	($273,725)
	Indirect Bus Tax: Motor Vehicle Lic	$0	$0	$0	$0	($48,115)	($48,115)
	Indirect Bus Tax: Other Taxes	$0	$0	$0	$0	($147,408)	($147,408)
	Indirect Bus Tax: Property Tax	$0	$0	$0	$0	($1,231,591)	($1,231,591)
	Indirect Bus Tax: S/L NonTaxes	$0	$0	$0	$0	($395,472)	($395,472)
	Indirect Bus Tax: Sales Tax	$0	$0	$0	$0	($1,111,024)	($1,111,024)
	Indirect Bus Tax: Severance Tax	$0	$0	$0	$0	($293,285)	($293,285)
	Personal Tax: Estate and Gift Tax	$0	$0	$0	$0	$0	$0
	Personal Tax: Income Tax	$0	$0	($143,630)	$0	$0	($143,630)
	Personal Tax: Motor Vehicle License	$0	$0	($34,540)	$0	$0	($34,540)
	Personal Tax: NonTaxes (Fines- Fees)	$0	$0	($60,754)	$0	$0	($60,754)
	Personal Tax: Other Tax (Fish/Hunt)	$0	$0	($24,112)	$0	$0	($24,112)
	Personal Tax: Property Taxes	$0	$0	($10,540)	$0	$0	($10,540)
	Social Ins Tax- Employee Contribution	($16,287)	$0	$0	$0	$0	($16,287)
	Social Ins Tax- Employer Contribution	($52,835)	$0	$0	$0	$0	($52,835)
	Total	**($69,122)**	**$0**	**($273,576)**	**($419,490)**	**($3,226,895)**	**($3,989,083)**

Similar information is presented for each of the five counties in Tables 31 through 35. These tables have been adjusted to capture inter-county flows.

COUNTY LEVEL

Table 31: Adjusted Impact on Total Value Added

Industry	Grand Forks	Polk	Nelson	Traill	Walsh
11 Ag, Forestry, Fishing & Hunting	($140,252)	($18,998)	($5,919)	($5,791)	($843)
21 Mining	($179,787)	($403)	$0	($3)	($1)
22 Utilities	($4,517,928)	($85,544)	$0	($2,302)	($15,066)
23 Construction	($1,978,029)	($18,707)	($1,273)	($961)	($763)
31-33 Manufacturing	($187,174)	($123,623)	($2,390)	($10,172)	($46,427)
42 Wholesale Trade	($1,882,951)	($443,433)	($31,777)	($27,594)	($4,272)
48-49 Transportation & Warehousing	($869,711)	($66,037)	($4,358)	($3,825)	($832)
44-45 Retail Trade	($4,897,311)	($219,239)	($27,890)	($42,261)	($7,877)
51 Information	($613,272)	($43,675)	($7,991)	($4,685)	($3,517)
52 Finance & Insurance	($1,679,791)	($76,066)	($20,088)	($17,884)	($3,508)
53 Real Estate & Rental	($613,574)	($14,412)	($2,732)	($2,122)	($481)
54 Professional- Scientific & Tech Services	($1,635,230)	($36,708)	($1,276)	($5,664)	($5,870)
55 Management Of Companies	($55,104)	($2,521)	$0	$0	$0
56 Administrative & Waste Services	($825,046)	($13,916)	($1,114)	($755)	($364)
61 Educational Services	($92,962)	($93,727)	$0	($304)	($28)
62 Health & Social Services	($4,723,796)	($298,912)	($31,222)	($61,012)	($8,174)
71 Arts- Entertainment & Recreation	($146,533)	($16,381)	($2,543)	($2,511)	($726)
72 Accommodations & Food Services	($1,359,413)	($86,682)	($7,749)	($15,232)	($1,670)
81 Other Services	($1,057,334)	($52,173)	($8,765)	($9,869)	($2,697)
92 Government & Non-NAICS	($8,237,971)	($331,502)	($58,792)	($78,114)	($11,139)
Total	**($35,693,168)**	**($2,042,659)**	**($215,879)**	**($291,059)**	**($114,254)**

Table 31 presents the county-level impact on economic activity measured in terms of Value Added. As was stated earlier, Grand Forks County accounts for most of the impact at $35.7 million. The largest impact in that county is on Government & Non-NAICS, followed in order by: Retail Trade; Health & Social Services; Utilities; and Construction. Together they account for 68 percent of the impact on Grand Forks County.

The economic activity in Polk County accounts for $2.0 million. The sector accounting for the largest impact is estimated to be Wholesale Trade, followed by: Government & Non-NAICS; Health & Social Services; Retail Trade; and Manufacturing. These sectors account for about 69 percent of the impact on Value Added in that county.

The impact on Nelson County is estimated to be $0.2 million. The sectors suffering the largest impact are, in order: Government & Non-NAICS; Wholesale Trade; Health & Social Services; Retail Trade; and Finance & Insurance. They account for 79 percent of the impact on Value Added.

The impact on Traill County is estimated to be $0.3 million. The sectors suffering the largest impact are in order: Government & Non-NAICS; Health & Social Services; Retail Trade; Wholesale Trade; and Finance & Insurance. They account for 78 percent of the impact on Value Added.

The impact on Walsh County is estimated to be $0.1 million. The sectors suffering the largest impact are, in order: Manufacturing; Utilities; Government & Non-NAICS; Health & Social Services; and Retail Trade. They account for 78 percent of the impact on Value Added in that county.

Table 32 presents a similar table of county-level impacts on employment. The impact on Grand Forks County is that it is estimated to lose industry support for about 597 jobs. Polk county impact is estimated to be about 39. Nelson, Trail and Walsh Counties all have single digit losses. The largest loss in Grand Forks County is Retail Trade at 115.4 jobs. Next is Health & Human Services at almost 94 jobs, followed by Government & Non-NAICS, Accommodations & Food Services, and Other Services. Altogether these sectors account for 68 percent of the impact in the county. The largest impacts on Polk County are in: Health & Social Services; Wholesale Trade; Retail Trade; Accommodations & Food Services; and Educational Services. They account for 72 percent of the impact on Polk County Value Added activities. The impact of the other counties is mostly comprised of the loss of support for fractions of jobs in various sectors. This could be seen as a weakening of support of jobs or of potentially diminishing work hours. Only Retail Trade, Health & Social Services, and Accommodations & Food Services reflect the potential for loss of entire jobs.

Table 32: Adjusted Impact on Employment

Industry	Grand Forks	Polk	Nelson	Traill	Walsh
11 Ag, Forestry, Fishing & Hunting	(3.2)	(0.7)	(0.1)	(0.1)	0.0
21 Mining	(0.8)	0.0	0.0	0.0	0.0
22 Utilities	(11.2)	(0.1)	0.0	0.0	0.0
23 Construction	(40.9)	(0.4)	0.0	0.0	0.0
31-33 Manufacturing	(3.3)	(2.0)	(0.1)	(0.2)	(0.8)
42 Wholesale Trade	(19.9)	(5.7)	(0.4)	(0.3)	0.0
48-49 Transportation & Warehousing	(13.9)	(1.5)	(0.1)	(0.1)	0.0
44-45 Retail Trade	(115.4)	(5.5)	(1.0)	(1.1)	(0.2)
51 Information	(6.3)	(0.4)	0.0	(0.1)	(0.1)
52 Finance & Insurance	(18.1)	(1.0)	(0.2)	(0.2)	0.0
53 Real Estate & Rental	(7.0)	(0.2)	(0.1)	0.0	0.0
54 Professional- Scientific & Tech Services	(24.2)	(0.9)	0.0	(0.1)	(0.2)
55 Management Of Companies	(0.7)	0.0	0.0	0.0	0.0
56 Administrative & Waste Services	(29.4)	(0.4)	(0.1)	(0.1)	0.0
61 Educational Services	(4.3)	(4.8)	0.0	0.0	0.0
62 Health & Social Services	(93.9)	(7.3)	(1.0)	(1.4)	(0.2)
71 Arts- Entertainment & Recreation	(5.6)	(0.6)	(0.2)	(0.2)	0.0
72 Accommodations & Food Services	(67.3)	(5.0)	(0.7)	(1.1)	(0.1)
81 Other Services	(41.6)	(2.5)	(0.5)	(0.5)	(0.1)
92 Government & Non-NAICS	(90.2)	(0.3)	(0.1)	(0.1)	0.0
Total	**(597.2)**	**(39.2)**	**(4.5)**	**(5.8)**	**(1.9)**

Table 33 presents a breakdown of the impact on state and local taxes. Grand Forks again dominates with a loss of $3.7 million. Polk County tax losses come to $0.3 million. The other three counties together lose less than $0.1million. In all five counties, the tax categories that account for the two largest impacts are Business Property Tax and Sales Tax. In Grand Forks County, Business Property Tax accounts for the largest share. The order is reversed for the other four counties.

Table 33: Adjusted State and Local Tax Impact, Grand Forks County, ND

Total	Grand Forks	Polk	Nelson	Traill	Walsh
Corporate Profits Tax	($137,805)	($7,960)	($809)	($1,107)	($232)
Dividends	($254,198)	($19,527)	($1,492)	($2,042)	($428)
Indirect Bus Tax: Motor Vehicle Lic	($44,171)	($3,944)	($402)	($478)	($79)
Indirect Bus Tax: Other Taxes	($128,906)	($18,501)	($1,174)	($1,394)	($230)
Indirect Bus Tax: Property Tax	($1,152,713)	($78,878)	($10,494)	($12,470)	($2,058)
Indirect Bus Tax: S/L NonTaxes	($380,654)	($14,818)	($3,466)	($4,118)	($680)
Indirect Bus Tax: Sales Tax	($995,370)	($115,654)	($12,083)	($14,357)	($2,370)
Indirect Bus Tax: Severance Tax	($292,900)	($385)	($2,667)	($3,169)	($523)
Personal Tax: Estate and Gift Tax	$0	$0	$0	$0	$0
Personal Tax: Income Tax	($123,546)	($20,083)	($852)	($658)	($72)
Personal Tax: Motor Vehicle License	($32,357)	($2,183)	($155)	($232)	($38)
Personal Tax: NonTaxes (Fines- Fees)	($58,165)	($2,590)	($283)	($424)	($68)
Personal Tax: Other Tax (Fish/Hunt)	($23,336)	($776)	($101)	($165)	($25)
Personal Tax: Property Taxes	($10,038)	($502)	($53)	($73)	($12)
Social Ins Tax- Employee Contribution	($15,109)	($1,178)	($68)	($83)	($17)
Social Ins Tax- Employer Contribution	($49,012)	($3,823)	($222)	($270)	($55)
Total	**($3,698,281)**	**($290,803)**	**($34,321)**	**($41,040)**	**($6,887)**

The above table presents the impact on taxes as produced by the IMPLAN package. The results represent not only county and city tax impacts, but also impact on state taxes. Project staff developed estimates of the amount of the impacts on taxes levied by county and city level governments. The results are presented below. The basis of these estimates was a state-county-city template that classifies the sources of tax revenues at state, county and local governments by type of tax obtained from the U.S. Census Department.[24] The template was applied to the tax impact amounts to isolate state, county, and local government impacts. The results are presented in Table 34. As can be seen, the size of the impact on taxes is estimated to be quite a bit larger, across the board.

[24] http://www.census.gov/govs/estimate/0235ndsl_1.html, http://www.census.gov/govs/estimate/0235ndsl_2.html, http://www.census.gov/govs/estimate/0224mnsl_1.html, http://www.census.gov/govs/estimate/0224mnsl_2.html.

Subsequent discussions in this section will address the development of estimates that break down impacts on city taxes by specific major cities. That analysis made use of the same data sources and methodology. It should be noted that resulting estimates of city level taxes are based on the assumption that municipal government, township government, any special district government and school district level allocations are city-level allocations rather than county-level allocations.

Table 34: Impact on County and City Taxes by County

Level of Impact	Grand Forks	Polk	Nelson	Traill	Walsh
County Tax Impact	($282,453)	($29,852)	($2,548)	($3,035)	($501)
City Tax Impact	($1,298,425)	($67,461)	($10,586)	($14,162)	($2,248)

STATE INCOME TAX

As an adjunct to more detailed breakouts of the tax impacts found in county-level tables above, project staff isolated estimates of the impact on State Individual and Corporate Income Tax by County. The results are presented in Table 35. Overall, the analysis indicates that the larger impact will be on Corporate Profits Tax, but the difference is not large. This relationship varies by county, most noticeably in Polk County. Individual income taxes are adjusted so that airmen, who are likely to be permanent residents of other states, are not accounted for in state income taxes.

Table 35: Individual and Business State Income Tax Impact

County	Individual Income Tax Impact	Corporate Profits Tax Impact
5 County	($145,211)	($147,913)
2 County	($143,629)	($145,765)
Grand Forks	($123,546)	($137,805)
Polk	($20,083)	($7,960)
Nelson	($852)	($809)
Traill	($658)	($1,107)
Walsh	($72)	($232)

SELECTED INDUSTRIES BY COUNTY

The following two tables present the impact on 45 selected industries for each of the counties, the two-county area and the five-county area in terms of Value Added and Employment. They provide insight into how the county-level impacts and combined-county impacts vary by important industries. For both the five-county and two-county areas, the list of industries account for 40 percent of the impact on Value Added. Power Generation & Supply sustains the

largest impact in terms of lost Value Added, about $4.4 million, followed by Monetary Authorities & Depository Credit Intermediation (Banks), Motor Vehicle & Parts Dealerships, Food & Beverage Stores, and General Merchandise Stores. These industries account for 21 percent of the impact on the five-county level and 22 percent of the impact on the two-county area.

In Grand Forks County, the listed industries account for 41 percent of the loss of Value Added activities. The top five impacts were on Power Generation & Supply, Monetary Authorities & Depository Credit Intermediation, Motor Vehicle & Parts Dealers, General Merchandise Stores, and Commercial & Institutional Buildings, where they account for an $8.0 million loss of economic activity out of the total $35.7 million lost to the county in terms of Value Added activities or 22 percent. In Polk County, the listed industries, at $0.5 million, account for 26 percent of the losses in Value Added activities. Monetary Authorities & Depository Credit Intermediation, Natural Gas Distribution, Food & Beverage Stores, Truck Transportation, and Motor Vehicle & Parts Dealers are the sectors that lose the most at almost $0.3 million. This amount equates to 12 percent of the total losses to the county. Monetary Authorities & Depository Credit Intermediation, Nursing & Residential Care Facilities, Food & Beverage Stores, Gasoline Stations, and Motor Vehicle & Parts Dealers have the largest impact in Nelson County. While they account for only $51 thousand, the total Value Added impact on the listed industries is $67 thousand. The largest impacts in Traill County are on Monetary Authorities & Depository Credit Intermediation, Nursing & Residential Care Facilities, Food & Beverage Stores, Motor Vehicle & Parts Dealers, and Nonstore Retailers. They account for $45 thousand or 58 percent of Value Added impact on the listed industries. Finally, Natural Gas Distribution, Monetary Authorities & Depository Credit Intermediation, Motor Vehicle & Parts Dealers, Food & Beverage Stores, and Nursing & Residential Care Facilities represent the largest impacts in Walsh County. At $22 thousand, they account for 70 percent of the $31 thousand impact on the listed industries.

Table 36: Adjusted Impact on Value Added by Selected Industries

Sector	5 County	2 County	Grand Forks	Polk	Nelson	Traill	Walsh
Motor Vehicle And Parts Dealers	($1,078,719)	($1,065,373)	($1,024,577)	($40,796)	($4,409)	($6,955)	($1,982)
Furniture And Home Furnishings Stores	($229,902)	($227,782)	($224,496)	($3,286)	$0	($1,705)	($415)
Electronics And Appliance Stores	($215,705)	($214,392)	($210,832)	($3,561)	$0	($1,100)	($212)
Building Material And Garden Supply Stores	($491,395)	($483,911)	($447,873)	($36,038)	($2,942)	($3,867)	($675)
Food And Beverage Stores	($791,399)	($772,617)	($717,797)	($54,820)	($8,673)	($8,222)	($1,887)
Health And Personal Care Stores	($302,933)	($294,795)	($277,999)	($16,796)	($1,823)	($5,467)	($848)
Gasoline Stations	($255,916)	($246,517)	($229,792)	($16,725)	($4,655)	($4,107)	($638)
Clothing And Clothing Accessories Stores	($247,909)	($247,813)	($243,813)	($4,001)	$0	$0	($95)
Sporting Goods, Hobby, Book And Music Stores	($174,385)	($173,572)	($166,441)	($7,132)	$0	($768)	($45)
General Merchandise Stores	($776,140)	($771,823)	($753,685)	($18,138)	$0	($3,557)	($759)
Miscellaneous Store Retailers	($264,812)	($263,016)	($255,652)	($7,364)	($1,123)	($518)	($155)
Nonstore Retailers	($365,362)	($354,939)	($344,357)	($10,582)	($4,264)	($5,994)	($165)
Nondepository Credit Intermediation And Related Activities	($113,345)	($112,792)	($111,799)	($993)	$0	($377)	($176)
Securities, Commodity Contracts, Investments	($98,755)	($97,690)	($93,815)	($3,875)	$0	($840)	($225)
Insurance Carriers	($201,123)	($200,251)	($195,940)	($4,311)	$0	($564)	($308)
Insurance Agencies, Brokerages, And Related	($247,281)	($245,830)	($238,862)	($6,968)	$0	($1,010)	($441)
Funds, Trusts, And Other Financial Vehicles	$0	$0	$0	$0	$0	$0	$0
Monetary Authorities And Depository Credit Intermediation	($1,136,833)	($1,099,293)	($1,039,375)	($59,918)	($20,088)	($15,094)	($2,358)
Nursing And Residential Care Facilities	($576,060)	($552,830)	($513,747)	($39,083)	($12,821)	($9,066)	($1,343)

Sector	5 County	2 County	Grand Forks	Polk	Nelson	Traill	Walsh
Child Day Care Services	($176,323)	($171,239)	($146,449)	($24,790)	($951)	($3,271)	($862)
Social Assistance, Except Child Day Care Services	($298,448)	($298,206)	($273,449)	($24,757)	$0	$0	($242)
Religious Organizations	($78,637)	($77,539)	($77,539)	$0	$0	$0	($1,098)
Grantmaking And Giving And Social Advocacy Organizations	($44,619)	($43,831)	($43,021)	($810)	($425)	($326)	($36)
Power Generation And Supply	($4,444,680)	($4,444,014)	($4,415,036)	($28,978)	$0	($407)	($259)
Natural Gas Distribution	($71,107)	($56,566)	$0	($56,566)	$0	$0	($14,541)
Water, Sewage And Other Systems	($105,053)	($102,892)	($102,892)	$0	$0	($1,895)	($266)
New Residential 1-Unit Structures, Nonfarm	($45,682)	($45,682)	($45,017)	($665)	$0	$0	$0
New Multifamily Housing Structures, Nonfarm	$0	$0	$0	$0	$0	$0	$0
New Residential Additions And Alterations, Nonfarm	$0	$0	$0	$0	$0	$0	$0
New Farm Housing Units And Additions And Alterations	$0	$0	$0	$0	$0	$0	$0
Manufacturing And Industrial Buildings	$0	$0	$0	$0	$0	$0	$0
Commercial And Institutional Buildings	($762,135)	($762,135)	($751,006)	($11,129)	$0	$0	$0
Highway, Street, Bridge, And Tunnel Construction	($200,682)	($200,682)	($200,682)	$0	$0	$0	$0
Water, Sewer, And Pipeline Construction	$0	$0	$0	$0	$0	$0	$0
Other New Construction	($3,101)	($3,101)	($3,101)	$0	$0	$0	$0
Maintenance And Repair Of Farm And Nonfarm Residential Structures	($209,641)	($208,990)	($207,038)	($1,952)	($303)	($295)	($53)
Maintenance And Repair Of Nonresidential Buildings	($445,539)	($443,908)	($440,341)	($3,568)	($593)	($391)	($646)
Maintenance And Repair Of Highways, Streets, Bridges, And Tunnels	($259,897)	($259,897)	($259,897)	$0	$0	$0	$0
Other Maintenance And Repair Construction	($73,055)	($72,340)	($70,948)	($1,393)	($376)	($274)	($64)
Air Transportation	($16,768)	($16,768)	($16,768)	$0	$0	$0	$0

Sector	5 County	2 County	Grand Forks	Polk	Nelson	Traill	Walsh
Rail Transportation	($119,180)	($119,008)	($116,786)	($2,222)	($1)	($80)	($91)
Water Transportation	$0	$0	$0	$0	$0	$0	$0
Truck Transportation	($372,383)	($366,694)	($323,797)	($42,897)	($3,095)	($2,104)	($490)
Transit And Ground Passenger Transportation	($52,401)	($52,183)	($48,945)	($3,238)	($204)	$0	($14)
Pipeline Transportation	($43,723)	($43,720)	($43,377)	($343)	$0	$0	($3)
Scenic And Sightseeing Transportation And Support Activities For Transportation	($60,394)	($60,383)	($57,162)	($3,221)	$0	$0	($11)

Table 37 presents the estimated impact in terms of the potential decrease in employment for the same set of industries. As discussed earlier in this section, the impact on employment in the five-county area is that the economy will support 649 fewer jobs, 258 (or 40 percent) of them are accounted for by the industries on this list. The five industries losing the most jobs are: Food & Beverage Stores; General Merchandise Stores; Nursing & Residential Care Facilities; Commercial & Institutional Buildings; and Social Assistance Except Child Day Care Services. They account for 97 jobs or 15 percent of the 649 jobs.

The overall impact on employment in the two-county area is that the economy will support 637 fewer jobs, 253 (or 40 percent) of them are accounted for by the industries on this list. The five industries losing the most jobs are: Food & Beverage Stores; General Merchandise Stores; Nursing & Residential Care Facilities; Commercial & Institutional Buildings; and Social Assistance Except Child Day Care Services. They account for 95 jobs or 15 percent of the total 637 jobs.

The overall impact on employment in Grand Forks County is that the economy will support 597 fewer jobs, 241 (or 40 percent) of them are accounted for by the industries on this list. The five industries losing the most jobs are: General Merchandise Stores; Food & Beverage Stores; Nursing & Residential Care Facilities; Commercial & Institutional Buildings; and Social Assistance Except Child Day Care Services. They account for 90 jobs or 15 percent of the total 597 jobs.

The overall impact on employment in Polk County is that the economy will support 39 fewer jobs, 12 (or 31 percent) of them are accounted for by the industries on this list. The five industries losing the most jobs are: Food & Beverage Stores, Nursing & Residential Care Facilities, Social Assistance Except Child Day Care Services, Child Day Care Services, and Truck Transportation. They account for 6 jobs or 16 percent of the total 39 jobs.

As discussed earlier, the economies in Nelson, Traill, and Walsh counties together lose support for 12 jobs. Additionally, the impact is fairly dispersed, so that the industries on this list account for only four jobs, with the top five industries accounting for slightly less than 3.

Table 37: Adjusted Impact on Employment by Selected Industries

Sector	5 County	2 County	Grand Forks	Polk	Nelson	Traill	Walsh
Motor Vehicle And Parts Dealers	(14.6)	(14.3)	(13.7)	(0.7)	(0.1)	(0.1)	0.0
Furniture And Home Furnishings Stores	(4.3)	(4.3)	(4.2)	(0.1)	0.0	0.0	0.0
Electronics And Appliance Stores	(4.7)	(4.7)	(4.6)	(0.1)	0.0	0.0	0.0
Building Material And Garden Supply Stores	(7.6)	(7.4)	(6.7)	(0.7)	(0.1)	(0.1)	0.0
Food And Beverage Stores	(22.3)	(21.7)	(20.1)	(1.5)	(0.3)	(0.3)	(0.1)
Health And Personal Care Stores	(5.6)	(5.4)	(5.1)	(0.3)	(0.1)	(0.1)	0.0
Gasoline Stations	(6.8)	(6.6)	(6.2)	(0.4)	(0.1)	(0.1)	0.0
Clothing And Clothing Accessories Stores	(8.8)	(8.8)	(8.7)	(0.1)	0.0	0.0	0.0
Sporting Goods, Hobby, Book And Music Stores	(5.7)	(5.7)	(5.4)	(0.3)	0.0	0.0	0.0
General Merchandise Stores	(21.0)	(20.8)	(20.4)	(0.4)	0.0	(0.1)	0.0
Miscellaneous Store Retailers	(12.6)	(12.4)	(12.1)	(0.3)	(0.1)	0.0	0.0
Nonstore Retailers	(9.3)	(8.8)	(8.2)	(0.6)	(0.3)	(0.1)	0.0
Nondepository Credit Intermediation And Related Activities	(1.0)	(1.0)	(1.0)	0.0	0.0	0.0	0.0
Securities, Commodity Contracts, Investments	(3.2)	(3.1)	(2.8)	(0.3)	0.0	(0.1)	0.0
Insurance Carriers	(4.4)	(4.4)	(4.3)	(0.1)	0.0	0.0	0.0
Insurance Agencies, Brokerages, And Related	(3.1)	(3.1)	(2.9)	(0.1)	0.0	0.0	0.0
Funds, Trusts, And Other Financial Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monetary Authorities And Depository Credit Intermediation	(7.9)	(7.5)	(7.1)	(0.5)	(0.2)	(0.1)	0.0
Nursing And Residential Care Facilities	(19.6)	(18.6)	(17.3)	(1.4)	(0.5)	(0.4)	(0.1)
Child Day Care Services	(9.4)	(9.1)	(7.9)	(1.2)	(0.1)	(0.2)	0.0
Social Assistance, Except Child Day Care Services	(16.4)	(16.3)	(15.2)	(1.2)	0.0	0.0	0.0
Religious Organizations	(3.4)	(3.4)	(3.4)	0.0	0.0	0.0	(0.1)
Grantmaking And Giving And Social Advocacy Organizations	(1.8)	(1.7)	(1.6)	(0.1)	0.0	0.0	0.0
Power Generation And Supply	(10.7)	(10.7)	(10.7)	(0.1)	0.0	0.0	0.0
Natural Gas Distribution	(0.1)	(0.1)	0.0	(0.1)	0.0	0.0	0.0
Water, Sewage And Other Systems	(0.6)	(0.5)	(0.5)	0.0	0.0	0.0	0.0

Sector	5 County	2 County	Grand Forks	Polk	Nelson	Traill	Walsh
New Residential 1-Unit Structures, Nonfarm	(0.7)	(0.7)	(0.7)	0.0	0.0	0.0	0.0
New Multifamily Housing Structures, Nonfarm	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Residential Additions And Alterations, Nonfarm	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Farm Housing Units And Additions And Alterations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing And Industrial Buildings	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial And Institutional Buildings	(17.2)	(17.2)	(16.9)	(0.3)	0.0	0.0	0.0
Highway, Street, Bridge, And Tunnel Construction	(4.2)	(4.2)	(4.2)	0.0	0.0	0.0	0.0
Water, Sewer, And Pipeline Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other New Construction	(0.1)	(0.1)	(0.1)	0.0	0.0	0.0	0.0
Maintenance And Repair Of Farm And Nonfarm Residential Structures	(2.9)	(2.9)	(2.9)	0.0	0.0	0.0	0.0
Maintenance And Repair Of Nonresidential Buildings	(9.3)	(9.2)	(9.1)	(0.1)	0.0	0.0	0.0
Maintenance And Repair Of Highways, Streets, Bridges, And Tunnels	(5.6)	(5.6)	(5.6)	0.0	0.0	0.0	0.0
Other Maintenance And Repair Construction	(1.5)	(1.4)	(1.4)	0.0	0.0	0.0	0.0
Air Transportation	(0.2)	(0.2)	(0.2)	0.0	0.0	0.0	0.0
Rail Transportation	(0.6)	(0.6)	(0.6)	0.0	0.0	0.0	0.0
Water Transportation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Truck Transportation	(7.3)	(7.2)	(6.2)	(1.0)	(0.1)	0.0	0.0
Transit And Ground Passenger Transportation	(2.3)	(2.3)	(2.1)	(0.2)	0.0	0.0	0.0
Pipeline Transportation	(0.2)	(0.2)	(0.2)	0.0	0.0	0.0	0.0
Scenic And Sightseeing Transportation And Support Activities For Transportation	(0.7)	(0.7)	(0.7)	0.0	0.0	0.0	0.0

EXTENSION OF IMPLAN COUNTY-LEVEL RESULTS TO CITY-LEVEL ESTIMATES

The IMPLAN modeling was based on county-level analyses. It made use of a dataset for each of the five counties supplied by MIG. The counties were analyzed separately to assess the impact on each county and in combination to produce five-county and two-county impact estimates. The county-level datasets can not be broken down into datasets for the component cities. Moreover, IMPLAN does not routinely provide datasets on single-zip code cities. Even if data on some separate cities were available, the trade between cities within the same county would be lost, in much the same manner as inter-county trade was lost when counties were modeled separately. Further, any adjustment based on a less than comprehensive set of cities would likely preclude accurate adjustments. As a result, the project team sought a means of extending IMPLAN-based estimates of county-level estimates using a non-IMPLAN approach. During the course of that search, project staff examined the results of surveys of airmen and civilian employees along with public sector data from such sources as the U.S. Bureau of Census. Project staff identified economic measures to serve as proxies for use in apportioning county-level impacts by industry sectors to cities within each county. For example, survey responses regarding shopping patterns and data on retail employment were used to allocate impacts related to retail sectors by city. City-level data on the number of construction employees and the number of manufacturing industry employees were used to allocate impacts on those industries, respectively. Once the entire impact was allocated by city and industry sector, project staff summed the impacts by city for use in the analysis.

Tables 38-42 present the results in terms of the projected impact on Employment and Value Added. In Grand Forks County, Grand Forks City is estimated to account for 94 percent of the $35.7 million county level impact on Value Added activities and 94 percent of the 597 county-level job impact. That result means that the remainder of the county accounts for 6 percent of the impact. Larimore is seen to lose the next largest amount of Value Added activities and support for associated jobs. The loss of $0.6 million translates into a 2 percent share of the county-level impact, while the 11 job impact also accounts for 2 percent of the county-level decrease in jobs supported. Emerado and Northwood are projected to account for a relatively small share (1 percent of county level impacts) in both categories.

In Polk County, the impact on East Grand Forks and Crookston is projected to account for almost all the county's impact in both categories. East Grand Forks is projected to account for 58 percent of the loss in economic activity as measured by Value Added and for 64 percent of the county-level jobs impact of 39. Crookston accounts for 29 percent and 26 percent of the county-level impacts on Value Added and Employment.

The majority of the impact on Nelson County appears to be fairly evenly spread across four cities – Lakota, McVille, Michigan and Petersburg. Together they are projected to account for 90 percent of the county-level losses of Value Added activities and 93 percent of the reduction of jobs supported. Hatton, Hillsboro, and Mayville in Traill County are estimated to account for 86 percent of the county-level losses in Value Added and 90 percent of employment impact. Grafton in Walsh County accounts for the largest impact, followed by Park River. Together they account for 75 percent and 74 percent of the county level impacts on Value Added activities and associated employment.

Examining the projected city-level impacts across counties, Grand Forks accounts for the overwhelming share of impact on Value Added activities, losing $33.7 million or 88 percent of the total five-county loss of $38.4 million. Next in size of losses is East Grand Forks at 3 percent of Value Added, with Crookston at nearly 2 percent and Larimore at about 1 percent. Projected impacts on Employment show that the same cities account for about 87 percent, 4 percent, 2 percent, and 2 percent, respectively.

Table 38: Projections of City-Level Impacts for Grand Forks County

City	Value Added Impact	Employment Impact
Emerado	($289,084)	(6.0)
Grand Forks	($33,710,853)	(562.0)
Larimore	($551,039)	(10.8)
Northwood	($348,958)	(6.3)
Rural	($320,039)	(4.0)
Other	($473,194)	(8.2)
Total	**($35,693,168)**	**(597.2)**

Table 39: Projections of City-Level Impacts for Polk County

City	Value Added Impact	Employment Impact
Crookston	($598,389)	(10.1)
East Grand Forks	($1,193,666)	(25.0)
Rural	($19,401)	(0.7)
Other	($231,204)	(3.5)
Total	**($2,042,659)**	**(39.0)**

Table 40: Projections of City-Level Impacts for Nelson County

City	Value Added Impact	Employment Impact
Lakota	($49,976)	(0.9)
McVille	($30,855)	(0.4)
Michigan	($61,066)	(1.5)
Petersburg	($51,958)	(1.4)
Rural	($5,919)	(0.1)
Other	($16,105)	(0.1)
Total	**($215,879)**	**(4.5)**

Table 41: Projections of City-Level Impacts for Traill County

City	Value Added Impact	Employment Impact
Hatton	($101,113)	(2.8)
Hillsboro	($76,326)	(1.2)
Mayville	($73,009)	(1.2)
Portland	($15,928)	(0.2)
Rural	($5,794)	(0.1)
Other	($18,890)	(0.2)
Total	**($291,059)**	**(5.8)**

Table 42: Projections of City-Level Impacts for Walsh County

City	Value Added Impact	Employment Impact
Edinburg	($2,819)	0
Fordville	($7,054)	(0.2)
Grafton	($66,039)	(1.1)
Hoople	($2,176)	0
Park River	($19,951)	(0.3)
Rural	($844)	0
Other	($15,370)	(0.2)
Total	**($114,254)**	**(1.9)**

EXTENSION OF TAX IMPACTS TO CITY LEVEL

Project staff developed and applied an allocation template to break tax impacts down by tax categories based on Census data regarding state, county and municipal revenue levels for North Dakota and Minnesota. The resulting overall city-level tax impacts were then spread across cities within each county based on city-level projections of Value Added impacts. The results are presented in the tables below. As can be seen, the estimates are broken down by sales tax, property tax and other taxes and revenue. The estimated impact on property tax is much larger than the estimated impact on sales and other taxes.

Tables 43 through 47 present a breakdown of the IMPLAN based county-level tax losses into city-level projections. The city of Grand Forks is again projected to account for the vast majority of tax losses at $1.2 million overall. This loss represents 96 percent of the estimated county losses. Larimore/McCanna ranks next in the county with 2 percent of the county losses.

In Polk County, East Grand Forks is estimated to account for 59 percent of total county tax losses and Crookston is estimated to account for 30 percent. Together they account for $59.8 thousand of tax losses.

In Nelson County, Lakota with 21 percent, Michigan with 37 percent, and Petersburg with 22 percent of the county losses account for $8.5 thousand of the estimated $10.6 thousand loss. In Traill County, Hatton is estimated to account for 39 percent of the county-level tax losses, Mayville for 25 percent, and Hillsboro for 24 percent. Together, they account for $12.6 thousand of the $14.2 thousand impact. In Walsh County, Grafton at 58 percent and Park River at 21 percent, are projected to account for $1.8 thousand of the county impact of $2.2 thousand.

Examining the projected city-level impacts across counties, Grand Forks accounts for the overwhelming amount of estimated lost taxes in the five-county area. The city is projected to lose $1.2 million in taxes of the total $1.4 million local taxes or 89 percent of the total local tax impact across the five counties as indicated in the five tables. Next, in size of losses is, East Grand Forks with 3 percent, followed Larimore/McCanna and Crookston at 1 percent each.

Table 43: Projections of City-Level Tax Impacts for Grand Forks County

City	Sales Tax	Property Tax	Other Taxes and Revenues	Total City Tax Impact
Emerado	$0	($7,408)	($1,178)	($8,586)
Grand Forks	($241,817)	($863,862)	($137,403)	($1,243,082)
Larimore/McCanna	($4,068)	($14,121)	($2,246)	($20,435)
Northwood	($1,959)	($8,942)	($1,422)	($12,323)
Other	$0	($12,077)	($1,921)	($13,998)
Total	**($247,844)**	**($906,410)**	**($144,170)**	**($1,298,425)**

Table 44: Projections of City-Level Tax Impacts for Polk County

City	Sales Tax	Property Tax	Other Taxes and Revenues	Total City Tax Impact
Crookston	$0	($15,723)	($4,229)	($19,952)
East Grand Forks	$0	($31,365)	($8,435)	($39,800)
Other	$0	($6,075)	($1,634)	($7,709)
Total	**$0**	**($53,163)**	**($14,298)**	**($67,461)**

Table 45: Projections of City-Level Tax Impacts for Nelson County

City	Sales Tax	Property Tax	Other Taxes and Revenues	Total City Tax Impact
Lakota	$0	($1,957)	($293)	($2,250)
McVille	$0	($1,208)	($181)	($1,389)
Michigan	($1,134)	($2,391)	($358)	($3,883)
Petersburg	$0	($2,035)	($304)	($2,339)
Other	$0	($631)	($94)	($725)
Total	**($1,134)**	**($8,222)**	**($1,230)**	**($10,586)**

Table 46: Projections of City-Level Tax Impacts for Traill County

City	Sales Tax	Property Tax	Other Taxes and Revenues	Total City Tax Impact
Hatton	($1,540)	($3,466)	($529)	($5,534)
Hillsboro	($446)	($2,616)	($399)	($3,461)
Mayville	($724)	($2,502)	($382)	($3,608)
Portland	($183)	($546)	($83)	($812)
Other	$0	($647)	($99)	($746)
Total	**($2,893)**	**($9,778)**	**($1,491)**	**($14,162)**

Table 47: Projections of City-Level Tax Impacts for Walsh County

Walsh County	Sales Tax	Property Tax	Other Taxes and Revenues	Total City Tax Impact
Edinburg	($12)	($40)	($6)	($59)
Fordville	$0	($100)	($15)	($116)
Grafton	($223)	($940)	($143)	($1,306)
Hoople	($2)	($31)	($5)	($37)
Park River	($152)	($284)	($43)	($479)
Other	$0	($219)	($33)	($252)
Total	**($388)**	**($1,614)**	**($245)**	**($2,248)**

SUMMARY OF MODELING RESULTS AND CONCLUSIONS

The overall loss of economic activity, as measured by Value Added activities, in the five-county area is estimated at $38.4 million. Grand Forks County accounts for the largest share with $35.7, followed by Polk County, Minnesota with $2.0 million. Nelson, Traill and Walsh Counties together account for $0.6 million - less than 2 percent. The concentration of the impact in Grand Forks County is echoed in the spreadsheet-based approximations of the projected city level impacts. Grand Forks City accounts for 88 percent of the total five-county impact. East Grand Forks accounts for another 3 percent. The remaining 9 percent is spread across the remaining cities, mainly in Grand Forks and Polk Counties. The impacts on Employment and Taxes follow much the same general pattern.

IMPACT OF BRAC ACTIONS ON GRAND FORKS INTERNATIONAL AIRPORT

Grand Forks International Airport is the primary point of departure and arrival for passengers coming to or leaving the city of Grand Forks. The airport is served by Northwest Airlines and Mesaba Airlines, which currently provide a combined total of five flights a day to Grand Forks.

As shown in Table 48, Grand Forks International Airport handled approximately 88,000 departures and 90,000 arrivals in 2005, for a total of approximately 180,000 passengers. This has been the approximate average annual passenger count for the past five years and partial 2006 data is consistent. Northwest Airlines carries over 88 percent of the passengers.

A small number of passengers (approximately 3,000 per year) departed or arrived on other small private, commercial aircraft, and charter aircraft.

Table 48: Grand Forks International Airport Passenger Data

Departures (Enplanements)

	NWA	Mesaba	Private and Corporate Aircraft	Charter Aircraft	Total
Jan	6,407	727	0	0	7,134
Feb	6,327	767	192	0	7,286
Mar	7,776	975	293	121	9,165
Apr	5,858	729	162	115	6,864
May	6,303	857	0	22	7,182
Jun	7,003	578	0	59	7,640
Jul	6,996	505	0	120	7,621
Aug	6,346	518	111	0	6,975
Sep	6,670	473	109	109	7,361
Oct	6,207	726	0	0	6,933
Nov	6,071	766	0	70	6,907
Dec	6,275	930	0	0	7,205
Total	**78,239**	**8,551**	**867**	**616**	**88,273**

Arrivals (Deplanements)

	NWA	Mesaba	Private and Corporate Aircraft	Charter Aircraft	Total
Jan	5,454	1,463	0	0	6,917
Feb	5,647	1,461	190	0	7,298
Mar	7,640	1,650	154	121	9,565
Apr	5,626	1,607	210	113	7,556
May	6,245	1,636	0	22	7,903
Jun	7,288	1,117	0	59	8,464
Jul	6,789	1,007	383	120	8,299
Aug	6,383	945	111	0	7,439
Sep	5,503	845	167	0	6,515
Oct	6,346	921	0	0	7,267
Nov	6,015	713	65	0	6,793
Dec	5,660	764	0	0	6,424
Total	**74,596**	**14,129**	**1,280**	**435**	**90,440**

OFFICIAL TRAVEL BY GRAND FORKS AIR FORCE BASE PERSONNEL

The SATO ticket office at Grand Forks Air Force Base issues all airline tickets for official travel by Grand Forks Air Force military and civilian personnel, as well as for official travel by other government employees in the region. Project team members contacted the SATO office, and found that it issues approximately 6,000 government airline tickets per year for official travel of military and government civilian employees.[25] About 2,000 of these tickets are for military recruits or for official travel by individuals that depart from other airports such as Fargo or Sioux Falls. The approximate 4,000 remaining tickets represent a mix of roundtrip and one-way tickets using Grand Forks International Airport.

The team was unable to determine the mix of roundtrip versus one-way tickets included in the 4,000 government tickets issued for flights from/to Grand Forks International Airport. The SATO office believes that while there are some one-way tickets issued, the majority of travel is roundtrip. Assuming all tickets are roundtrip for official travel from the base (a scenario which assumes the largest possible number of Grand Forks International Airport departures and arrivals), official travel would account for approximately 8,000 arrivals and departures per year. This is about 4.5 percent of the total annual passenger traffic for Grand Forks International Airport.

The planned realignment of Grand Forks AFB reduces the current on-base population to 1,860 military and government civilian positions, a reduction of approximately 1,000 from the current base population. Assuming the airline travel patterns for the revised base population remain as they are today, the projected calendar year 2011 airline passenger traffic from the reduced base population would be slightly less than 5,000 arrivals and departures per year. Official base-related travel would then account for approximately 3 percent of projected 2011 airport passenger traffic.

OTHER BASE-RELATED TRAVEL

The passenger volume discussed above is for official Grand Forks AFB travel only. In addition to the passenger volume through Grand Forks International Airport created by the official movement of military and civilians from the base, there is an undetermined amount of travel for vacations and personal business by people associated with the base and their dependents. No figures for this travel are available since the people traveling use various off-base travel agents and online reservation services, and project researchers have no way to accurately quantify this passenger volume.

For the purpose of this study, project staff assumed that people associated with the base travel for personal reasons at about the same rate as military and civilian personnel perform official

[25] Mr. Gary Lee, SATO Travel Office—(701) 747-3484.

travel. Using this assumption, the total annual Grand Forks International Airport airline passenger volume related to Grand Forks AFB would be about 8 percent of the annual airport passenger volume. This would reduce to about 6 percent in calendar year 2011 with the projected personnel reductions related to the realignment.

CARGO THROUGH GRAND FORKS INTERNATIONAL AIRPORT

Cargo in and out of Grand Forks International Airport is carried by Federal Express which maintains a cargo terminal at the airport. Table 49 shows the monthly and annual volume of cargo in pounds departing (enplaned) and arriving (deplaned) through Grand Forks. About 45 million pounds of cargo moves through the Federal Express Cargo terminal annually.

Table 49: Amount of Cargo Departing and Arriving at Grand Forks International Airport

Departing FedEx Cargo @ GFK	2005	Arriving FedEx Cargo @ GFK	2005
Jan	1,828,326	Jan	1,941,895
Feb	1,819,089	Feb	1,966,275
Mar	2,098,999	Mar	2,312,899
Apr	1,943,252	Apr	2,232,518
May	1,702,361	May	1,987,312
Jun	1,720,607	Jun	2,170,054
Jul	1,609,478	Jul	2,056,348
Aug	1,602,228	Aug	2,036,760
Sep	1,681,703	Sep	2,082,950
Oct	1,668,687	Oct	2,112,626
Nov	1,625,419	Nov	2,006,027
Dec	2,026,813	Dec	2,412,869
Total	**21,326,962**	**Total**	**25,318,533**

Federal Express delivers 10-50 packages each morning to Grand Forks Air Force Base. This represents business and residential packages combined. Federal Express also picks up between 10 to 50 packages each afternoon. One truck delivers in the morning and one truck does the pickups in the afternoon. The impact on Federal Express from the Grand Forks AFB realignment is expected to be minimal.

UTILITIES

Grand Forks AFB provides facilities to support the 2,000 airmen stationed there and their mission. This translates into a large amount of expenditures on utilities. Data in the 2003

through 2005 Grand Forks AFB Economic Impact Analysis reports indicate that the base spends about $10 million annually on utilities. The spending has been as follows.

- FY2003: $9.3 million.
- FY2004: $9.1 million.
- FY2005: $10.2 million.

The project team examined contract data provided by Grand Forks AFB and identified two major sources of electric power utilized by the base—Northern States Power, Minneapolis, MN, and Nodak Electric Coop, Grand Forks, ND. The vendor data indicates the following costs:

- FY2003: Northern States Power $3.0 million; Nodak $3.8 million.
- FY2004: Northern States Power $2.4 million; Nodak $3.9 million.
- FY2005: Northern States Power $3.2 million; Nodak $4.9 million.

Further research indicated that Northern States Power is a subsidiary of Xcel Energy. Northern States Power electric revenues ranged from $2.5 billion in 2003 and 2004 to $3.0 billion in 2005. The level of revenue from Grand Forks AFB identified in the vendor records represents a very small share of this revenue and is not likely to be of great concern to the utility as a whole.

Nodak, on the other hand, is a 13,000-member cooperative that serves only eastern North Dakota. Its service encompasses all or part of Cavalier, Pembina, Ramsey, Walsh, Benson, Nelson, Grand Forks, Eddy, Griggs, Steele, and Traill Counties. According to recent income statements, its electric revenues for the years 2003 through 2005 were $34.8 million, $37.4 million, and $38.7 million, respectively. Grand Forks AFB is the single largest load in the system. The vendor data indicated that Grand Forks AFB demand accounts for 10 to 13 percent of Nodak revenues. Given this, a 34.4 percent cut in Grand Forks AFB staffing would translate into a dip in revenues for Nodak in the range of 4 percent. Such a decrease is likely to be of concern to the coop. In fact, the coop's 2005 Annual Report indicates that they expect a substantial reduction in sales, but points to the arrival of the UAV mission as a source of interest.

SURVEY OF LOCAL FIRMS

As another part of this research project, an online survey of area employers was conducted to gauge their assessment of the impact of BRAC realignment. The survey resulted in 151 responses. Sixty-two percent of respondents expected some impact on their firm.

The firms responding to the survey represent a wide variety of industry sectors. Their industry identity and size (number of employees) is shown in Tables 50 and 51.

Table 50: Respondents by Industry Classification

Industry	Responses
Agriculture, Forestry, Fishing, & Hunting	4
Mining	1
Construction	13
Manufacturing	8
Wholesale Trade	3
Retail Trade	16
Transportation & Warehousing	9
Utilities	4
Information	2
Finance & Insurance	11
Real Estate & Rental & Leasing	6
Professional, Scientific & Technical Services	15
Management of Companies & Enterprises	4
Administrative & Support and Waste Management & Remediation Services	0
Education Services	10
Health Care & Social Assistance	9
Arts, Entertainment & Recreation	5
Accommodations & Food Services	6
Other Services, Except Public Administration	13
Public Administration	4
Not Elsewhere Classified	8
Total	**151**

Table 51: Full-Time and Part-Time Employees

Full-Time Employees	
Number of Employees	**Responses**
0	5
1-2	29
3-5	27
6-10	21
11-25	27
26–50	18
51–100	13
101–150	6
151–200	2
201–500	1
500+	2

Part-Time Employees	
Number of Employees	**Responses**
0	41
1-2	40
3-5	28
6-10	18
11-25	11
26-50	8
51-100	1
101-150	3
150+	1

Table 52 characterizes the interaction of the businesses with Grand Forks AFB. The respondents in Grand Forks, East Grand Forks, and Northwood seem to do the most business with the base.

Table 52: Please indicate which types of business activity (with Grand Forks AFB) will be affected.

Responses	City	State	Direct Business with Base	Business or Patronage by Military or Families	Both
5	Grafton	ND	0	0	1
1	Reynolds	ND	0	0	1
1	Thompson	ND	0	0	1
1	Buxton	ND	0	1	0
1	Emerado	ND	0	1	0
1	Pisek	ND	0	1	0
2	Larimore	ND	0	1	1
9	Northwood	ND	1	9	2
12	East Grand Forks	MN	3	7	2
103	Grand Forks	ND	38	46	17
136	**Total**		**42**	**66**	**25**

Subsequent questions in the business survey related to the communities reaction to BRAC. Ninety-seven percent of respondents indicated that they were aware of BRAC. Sixty-two percent indicated that they expect BRAC to hurt their business.

Respondents who expected the realignment to affect their business were asked to indicate the best description of their expectation of how the BRAC realignment would affect their revenues. Table 53 presents a tabulation of responses. As can be seen, the proportions indicating slight and large decreases in revenues far outpaced no change or any increase.

Table 53: Please indicate which selection best describes how you expect the realignment of Grand Forks AFB to affect your revenues.

Response	Percent
Large Decrease	33%
Slight Decrease	56%
No Change	6%
Slight Increase	4%
Large Increase	0%

These respondents were also asked to indicate the type of changes already made in anticipation of BRAC. The 88 responses broke down as indicated in Table 54. "No Change" dominated except for Markups where a slight decrease was indicated. Some decreases in Inventories, Hours of Operations, and Number of Locations were noticeable.

Table 54: Please indicate the nature of changes that you have made in any of the following areas in anticipation of BRAC impact. (If any of the following do not apply, please check N/A)

	Large Decrease	Slight Decrease	No Change	Slight Increase	Large Increase	N/A	Total
Staffing	5%	10%	64%	0%	0%	22%	100%
Inventories	1%	10%	61%	0%	0%	27%	100%
Hours of Operation	1%	6%	69%	0%	0%	24%	100%
Number of Locations	2%	68%	3%	0%	0%	26%	100%
Markups	0%	1%	65%	3%	0%	31%	100%
Advertisements	2%	7%	55%	11%	1%	24%	100%
Other	1%	1%	57%	1%	0%	40%	100%

The same set of respondents was also asked to indicate the types of changes that were planned. The responses are characterized in Table 55. Again, "No Change" dominated the responses, but a larger share of responses indicated slight decreases in amount for all categories except Markups. Perhaps with recent increases in inflation, cut backs in margin do not seem feasible. The share of large decreases also rose.

Table 55: Please indicate the nature of changes you plan to make in any of the following areas in anticipation of BRAC impact. (If any of the following do not apply, please check N/A)

	Large Decrease	Slight Decrease	No Change	Slight Increase	Large Increase	N/A	Total
Staffing	6%	31%	48%	1%	0%	15%	100%
Inventories	3%	24%	45%	0%	0%	27%	100%
Hours of Operation	1%	9%	68%	0%	0%	22%	100%
Number of Locations	1%	5%	67%	3%	0%	24%	100%
Markups	0%	3%	60%	7%	1%	28%	100%
Advertisements	1%	11%	48%	23%	2%	15%	100%
Other	0%	1%	55%	3%	0%	41%	100%

Respondents who thought that the realignment would not affect revenues were asked to indicate the nature of changes they have planned. Table 56 below presents a breakdown of the responses. The majority of responses indicated no change for most categories, with the exception of staffing where 43 percent plan a slight increase. No large decreases are planned, but slight decreases are planned by several firms.

Table 56: If you feel that the realignment of the Grand Forks AFB will not affect your revenues, please indicate the nature of any changes you plan to make in you business within the next 3 years.
(If any of the following do not apply, please check N/A)

	Large Decrease	Slight Decrease	No Change	Slight Increase	Large Increase	N/A	Total
Staffing	0%	12%	33%	43%	5%	7%	100%
Inventories	0%	5%	53%	12%	5%	24%	100%
Hours of Operation	0%	3%	76%	9%	2%	10%	100%
Number of Locations	0%	7%	72%	0%	14%	7%	100%
Markups	0%	2%	53%	16%	0%	29%	100%
Advertisements	0%	3%	52%	28%	0%	17%	100%
Other	0%	2%	41%	3%	0%	53%	100%

When businesses were asked if there are any positions that are hard to fill, there were approximately 80 responses, with some positions mentioned multiple times. The list of identified positions can be found in Appendix 5. Respondents were also asked to suggest future training needs. A summary of responses to that question is shown in Table 57. The responses were dispersed across most categories, as shown in the table.

Table 57: Where do you see your company's future training needs?

Response	Percent
Do Not Foresee Any Future Training Needs	31%
Managerial	20%
Supervisory	25%
Technical	30%
Professional	23%
Production	7%
Customer Service	26%
Sales	23%
Administrative/Support	12%
Instructor/Training	9%
Other	2%

Finally, respondents were given the opportunity to enter questions, comments, ideas, or concerns regarding BRAC. Approximately 30 firms provided input. Many respondents seemed concerned about BRAC. A large portion indicated concern regarding the consequences of BRAC on their business. A summary of responses to this question are included in Appendix 5.

SECTION 4
IMPACT ON THE REAL ESTATE MARKET

This section examines the real estate market in Grand Forks, with emphasis on the residential sector. An overview of the real estate markets in Grand Forks County, and the surrounding counties, which include Nelson, Traill, Walsh and Polk Counties is presented in Appendix 6. Appendix 7 is a summary of affordable housing issues in Grand Forks.

In order to present the most comprehensive information possible on this market, the researchers relied on both statistical and empirical data. In conducting research on the Grand Forks real estate market, the team consulted numerous sources, including local public officials, real estate brokers, real estate developers, and entrepreneurs, as well as publications and reports from national research organizations, financial rating agencies, and governmental agencies. While the Grand Forks real estate market is constantly developing and changing, the information contained in this report is meant to present the current status of the market, and is based on the most current data available.

OVERVIEW OF FINDINGS

In general, the Grand Forks real estate market has been very robust, with the exception the downtown office sector, exhibiting strength in the housing, industrial, and retail sectors. There have been numerous real estate projects completed within the past few years, and several more are either under construction or in the planning stages. Statistical data, as well as conversations with local real estate professionals and public officials, present a picture of strength. Additionally, the local real estate professionals consulted for the study remain optimistic about the long-term prospects for the Grand Forks market and do not have serious concerns that the Grand Forks AFB realignment will have a significant negative effect on real estate. The general sentiment is that Grand Forks has been a resilient market, having experienced four economic shocks during the 1990s, the previous downsizing of Grand Forks Air Force Base, the 1997 flood, the agricultural recession, and the weak Canadian dollar. The past resilience of Grand Forks, combined with the current momentum in the Grand Forks real estate market, contributes to a positive outlook about the market despite the base realignment.

Highlights of the Grand Forks real estate market include the following:

- Overall apartment vacancy of 5.4%.[26]
- Average home sales price of $155,919 as of May, 2006; an increase from $151,763 for all of 2005.[27]

[26] Greater Grand Forks Apartment Association, Vacancy Survey, February 2006.
[27] Colter, John. Association Executive, Grand Forks Board of Realtors.

- Strong downtown housing market as evidenced by robust demand for new condominium developments.
- Strong demand for industrial space from tenants such as LM Glasfiber, and Cirrus Design Corporation.
- Significant new retail development including Kohl's, Wal-Mart Super Center Expansion, and Subaru expansion.[28]
- Development of the Canad Inn hotel, water park, and cinema project.
- $91 million in current and planned construction expenditures at University of North Dakota (UND).[29]
- Proposed REAC bio-research facility.
- Total projected 2006 construction value of $247 million in the Grand Forks Metropolitan Statistical Area (MSA).[30]

DOWNTOWN HOUSING MARKET

The downtown housing market in Grand Forks has been particularly strong. Elite Brownstones is a 27-unit condominium development located in downtown Grand Forks, on the former site of the Memorial Park and Herald's East parking lot. The Elite Brownstones project broke ground in April 2006 and sold out prior to completion of construction. Other downtown housing projects include Metro Lofts, a 21-unit apartment project being developed on the site of the former opera house building, as well as preliminary plans for a condominium project in the YWCA building and an apartment project in the Griffith's Building at 3rd and DeMers. There are also plans for a second phase of Elite Brownstones, which will include 32 additional units.

Properties located in the 22 shaded blocks may be eligible for Ren Zone Program incentives.

In addition to strong market demand, another factor driving the development of downtown housing is its designation as a Renaissance Zone, a statewide project designed to encourage reinvestment and redevelopment in a defined geographic area. Properties located in the Renaissance Zone may be eligible for state income tax credits and local property tax exemptions. The Grand Forks Renaissance Zone encompasses 22 downtown blocks, and 11 Renaissance Zone projects, including Elite Brownstones, have been approved since establishment of the Zone in 2001[31]. Additionally, the Grand Forks Office of Urban Development established a Rental Rehabilitation Program that provides no- and low-interest loans for upgrading existing downtown apartments

[28] Gengler, Brad. Grand Forks Planner.
[29] Moody Investor Services Report, Grand Forks, ND. October 6, 2005.
[30] Dodge Market Look, Grand Forks, ND-MN. 3rd Quarter 2005.
[31] 2005 Annual Report, Office of Urban Development.

or converting non-residential space to rental units. The program was established in late 2005, and its boundaries are identical to those of the Renaissance Zone.[32] The project team anticipates that the new downtown housing development will also lead to increased retail demand downtown, as new residents demand convenient retail options.

32ND AVENUE SOUTH

The 32nd Avenue South area is a major retail corridor in Grand Forks that has experienced significant growth over the past several years, and continues to show considerable strength and development activity. 32nd Avenue South is home to the Target shopping center, and includes major retailers such as Target, Wal-Mart, Best Buy, Bed Bath & Beyond, Menards, and PETCO. Development along 32nd Avenue South began after the 1997 flood, and was spurred in part by a million dollar infrastructure investment by the city.[33] Current development projects on 32nd Avenue South include a new Kohl's Department Store, 11 acres of associated commercial development, the expansion of the Wal-Mart Super Center, and a new strip mall. Future growth along 32nd Avenue South will be restrained by the limited availability of developable land as the corridor is largely built-out, with only one significant development site remaining.[34] The project team anticipates the constrained supply of developable land along 32nd Avenue South will lead to an increase in rents in the area, as well as a shift of the focus for new development away from 32nd Avenue.

SOUTH WASHINGTON STREET

South Washington Street has experienced significant development within the last three years. Current development projects on South Washington Street include a new Wells Fargo Bank, and an expansion of the Stadter Medical Center. Because of the build-out of the 32nd Avenue South corridor, it is anticipated that much of the future growth will shift to South Washington Street. According to the Grand Forks City Planner, the vision for South Washington Street includes a mix of single-family residential and commercial uses, with the focus on creating a pedestrian friendly environment.

INDUSTRIAL PARK

The Grand Forks Industrial Park is a major focus of activity for industrial space within Grand Forks. The Industrial Park was built to spur economic development and was constructed largely through public financing.[35] The Industrial Park is home to major tenants such as Amazon.com, LM Glasfiber, and Cirrus Design Corporation. Cirrus Design recently expanded by 93,000 square feet, and LM Glasfiber has expanded into 75,000 square feet of space previously

[32] 2005 Annual Report, Office of Urban Development.
[33] Grand Forks Region Economic Development Corporation.
[34] Gengler, Brad. Grand Forks Planner.
[35] Grand Forks Region Economic Development Corporation.

occupied by Amazon.com. Additionally, PS Doors is undertaking a project to build 32,000 square feet of space in the Industrial Park. Currently, there is approximately 50,000 square feet of vacant space in the park.

UNIVERSITY OF NORTH DAKOTA

The University of North Dakota (UND) is a significant source of real estate activity in Grand Forks. In the past decade, UND has expanded from 5.1 million square feet to more than 5.6 million square feet; and since 2001, UND has leased more than 500,000 square feet of land for development, including residential housing, retail, and hospitality.[36] In the past eight years, UND has completed $350 million in new construction, including the $104 million Ralph Engelstad Arena and the $10 million Hilton Garden Inn. Additionally UND has $44 million in projects in progress, including the new parking ramp and the Wellness Center, and another $47 million planned.[37]

Another important element of UND's real estate activities is its involvement with the Tech Park. The Tech Park is located on 55 acres on the western edge of UND, and includes eight buildings representing $33 million in construction and infrastructure expenditures. The tech park includes two business incubators, five other buildings that are home to technology-related companies; as well as the 100-room Hilton Garden Inn. There are currently 25 acres left to develop, and the tech park is seeking to acquire 24 additional acres, which will be used for aerospace and UAV research and commercialization.[38] The UND Aerospace Foundation at the tech park is conducting a $120 million fund drive called "Innovation and Entrepreneurship in Aerospace" to keep the UND aerospace programs world-class and state-of-the-art. The Aerospace Foundation has plans to build a new $25 million research facility in the UND Tech Park.[39]

CANAD INNS DEVELOPMENT

A well known Canadian Hotel Chain, Canad Inns, is building a hotel, cinema, and water park complex adjacent to the Alerus Center, an entertainment and convention center that opened in Grand Forks in 2001. The Canad Inn project will feature a 400-room hotel, a 45,000 square foot indoor water park and aquatics center, and a 10-screen multiplex cinema. The project will encompass 200,000 square feet, and is projected to cost $40 million.[40] It is scheduled to open in spring 2007.[41] The Canad Inn project is anticipated to increase hotel demand by attracting additional Canadian visitors who recognize the Canad Inn brand and who otherwise would not have considered Grand Forks as a destination.

[36] Moody Investor Services Report, Grand Forks, ND. October 6, 2005.
[37] Moody Investor Services Report, Grand Forks, ND. October 6, 2005.
[38] Gjovig, Bruce. Director, Center For Innovation.
[39] Gjovig, Bruce. Director, Center For Innovation.
[40] Moody Investor Services Report, Grand Forks, ND. October 6, 2005.
[41] http://www.canadinns.com.

HOUSING MARKET

The Grand Forks housing market has exhibited many signs of strength. As of February 2006, overall apartment vacancy was only 5.4 percent, and average home prices as of May 2006 are up 2.7 percent compared to 2005.[42] There is significant construction of new housing, especially in the downtown market. According to Grand Forks broker Kevin Ritterman of Dakota Commercial, in the first quarter of 2006, he had performed more residential closings than in any previous quarter. Based on information provided by the Grand Forks City Planner, there are 839 new home sites currently approved or in the approval process. Total residential construction in the Grand Forks MSA was valued at $64,073,000 in 2005, and is projected to be $77,879,000 in 2006, representing a 22 percent increase.[43] Single-family construction in 2005 in the Grand Forks MSA was valued at $46,121,000 and multifamily housing construction was valued at $17,952,000.[44] In 2006, the value of single-family and multifamily construction is projected to be $45,763,000 and $32,116,000, respectively.[45] Given the large increase in the value of multifamily construction, these numbers highlight the shift in the growth of Grand Forks housing from single-family development to multifamily.

Additionally, there is significant new and planned construction of housing in downtown Grand Forks. The 27-unit Elite Brownstones condominium development downtown broke ground in April 2006 and is already sold out.[46] Other downtown housing projects include Metro Lofts, a 21-unit apartment project being developed on the site of the former opera house building, as well as preliminary plans for a condominium project in the YWCA building and an apartment project in the Griffith's Furniture Building at 3rd and DeMers.[47] There are also plans for a second phase of Elite Brownstones, which will encompass 32 units.

POTENTIAL IMPACT OF THE BASE REALIGNMENT

The project team anticipates that the Grand Forks AFB realignment will have a moderate impact on the housing market. There are 2,450 active-duty airmen, 385 appropriated civilian personnel paid through appropriated funds, 215 non-appropriated fund employees, and 485 contractors and private business employees at the base. Adjusting the 2,450 airmen to reflect an estimated 147 married couples in which both are active duty personnel yields an estimated 2,303 households (families or single-airmen). 854 of these couples and singles are estimated to reside off-base, 3 of whom live outside the five-county region. Of the 385 appropriated-fund civilians, 19 are estimated to live outside the five-county area. All of the non-appropriated fund personnel are estimated to live in Grand Forks County.

[42] Colter, John. Association Director, Grand Forks Board of Realtors.
[43] Dodge Market Look, Grand Forks, ND-MN. 3rd Quarter 2005.
[44] Dodge Market Look, Grand Forks, ND-MN. 3rd Quarter 2005.
[45] Dodge Market Look, Grand Forks, ND-MN. 3rd Quarter 2005.
[46] Grand Forks Herald, *Springtime For Downtown Grand Forks Sees Boom In Investment Activities*, April 3, 2006.
[47] Hoover, Greg. Director, Urban Development.

As a result of the realignment, airmen and civilian families will leave the area causing additional vacancy in the housing market. The most likely BRAC realignment scenario is that about 34.4 percent of the jobs at Grand Forks AFB will be lost by 2011. Of the 854 off-base airmen households estimated above, 293 would be lost from the five-county region. Of the 600 appropriated and non-appropriated employees, 200 are estimated to be lost from the five-county region. The direct, indirect, and induced impact of the loss of these households, plus a 34.4 percent reduction in vendor spending, would come to another approximate 649 positions no longer being supported in the five-county area. Assuming one household per position, the military and civilian employee losses would account for 494 households. Together with the 649 employment impact, a total of up to 1,142 households would be vacated in the area.

The potential loss of households could have a significant negative impact on housing vacancy in Grand Forks, if all of the losses occur within a condensed period. If the losses are staggered, then the impact would be somewhat less substantial. The following analysis demonstrates the maximum impact on vacancy in the housing market if all of the losses of households were to occur at the same time. Assuming that the proportion of residents who lose their employment as a result of the realignment who own homes as opposed to renting is the same as for the general population, at 50.5%, then the total number of homes that would be put on the market for sale would be 527.[48] Based on the total number of homes that were sold in the City of Grand Forks in 2005 of 519, the 527 additional homes represents an additional twelve month supply of housing inventory.[49] Additionally, assuming that 49.5% of the 19,674 occupied units in Grand Forks are rental units, which equals the proportion of the population of Grand Forks that are renters, and assuming that the same proportion of residents who lose their employment as a result of the realignment that are renters equals that of the general population of Grand Forks, then an additional 517 rental units would become vacant as a result of the downsizing.[50] This decrease in occupied units then would represent an additional 5.3% in rental vacancy.

Table 58 presents the estimated households lost by county by category as an indicator of the potential for impact on housing demand.

[48] City of Grand Forks Consolidated Plan, page 2-9/ US Census.
[49] Colter, John. Association Executive, Grand Forks Board of Realtors.
[50] City of Grand Forks Consolidated Plan, page 2-9/ US Census.

Table 58: Estimated Households Lost by County

County	Airmen Lost	Civilians Lost	Employment Impact	Potential Households Vacated
Grand Forks (off-base)	257	180	597	1,034
Polk	22	9	39	70
Nelson	3	2	5	10
Traill	9	8	6	23
Walsh	2	1	2	5
Total	**293**	**200**	**649**	**1,142**

Additionally, for the surrounding counties, assuming that the same proportion of residents who lose their employment as a result of the realignment that are renters and those that are homeowners is the same as for the general population, then based on data from the 2000 Census, the resulting impact on vacancy would be as follows:

Grand Forks County – Increase in vacancy of 3.81% from 7.1% to 10.82%.

Polk County – Increase in vacancy of 0.53% from 13.8% to 14.33%.

Nelson County – Increase in vacancy of 0.55% from 19.2% to 19.75%.

Traill County – Increase in vacancy of 0.63% from 9.9% to 10.53%.

Walsh County – Increase in vacancy of 0.08% from 12.6% to 12.68%.

Statistical data on the Grand Forks Housing Market are presented below.

Table 59: Grand Forks Housing Overview by Zip Code[51]

	Grand Forks	58201	58202	58203	58204-AFB	58205-AFB
Median Age	28.3	25	38.9	36.5	32.7	24.8
Median Cost	$140,800	$155,300	N/A	$118,100	$65,900	$140,600
Homes Owned	48.27%	52.51%	N/A	45.45%	1.66%	5.72%
Homes Rented	47.13%	42.73%	N/A	48.2%	82.96%	92.08%
Housing Vacant	4.60%	4.76%	N/A	6.35%	15.38%	2.20%
Apartment Rent	$559	$559	$559	$559	$559	$559

[51] www.BestPlaces.net.

Table 60: Grand Forks, ND and East Grand Forks, MN Housing Sales[52]

Category	2006 through May	2005 Whole Year
Total Home Sales	**143**	**606**
Average Sales Price	$155,919	$151,763
Average Days on Market	107	96

Over the past five years there has been a steady increase in the apartment inventory in Grand Forks. The following data illustrate this trend.

Table 61: Grand Forks Apartment Inventory by Year[53]

Year	Apartment Properties	Apartment Units
2006	465	7,914
2005	461	7,832
2004	451	7,398
2003	447	7,308
2002	445	7,214

COMMERCIAL REAL ESTATE — RETAIL

Grand Forks has experienced substantial retail development over the past several years and has become a regional retail hub, drawing retail business from the surrounding region, as well as Canadian tourists who visit Grand Forks in order to shop. Much of the recent growth in the retail sector can be attributed to the influence of Canadian shoppers.[54] Retail activity in Grand Forks is concentrated along 32nd Avenue South, South Washington Street, in the Columbia Mall, and the Central Business District, which is experiencing a recovery in the retail market. Total square footage of new construction for stores and restaurants in the Grand Forks MSA was 149,000 square feet in 2005 and is projected to be 132,000 in 2006.[55] Total construction value of stores and restaurants in the Grand Forks MSA in 2005 was $11,572,000 and is projected to be $9,049,000 in 2006.[56] The project team believes that the slowdown in retail construction does not reflect a soft retail market, but rather is a reflection of the build-out of the 32nd Avenue South area, and the shortage of new available retail sites.

[52] Colter, John. Association Executive, Grand Forks Board of Realtors.
[53] Herz, John. Grand Forks Assistant Assessor.
[54] Grand Forks Draft 2035 Plan.
[55] Dodge Market Look, Grand Forks, ND-MN. 3rd Quarter 2005.
[56] Dodge Market Look, Grand Forks, ND-MN. 3rd Quarter 2005.

A July 2004 survey by Mel Carsen, Grand Forks City Assessor, indicated a total of 3,703,694 square feet of retail space in Grand Forks at the time of the survey.

32nd Avenue South And South Washington Street

Much of the retail activity has occurred along 32nd Avenue South, which emerged as a major retail corridor after the flood. Retail activity along 32nd Avenue South was fueled in part through a million dollar investment in infrastructure by the city.[57] The area is home to major retailers such as Target, Wal-Mart, Best Buy, Bed Bath & Beyond, Menards and PETCO. Current development projects on 32nd Avenue South include a new Kohl's Department Store, and 11 acres of associated commercial development, the expansion of the Wal-Mart Super Center, and a new strip mall. Upon completion of these projects, developable space will be limited along 32nd Avenue South, and the retail development focus will shift to South Washington Street. Current development projects on South Washington Street include a new Wells Fargo Bank, and an expansion of the Stadter Medical Center.

Columbia Mall

In addition to 32nd Avenue South, and South Washington Street, another major retail presence in Grand Forks is the Columbia Mall. The Columbia Mall contains 622,000 square feet of gross leasable area and is home to major retailers including Sears, JC Penney and Macy's. Other national tenants include Victoria's Secret, Aeropostale, Gap, Bath & Body Works, Zales, Kay Jewelers and Helzberg Diamonds.[58] According to Dan Sullivan of GK Development Inc., the mall is doing well with increasing sales and decreasing vacancy. The mall was opened in 1978 and underwent a renovation in 2000. It is owned by GK Development Inc.[59]

Downtown

The downtown area has traditionally been a difficult retail market. Retail in the Central Business District is still softer than in other local markets, however the retail trend downtown is positive, and continued growth can be projected as new downtown housing units come on-line. Retail growth in downtown since the start of 2006 includes a yoga and dance studio, a photo studio and art gallery, an upscale lounge called Toasted Frog, and a new artisan bakery.[60] In addition, the new owner of St. John's Block apartment building has plans for an art gallery and wine bar on the main floor, and potentially a grocery store in the basement.[61]

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[57] Grand Forks Economic Development Corporation.
[58] http://www.gkdevelopment.com/pages/columbia_mall/27.php (accessed in June 2006).
[59] http://www.gkdevelopment.com/pages/columbia_mall/27.php (accessed in June 2006).
[60] Tran, Tu-Uyen. 2006. *SPRINGTIME FOR DOWNTOWN GRAND FORKS SEES BOOM IN INVESTMENT ACTIVITIES*. Grand Forks Herald, April 3.
[61] Tran, Tu-Uyen. 2006. *SPRINGTIME FOR DOWNTOWN GRAND FORKS SEES BOOM IN INVESTMENT ACTIVITIES*. Grand Forks Herald, April 3.

Illustrative of the recovery in downtown retail is a February 2002 study by City Assessor Mel Carson showing downtown retail vacancy at 48%, compared to a July 2004 study by Mel Carsen showing downtown retail vacancy at only 25%.

RENTAL RATES

While no formal statistical data are available for retail rental rates, conversations with brokers and developers revealed the following.

According to Kevin Ritterman of Dakota Commercial, rental rates for big box retail space are $10 per square foot on a triple net lease, and strip mall space ranges from $11-17 per square foot on a triple net lease.

According to Ken Welter of Crary Real Estate, retail rents range between $12-$15 per square foot on a triple net lease.

Dan Sullivan of GK Development Inc. indicated that retail space in the Columbia Mall ranges from $20-$50 per square foot.

AVAILABLE SPACE

The largest unoccupied block of retail space in Grand Forks is the former Target Store space located in the Columbia Mall. Upon vacating the space and moving to its new location on 32nd Avenue, Target returned the 120,000 square foot space back to the Columbia Mall with restrictions in place to prohibit a competitive use. Dan Sullivan of GK development indicated that the company is developing plans for the space, however he declined to elaborate on the details. The project team believes that the space would be well suited for another anchor tenant, or for an expansion of the mall to accommodate a number of smaller specialty retailers. Another unoccupied retail space is the site of the former Best Products Store at 2500 S. Columbia Road which, according to Kevin Ritterman, contains approximately 20,000 square feet.

A partial list of available retail space in Grand Forks follows:[62]

[62] Grand Forks MLS.

Table 62: Commercial Real Estate Available Retail Space, Grand Forks, ND

Location	Size in SF	Price/ Rent	Price/Rent / PSF
1923 Gateway Drive	7,589	$550,000	$72.47
3805 Gateway Drive	7,000/ 1.10 acres	$1,418,333	$202.62
3200 Gateway Drive	2,880 / 4.27 acres	$315,900	$109.69
418 Gateway	2,792	$79,900	$28.62
1429 Washington St. South	1,500	$119,000	$79.33
1835 Washington St. South	1,450 (Gas Station)	$170,000	$117.24
1215 43rd St North	2,010 / 0.80 acres	$175,000	$87.06
1110 Washington St. South	22,500 (Gas Station)	$350,000	$15.56
3450 Gateway	23,261	$375,000	$16.12
202 3rd St North	7,240 / 0.72 acres	$450,000	$62.15
1301 University Ave	1,961 (Gas Station and Car Wash)	$450,000	$229.47
2207 DeMers Ave	4,890 / 0.84 acres	$485,000	$99.18
2475 Washington St. South	15,404 / 1.1 acres	$575,000	$37.23
7401 42nd St. North	3,600 retail & 600 sf apartment	$149,900	$35.69
2515 South Washington	15,500	$67,000 / Yr.	$4.00/ Yr. NNN
6,8 & 10 South 3rd	9,900	$59,400/ Yr.	$6.00 / Yr. NNN
311 DeMers	3,000	$30,000/ Yr.	$10.00/ Yr.
2215 Gateway Drive	1,500	$15,000 / Yr.	$10.00 / Yr.
1375 Columbia Rd	1,531	$18,372 / Yr.	$12.00 / Yr. NNN
623 Washington St. South	4,423	$53,076 / Yr.	$12.00 / Yr. NNN
1311 Washington St. South	2,600	$18,000 / Yr.	$6.92/ Yr.
4220A 5th Ave North	5,239	$72,000 / Yr.	$13.74 / Yr. NNN

(Note: NNN means Triple Net Lease. NNN leases require the tenant to pay operating expenses.)

COMMERCIAL REAL ESTATE — OFFICE

The office market in Grand Forks is somewhat softer than the residential, retail and industrial markets. The areas of development activity for office tend to be similar to the ones for the retail market, with 32nd Avenue South exhibiting the strongest rental rates, followed by South Washington, and a general weakness in the downtown office market.

Another significant Grand Forks office market project is the UND Tech Park. The UND Tech Park includes four single tenant office buildings, as well as an 18,000 square foot multi-tenant office building that is 90% occupied.[63] Additionally, there are two tech incubators at the park, where emerging companies can rent office space as small as a single computer terminal and

[63] Gjovig, Bruce. Director, Center For Innovation.

desk, on a flexible month-to-month basis.[64] In addition to the existing space in the Tech Park, there are 25 acres of land for future development, and the Tech Park is in the process of acquiring 24 more acres for future development, which will be used for aerospace and UAV research and commercialization.[65]

According to Dodge Market Look, total square footage of new construction for office space in the Grand Forks MSA was 18,000 square feet in 2005, down from 74,000 square feet in 2004. Construction of new office space in 2006 is projected to be 42,000 square feet. Total construction value of office space in 2005 was $2,487,000 and is projected to be $7,305,000 in 2006.

A July 2004 survey by Mel Carsen, Grand Forks City Assessor, indicated a total of 1,621,472 square feet of office space in Grand Forks at the time of the survey.

RENTAL RATES / TENANT IMPROVEMENTS

While no formal statistical data are available for office rental rates, conversations with brokers and developers revealed the following.

According to Kevin Ritterman of Dakota Commercial, office space in Grand Forks typically ranges from $8-$12 per square foot, and newly constructed office space can rent for $15 per square foot on a triple net lease.

According to Jack Wavra of Greenberg Realty, office space in Grand Forks typically ranges from $11 to $14 per square foot.

Ken Welter of Crary Real Estate provided the following rental ranges for office space: $6 per square foot in the downtown market, $12-$15 per square foot on South Washington Street and $15 per square foot on 32nd Avenue South.

Tim Crary of Crary Real Estate provided a range of $15-$17 for office rents on a triple net lease with expenses typically in the $3.50-$4.00 range. A tenant improvement allowance of $10 per square foot is also typical for office space in this price range.

None of the brokers interviewed reported any rent concessions being offered by landlords.

Rents at the business incubator at the UND Tech Park are between $350-$600 per month for a work station, depending on the size of the station.[66] According to Bruce Gjovig, Director of the Center for Innovation, this equals approximately $20 per square foot, however tenants of

[64] Gjovig, Bruce. Director, Center For Innovation.
[65] Gjovig, Bruce. Director, Center For Innovation.
[66] Gjovig, Bruce. Director, Center For Innovation

the incubators also have access to conference and meeting facilities, and small business consulting services, which are included in the rent.

VACANCY

The majority of the vacant office space in Grand Forks is in the downtown market, which has experienced sustained high vacancy rates. A July 2004 survey by Mel Carsen, Grand Forks City Assessor, indicated that 37.1% of the 469,118 square feet of downtown office space was vacant.[67] When combined with the fully occupied 347,061 square feet of public office space, the overall downtown vacancy rate drops to 21.3% at the time of the survey.[68] Additionally, the data are somewhat skewed by the fact that of the total vacant downtown office space, 120,025 square feet of the total 173,962 vacant square feet are located in three buildings, the phone company building, 322 DeMers, and 402 DeMers.[69]

Not considering the vacant space in the above mentioned three buildings, the total downtown vacancy rate at the time of the survey is 11.5% and only 6.6% when public office space is included.

While time has elapsed since the July 2004 survey, according to an executive with the Grand Forks Region Economic Development Corporation, the downtown market remains soft, and the downtown vacancy rate remains similar to the July 2004 survey.[70] Additionally, the executive indicated that the building at 322 DeMers Avenue is losing an entire floor of occupancy, which will add approximately 10,147 square feet of additional vacancy.[71]

AVAILABLE SPACE

There is significant available office space in downtown Grand Forks. There is currently approximately 30,000 square feet of office space available at Old Town Square located at 322 DeMers, and the property will soon have 40,000 square feet of vacancy. Additionally, Corporate Center #2 at 402 DeMers has approximately 31,000 square feet of available office space and The NW Bell Building at 113 N 5th Street has 56,000 square feet of available office space.[72] The former Civic Auditorium could also be utilized as office space, and includes 60,000 square feet and 160 parking spaces.[73]

[67] Inventory of Property by Occupancy in the Grand Forks Central Business District – Grand Forks As of 07-01-04.
[68] Inventory of Property by Occupancy in the Grand Forks Central Business District – Grand Forks As of 07-01-04.
[69] Inventory of Property by Occupancy in the Grand Forks Central Business District – Grand Forks As of 07-01-04.
[70] Grand Forks Region Economic Development Corporation.
[71] Grand Forks Region Economic Development Corporation.
[72] Inventory of Property by Occupancy in the Grand Forks Central Business District – Grand Forks As of 07-01-04.
[73] Grand Forks Region Economic Development Corporation.

Table 63: Commercial Real Estate - Office Space Available, Grand Forks, ND

Location	Size in SF	Price/ Rent	Price/Rent / Per SF (PSF)
2702 17th Ave South #A	1,512	$189,900	$125.59
1913 Washington St. South	3,937	$299,000	$75.95
2750 17th Ave South	4,128	$469,000	$113.61
405 Bruce Ave South	14,000	$91,000 / Yr.	$6.50 / Yr.
1604 Washington St. South	20,809	$145,663 / Yr.	$7.00 / Yr. NNN
212 4th St. South	25,412	N/A	$8.00-10.00 / Yr. Includes Utilities
4775 Technology Circle	5,400	$48,600 / Yr.	$9.00 / Yr. NNN
2812 17th Ave South #C	1,936	$19,360 / Yr.	$10.00 / Yr.
12 3rd St. South	1,190	$13,090 / Yr.	$11.00/ Yr. Utilities included
3100 Columbia Road South #400	3,818	$64,906 /Yr.	$14 +$3 CAM / Yr. (CAM means Common Area Maintenance)
809 5th St North	756	$7,800 /Yr.	$10.31 / Yr.
1503 11th Ave North	1,150	$8,340 Yr.	$7.25 / Yr. Utilities Included
616 15th St South	1,800	$10,800 /Yr.	$6.00 / Yr. NNN
2534 17th Ave Suite G	1,350	$15,000 / Yr.	$11.11 / Yr. NNN

(Note: NNN means Triple Net Lease)

COMMERCIAL REAL ESTATE — INDUSTRIAL

There has been significant recent development in the Grand Forks industrial market. Much of the industrial development activity in Grand Forks centers around the Grand Forks Industrial Park. The Industrial Park was built to spur economic development and was constructed largely through public financing.[74] The Industrial Park is home to major tenants such as Amazon.com, LM Glasfiber and Cirrus Design Corporation. The Industrial Park encompasses approximately 400 acres, and there are currently approximately 70 acres of Greenfield sites available, as well as approximately 50,000 square feet of vacant space in the park.[75] An additional special feature of the park is that approximately 48 acres are designated as a foreign trade zone.[76]

INDUSTRIAL EXPANSION

There are a number of expansion projects in the Grand Forks Industrial Park that have recently occurred, or are currently underway. Cirrus Design recently expanded by 93,000 square feet, and LM Glasfiber has expanded into 75,000 square feet of space previously used by Amazon.com. Other expansion projects include the following:

[74] Grand Forks Region Economic Development Corporation.
[75] Grand Forks Region Economic Development Corporation.
[76] Grand Forks Region Economic Development Corporation.

Hood Packaging Corporation[77]

Since 1996 Hood Packaging Corporation has leased 31,353 square feet from the Grand Forks Growth Fund in the building at 4955 10th Avenue. In 2005 the Grand Forks Growth Fund approved the sale of the building (45,433 square feet) and the adjacent property parcel for $1,600,000. The Grand Forks Growth Fund expects the sale to close in the near future.

PS Doors[78]

PS Doors is constructing a new 32,000 square foot facility. In April 2006, the Growth Fund Committee approved of the sale of 5.5 in acres the Industrial Park for $143,748; reimbursement up to $90,000 for actual costs of soil remediation for the construction of the 32,000 square foot building; and a PACE interest buy-down loan in the amount of up to $135,000. The City Council approved a five-year declining property tax exemption for the project.

MnDak Concrete Inc[79]

MnDak Concrete is constructing a 6,900 square foot facility in the Industrial Park. The building will house a state-of-the-art concrete batching plant for producing high quality structural and architectural concrete products. The total project cost is $3.65 million and in April 2006 the Grand Forks Growth Fund approved a PACE interest buy-down loan of $126,629. The City Council approved a five-year declining property tax exemption for the project.

According to Dodge Market Look, total square footage of construction for warehouse, manufacturing and lab space in the Grand Forks MSA was 179,000 square feet in 2005, and is projected to be 170,000 square feet in 2006. Total construction value of warehouse, manufacturing and lab space in the Grand Forks MSA in 2005 was $14,836,000 and is projected to be $14,185,000 in 2006.

RENTAL RATES

While no formal statistical data are available for industrial rental rates, the following chart shows the range of rental rates for tenants of the Grand Forks Industrial Park. An important note, when considering industrial rental rates in Grand Forks, is that many of the rents in the

[77] Hoover, Greg. Director, Urban Development.
[78] Hoover, Greg. Director, Urban Development.
[79] Hoover, Greg. Director, Urban Development.

Industrial Park are at below market rates, as the Grand Forks Growth Fund uses attractive rental rates to entice businesses to locate and expand within Grand Forks.[80]

Table 64: Commercial Real Estate - Industrial Grand Forks Industrial Park Rental Rates[81]

Range in SF	Price/Rent / PSF
31,000 – 158,000	$2.50 - $5.74

AVAILABLE SPACE

Available industrial space in Grand Forks is currently very limited. Rather than building "spec" development, most industrial development in Grand Forks is build to suit development that is constructed when a future tenant demands space, particularly for users demanding in excess of 20,000 square feet. According to an executive of the Grand Forks Economic Development Corporation, there are two primary options for tenants seeking industrial space in Grand Forks. The first option is for the JDA to construct the space and lease it to the tenant, and the second option is for the tenant to enter into an arrangement for a local developer to build the space which is then leased to the tenant.[82] There is currently approximately 50,000 square feet of industrial space available in the industrial park. Other available industrial space in Grand Forks is presented in the following chart.

[80] Grand Forks Region Economic Development Corporation.
[81] Hoover, Greg. Director, Urban Development.
[82] Grand Forks Region Economic Development Corporation.

Table 65: Commercial Real Estate - Industrial Available Industrial Space, Grand Forks, ND[83]

Location	Size in SF	Price/ Rent	Price/Rent / PSF
5700 Gateway	45,000	$685,000	$15.22
6105 Gateway	39,400	$1,250,000	$31.73
3901 Washington St South	130,550 (Storage Units)	$1,010,000	$7.74
1325 Dyke Ave	5,464	$169,900	$31.09
1323 8th Ave North	2,485	$245,000	$98.59
5205 Gateway Dr	12,000	$60,000 / Yr.	$5.00 / Yr. Tenant Pays Utilities
1000 3rd St North	10,300	$41,200 / Yr.	$4.00/ Yr. NNN

LAND

Table 66 itemizes commercial and residential land that is currently for sale in the city of Grand Forks.

Table 66: Available Land, Grand Forks, ND[84]

Location	Size in Acres	Price	Price / Acre
RR Merrifield Road Across from golf course	37.21	$639,600	$17,189
Washington St South West Side next to Cancer Center	Three 3.3 acre lots	$599,000	$181,515
1751 42nd St South	21.17	$5,532,991	$261,360
301 Desiree Drive	2	$167,900	$83,950
RR N 42nd St	15	$150,000	$10,000
659 Vineyard Dr	0.58	$86,900	$149,828
647 Vineyard Dr	0.58	$82,900	$142,931
6351 Sandalwood	2.5	$66,500	$26,600
40th Ave South	14 home sites	$59,900/site	N/A
3601 Lynwood Circle	0.56	$57,900	$103,393
4732 Pines Circle	0.21	$43,000	$204,762

COUNTY DATA

In addition to examining the real estate market in Grand Forks proper, the project team also studied the real estate market on a county level, including data from Grand Forks County as

[83] Grand Forks MLS.
[84] Grand Forks MLS.

well as Nelson, Traill and Walsh Counties in North Dakota and Polk County, Minnesota. Much of the information presented for these counties is based on US Census data, and information on real estate values in these counties was also collected from the county assessors' offices.

A brief overview of the real estate market for each county is presented below. For more detailed information on each county, please refer to Appendix 6 of this report.

Grand Forks County, North Dakota

Grand Forks County is the largest county in terms of population and economic activity of the five counties that were studied. The real estate market in Grand Forks County is centered on activity in the City of Grand Forks, and has exhibited strong growth over the past several years. As of 2000, the population of Grand Forks County was 66,109, and the median household income was $35,785. Based on data from the 2000 Census, there were 27,373 housing units in Grand Forks County, of which 92.9% were occupied. Of the occupied housing units, 53.9% were owner occupied, while the remaining 46.1% were occupied by renters. The median value of owner occupied housing units was $92,800, while the median rent was $477.

Growth in the real estate market in Grand Forks County can be seen through the following information obtained from the Grand Forks County Finance and Tax Department. Between 2000 and 2005, the value of residential property in Grand Forks County increased from $1,196,784,978 to $1,694,588,533, a 41.5% increase. During the same period, the value of commercial property increased from $744,463,720 to $976,144,280, a 31.1% increase.

Nelson County, North Dakota

As of 2000, the population of Nelson County was 3,715, and the median household income was $37,406. Based on data from the 2000 Census, there were 2,014 housing units in Nelson County, of which 80.8% were occupied. Of the occupied housing units, 80.2% were owner occupied, while the remaining 19.8% were occupied by renters. The median value of owner occupied housing units was $36,100, while the median rent was $275.

Growth in the real estate market in Nelson County can be seen through the following information obtained from the Nelson County Office of Tax Equalization. Between 2000 and 2005, the value of residential properties in Nelson County increased from $23,561,618 to $25,617,463, an 8.7% increase. Over the same time period, the value of commercial properties increased from $13,490,183 to $15,607,895, a 15.7% increase.

Traill County, North Dakota

As of 2000, the population of Traill County was 8,477, and the median household income was $37,445. Based on data from the 2000 Census, there were 3,708 housing units in Traill County, of which 90.1% were occupied. Of the occupied housing units, 72.6% were owner occupied, while the remaining 27.4% were occupied by renters. The median value of owner occupied housing units was $60,000, while the median rent was $344.

Growth in the real estate market in Traill County can be seen through the following information obtained from the Traill County Tax Director. Between 2001 and 2006, the value of residential properties in Traill County increased from $113,418,711 to $152,382,684 a 34.3% increase. Over the same time period, the value of commercial properties increased from $76,423,281 to $91,070,677, a 19.2% increase.

Walsh County, North Dakota

As of 2000, the population of Walsh County was 12,389, and the median household income was $33,845. Based on data from the 2000 Census, there were 5,757 housing units in Walsh County, of which 87.4% were occupied. Of the occupied housing units, 76.8% were owner occupied, while the remaining 23.2% were occupied by renters. The median value of owner occupied housing units was $52,100, while the median rent was $361.

Growth in the real estate market in Walsh County can be seen through the following information obtained from the Walsh County Director of Tax Equalization. Between 2000 and 2005, the value of residential properties in Walsh County increased from $136,061,401 to $153,121,854, a 12.5% increase. Over the same time period, the value of commercial properties decreased from $66,222,472 to $63,563,829, a 4.0% decrease.

Polk County, Minnesota

As of 2000, the population of Polk County was 31,369, and the median household income was $35,105. Based on data from the 2000 Census, there were 14,008 housing units in Polk County, of which 86.2% were occupied. Of the occupied housing units, 74.1% were owner occupied, while the remaining 25.9% were occupied by renters. The median value of owner occupied housing units was $75,000, while the median rent was $396.

Growth in the real estate market in Polk County can be seen through the following information obtained from the Polk County Assessor. Between 2000 and 2006, the value of residential properties in Polk County increased from $475,889,875 to $688,479,000, a 44.7% increase. Over the same time period, the value of commercial properties increased from $82,568,433 to $97,222,600, a 27.9% increase.

MARKET GROWTH

The project team anticipates a healthy long-term outlook for the Grand Forks real estate market. Given the current positive real estate dynamic and the strong demand, the Grand Forks real estate market is expected to remain vibrant and continue to grow. The long term driver of growth in the real estate market will be demand growth through an increasing population plus an amount needed to replace and upgrade older depreciated real estate assets.

Much of the future growth in Grand Forks may occur in the high-tech and research fields. The proposed UAV mission at Grand Forks Air Force Base, combined with the efforts of the UND Aerospace Foundation are anticipated to promote aerospace and engineering firms to locate and expand in Grand Forks. While industrial and light manufacturing will remain important, the project team anticipates the growth focus to shift to high-tech. Additionally, because high-tech and research oriented jobs are generally higher paying than those in industrial and light-manufacturing, income growth associated with the new jobs will likely have a positive impact on both the retail and housing markets in Grand Forks, as higher disposable incomes lead to greater retail spending and demand for higher priced homes. In addition to the above, expansion at the Energy and Environmental Research Center (EERC) in the areas of Biomass and Coal to Liquid Fuel should promote new economic development.

PERMITS AND ASSESSOR DATA

This section presents the historical growth in the number of apartment units and commercial buildings in Grand Forks, as well as their full assessed value. Additionally, historical data on building permits are presented. Between 2002 and 2006 the total number of apartment units in Grand Forks has grown from 7,214 to 7,914, a 9.7% increase.[85] The total number of commercial buildings has increased from 1,038 to 1,063, a 2.4% increase, and assessed value of commercial buildings has increased from $761,907,300 to $998,430,800 a 31% increase.[86]

Table 67: Market Growth Apartment Units by Year[87]

Year	Apt Properties	Apt Units
2006	465	7,914
2005	461	7,832
2004	451	7,398
2003	447	7,308
2002	445	7,214

[85] Herz, John. Grand Forks Assistant Assessor.
[86] Herz, John. Grand Forks Assistant Assessor.
[87] Herz, John. Grand Forks Assistant Assessor.

Table 68: Market Growth Commercial Buildings by Year[88]

Year	Commercial Buildings
2006	1,063 (partial year)
2005	1,055
2004	1,051
2003	1,045
2002	1,038

Table 69: Market Growth Assessed Value of Commercial Properties by Year[89]

Year	Value
2006	$998,430,800 (partial year)
2005	$921,064,100
2004	$858,607,300
2003	$804,375,600
2002	$761,907,300

Table 70: Market Growth Single Family Permits by Year[90]

Year	Number of Permits	Value
2006	23 (partial year)	$3,753,641(partial year)
2005	111	$18,264,346
2004	109	$16,577,687
2003	97	$16,548,811
2002	73	$13,325,023
2001	57	$11,300,016
2000	44	$7,007,827

[88] Herz, John. Grand Forks Assistant Assessor.
[89] Herz, John. Grand Forks Assistant Assessor.
[90] Grand Forks Inspections Department.

Table 71: Market Growth Town House Permits by Year[91]

Year	Number of Permits	Value
2006	2 (partial year)	$177,648 (partial year)
2005	91	$10,824,715
2004	115	$13,269,953
2003	89	$9,937,895
2002	49	$5,569,206
2001	10	$1,038,978
2000	6	$631,841

Table 72: Market Growth Multiple Dwelling Permits by Year[92]

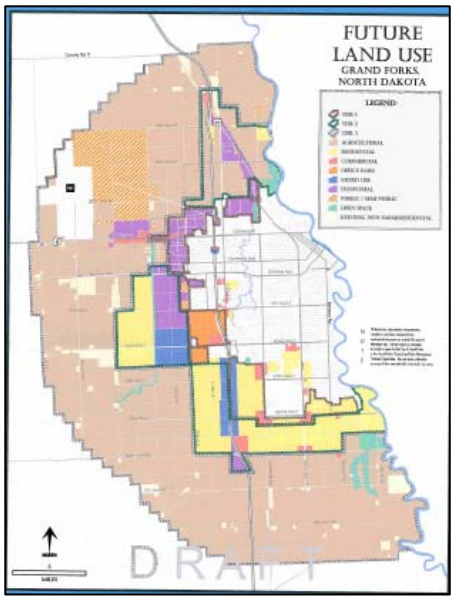
Year	Number of Permits	Number of Units	Value
2006	N/A	N/A	N/A
2005	9	268	$17,401,000
2004	9	227	$12,682,382
2003	12	312	$17,738,000
2002	3	118	$6,298,000
2001	2	32	$1,450,000
2000	N/A	N/A	N/A

Table 73: Market Growth Commercial Permits by Year[93]

Year	Number of Permits	Value
2006	2 (partial year)	$25,423,777 (partial year)
2005	24	$22,548,007
2004	23	$20,661,228
2003	18	$7,181,748
2002	17	$20,258,672
2001	21	$9,597,390
2000	15	$80,400,482

[91] Grand Forks Inspections Department.
[92] Grand Forks Inspections Department.
[93] Grand Forks Planning and Zoning Department.

2035 PLAN



Grand Forks County has adopted the 2035 Land Use Plan as a guide for county residents and decision-makers to plan for future growth and development through 2035. The purpose of the plan is to provide:[94]

- A guide to county residents and decision-makers to plan for future growth and development through 2035.
- A representation of the goals and values of the county and a vision for maintaining a high quality of life.
- A continuation of the fulfillment of state-mandated requirements to prepare a comprehensive plan to guide land use policies and regulation.
- Direction in making decisions such as zoning and land use requirements in the planning area, as well as transportation issues, floodplain management, and natural resource protection.

Additionally, the plan identifies areas for urban growth through 2055, with urban growth areas that are located adjacent to the City of Grand Forks to allow for the expansion of utilities and infrastructure in a cost-effective manner. The figure above shows a graphical representation of the future land use in the City of Grand Forks.

CONCLUSION

In summary, the Grand Forks real estate market has been generally strong and healthy. It exhibits strength in residential, retail, and industrial. The weakness in the office market is largely a result of high vacancy in the Central Business District, which is beginning to slowly recover as other uses such as retail and residential are being found for vacant office space. Because of the robust market, the diverse economy, and growth initiatives such as emphasis on research, technology, and aerospace, the project team does not foresee a significant long-term negative impact on the real estate market from the Grand Forks AFB realignment. Detailed real estate information for Grand Forks, Nelson, Traill, and Walsh Counties in North Dakota, and for Polk County in Minnesota, is provided in Appendix 6. Appendix 7 provides information on affordable housing in North Dakota and the Grand Forks area.

[94] Grand Forks Draft 2035 Plan.

SECTION 5
IMPACT ON SCHOOLS

There are currently about 1,100 students in kindergarten through 12th grade who have a military or federal civilian parent who works on Grand Forks AFB. The base has its own school district and school board. There are two schools located on the base, with 566 students in kindergarten through 8th grade. The Grand Forks AFB Public School District contracts with the Grand Forks Public School District to administer these on-base schools and to educate an additional 280 students, about 150 of whom attend Central High School in the City of Grand Forks. About 250 more students attend schools in other public school districts and private schools in the area. There are between 80 and 100 students in each of grades K through 8, and about 60 in each of grades 9-12. The 636 respondents to the military and APF civilian surveys that the team conducted identified 38 schools that their children attended. The Grand Forks AFB community is constantly changing, as are the numbers of base students in the schools in the five-county region.

If one-third to one-half of these 1,100 students left, there would be 375 to 550 fewer students in area schools and a proportionate reduction in teachers, other school support positions, and revenue from local, state, federal and other sources, including Impact Aid.

About 1,400 military personnel and large numbers of their spouses and dependents, as well as many civilian personnel who work on base take classes in local universities and technical schools, several of which offer classes on base. If one-third to one-half of these 2,000 plus students were eliminated, it would mean a loss of 670 to 1,000 students, and some of the over $1 million in Air Force Tuition Assistance and other funding associated with them.

KINDERGARTEN – 12TH GRADE

Sixty-five percent or 716 of the 1,100 students in kindergarten through 12th grade who have a military or federal civilian parent attend one of three schools. Carl Ben Eielson Elementary School and Nathan Twining Elementary and Middle School are located on the base and together have 566 students in grades K-8 as of September 2006. Another 150 Grand Forks AFB students attend a third school, Central High School, which has a total enrollment of 1,154 students in grades 9-12.

Table 74: Grand Forks AFB Students Who Attend On-Base Schools, by Grade (September 2006)

Schools on Grand Forks AFB	Grade	Number of Grand Forks AFB Students
Carl Ben Eielson Elementary School (Grades K-3)	K	77
	1	61
	2	88
	3	48
Nathan Twining Elementary (Grades 4-5) & Middle School (Grades 6-8)	4	55
	5	66
	6	57
	7	50
	8	64
Total		**566**

The following table shows the public school districts with the highest number of federally-connected students associated with Grand Forks AFB and the amount of Impact Aid the US Department of Education paid these districts in Fiscal Year 2006. About 977 of the current 1,100 Grand Forks AFB students attend school in one of these districts. The enrollment figures for FY 2006 payments are over 4 years old. Since then, the number of students from the base has already declined by about 400. For example, the number of students from the base in the Grand Forks AFB/Grand Forks Public School Districts alone has decreased by 300 students, from 1,150 in the 2001-2002 school year to about 850 in the 2006-2007 school year.

Table 75: Public School Districts that Received Impact Aid in Fiscal Year 2006 (Based on 2001-2002 School Year Enrollment)

Public School District	Grand Forks AFB Military Parent	Grand Forks AFB Civilian Parent	Total Grand Forks AFB Dependents (3 Years Ago)	Impact Aid (Paid in FY 2006)
Grand Forks AFB & Grand Forks	1,150	0	1,150	$6.9 Million
Emerado	12	52	64	$11,836
Hatton	31	7	38	$13,038
Larimore	34	62	96	$18,216
Northwood	21	27	48	$12,180

The following tables show the most recent enrollment data, by grade, for Emerado, Hatton, Larimore and Northwood School Districts. This data changes constantly as Grand Forks AFB families move frequently.

Table 76: Grand Forks AFB Students Who Attend Emerado Public School, By Grade

School and Grade	Total Enrollment	Grand Forks AFB Military Parent	Grand Forks AFB Civilian Parent	Total Grand Forks AFB Students
Emerado Public School				
Kindergarten	8	0	0	0
1st Grade	4	1	0	1
2nd Grade	11	0	4	4
3rd Grade	5	1	2	3
4th Grade	5	0	1	1
5th Grade	7	1	2	3
6th Grade	7	0	2	2
7th Grade	10	0	1	1
8th Grade	6	1	0	1
Total - Emerado School District (plus 56 high school students)	**63**	**4**	**12**	**16**

The Emerado Public School District also has 56 high school students who attend schools in the Grand Forks and Larimore school districts, some of whom are Grand Forks AFB students.

Table 77: Grand Forks AFB Students Who Attend Hatton Public School, By Grade

School and Grade	Total Enrollment	Grand Forks AFB Military Parent	Grand Forks AFB Civilian Parent	Total Grand Forks AFB Students
Hatton Public School				
Kindergarten	10	3	1	4
1st Grade	15	1	2	3
2nd Grade	14	3	0	3
3rd Grade	8	2	0	2
4th Grade	16	2	0	2
5th Grade	18	2	1	3
6th Grade	14	1	1	2
7th Grade	19	2	0	2
8th Grade	18	5	2	7
9th Grade	23	2	0	2
10th Grade	27	4	0	4
11th Grade	23	1	2	3
12th Grade	17	0	4	4
Total – Hatton School District	**222**	**28**	**13**	**41**

Table 78: Grand Forks AFB Students Who Attend Larimore Public Schools, By Grade

Grade	Total Enrollment	Grand Forks AFB Military Parent	Grand Forks AFB Civilian Parent	Total Grand Forks AFB Students
Larimore Elementary School	**2005-2006 School Year**			
Kindergarten	20	4	2	6
1st Grade	26	3	3	6
2nd Grade	40	1	3	4
3rd Grade	33	2	4	6
4th Grade	36	4	3	7
5th Grade	40	3	4	7
6th Grade	26	4	6	10
Subtotal	221	21	25	46
Larimore High School				
7th Grade	30	0	3	3
8th Grade	40	3	11	14
9th Grade	51	0	6	6
10th Grade	50	5	8	13
11th Grade	45	1	7	8
12th Grade	49	2	2	4
Subtotal	265	11	37	48
Total - Larimore School District	**486**	**32**	**62**	**94**

Table 79: Grand Forks AFB Students Who Attend Northwood Public School, By Grade

School and Grade	Total Enrollment	Grand Forks AFB Military Parent	Grand Forks AFB Civilian Parent	Total Grand Forks AFB Students
Northwood Public School				
Kindergarten	8	2	0	2
1st Grade	21	1	1	2
2nd Grade	26	3	0	3
3rd Grade	24	0	2	2
4th Grade	20	2	0	2
5th Grade	16	1	3	4
6th Grade	34	1	2	3
7th Grade	27	1	1	2
8th Grade	15	1	1	2
9th Grade	19	2	2	4
10th Grade	32	0	1	1
11th Grade	20	1	1	2
12th Grade	30	1	0	1
Total – Northwood School District	**292**	**16**	**14**	**30**

In addition to the school districts discussed in the tables above that received Impact Aid, Table 80 shows some of the private schools that small numbers of students from Grand Forks AFB attended last year.

Table 80: Some of the Private Schools that Several Grand Forks AFB Students Attended in the 2005-2006 School Year

School Name	Location
Holy Family School	Grand Forks, ND
New Testament Baptist School	Grand Forks, ND
St. Michael's Elementary School	Grand Forks, ND
Riverside Christian School	East Grand Forks, MN
Sacred Heart Elementary School	East Grand Forks, MN
Sacred Heart High School	East Grand Forks, MN

The table below summarizes the data presented above for various schools and shows the total number of Grand Forks AFB students by grade and the usual age for students in that grade.

Table 81: Summary of Grand Forks AFB Students, by Grade and Age

Grade	Usual Age	Number of Grand Forks AFB Students
Kindergarten	5	111
1st Grade	6	87
2nd Grade	7	122
3rd Grade	8	77
4th Grade	9	79
5th Grade	10	95
6th Grade	11	92
7th Grade	12	72
8th Grade	13	109
9th Grade	14	63
10th Grade	15	67
11th Grade	16	59
12th Grade	17	67
Total		**1,100**

When a school district loses a federally-connected student, it loses more than just the Impact Aid associated with that student. In general, it loses the revenue per student derived from local, state, federal, and other sources. Table 83 shows the amount of revenue per student that the public school districts in the five-county area received. For example, if the Emerado School District loses one student, it loses about $18,000 in school revenue annually. If the Grand

Forks AFB/Grand Forks School Districts lose one student, they lose about $9,000 in annual revenue.

In general, the student population in North Dakota is decreasing. On average, the 5-Year Enrollment Trend for public school districts in North Dakota is a minus 8.4 percent. However, some of the school districts in the five-county region are losing students at a faster rate. For example, Emerado enrollment dropped from the 72 students shown below in the 2004-2005 school year to 63 students in the 2006-2007 school year, Hatton dropped from 240 to 222 students this year, and Larimore dropped from 534 to 486 students last year.

Table 82: Summary of the Amount of Revenue Per Student, by County and by School District (2004-2005 School Year)

County	School District	Number of Students	Total Revenue	Revenue Per Student
Grand Forks	Emerado 127	72	$1,293,942	$17,971
	Grand Forks & Grand Forks AFB	7,525	$68,660,468	$9,124
	Larimore 44	534	$3,712,127	$6,952
	Manvel 125	144	$1,658,685	$11,519
	Midway 128	265	$2,264,098	$8,544
	Northwood 129	315	$2,556,476	$8,116
	Thompson 61	416	$2,524,447	$6,068
Polk	Climax	146	$2,285,573	$15,655
	Crookston (ASE)	1,469	$14,819,202	$10,088
	East Grand Forks	1,723	$14,266,829	$8,280
	Fertile (ASE)	533	$5,830,860	$10,940
	Fisher	294	$2,996,943	$10,194
	Fosston	650	$6,399,041	$9,845
	Win-E-Mac (ASE)	542	$5,126,265	$9,458
Nelson	Dakota Prairie 1	299	$3,089,491	$10,333
	Lakota 66	232	$1,852,220	$7,984
Traill	Central Valley 3	274	$1,924,452	$7,024
	Hatton 7	240	$1,936,269	$8,068
	Hillsboro 9	411	$3,088,548	$7,515
	May-Port CG 14	583	$3,921,286	$6,726
Walsh	Adams 128	75	$874,915	$11,666
	Edinburg 106	128	$952,872	$7,444
	Fordville-Lankin 5	104	$1,161,034	$11,164
	Grafton 3	963	$5,987,369	$6,217
	Minto 20	231	$1,650,688	$7,146
	Nash 51	15	$299,836	$19,989
	Park River 78	404	$3,004,563	$7,437

Table 83: Amount of Revenue Per Student, by Source of Revenue, by County in North Dakota, and by School District (2004-2005 School Year) [95]

County	School District	Number of Students PK-12	Local Revenue	State Revenue	Federal Revenue	Other Revenue	Total Revenue	Revenue Per Student
Grand Forks	Emerado 127	72	$598,931	$483,460	$208,089	$3,463	$1,293,942	$17,971
	Grand Forks 1	7,525	$31,825,615	$23,923,311	$5,255,899	$31,000	$61,035,825	$8,111
	Grand Forks Air Force Base		$0	$264,760	$7,359,883	$0	$7,624,643	
	Grand Forks AFB/Grand Forks together	7,525	$31,825,615	$24,188,071	$12,615,782	$31,000	$68,660,468	$9,124
	Larimore 44	534	$1,628,113	$1,720,691	$346,344	$16,979	$3,712,127	$6,952
	Manvel 125	144	$720,308	$721,695	$208,395	$8,286	$1,658,685	$11,519
	Midway 128	265	$1,119,028	$900,439	$244,632	$0	$2,264,098	$8,544
	Northwood 129	315	$1,246,784	$962,003	$334,906	$12,784	$2,556,476	$8,116
	Thompson 61	416	$971,888	$1,358,370	$136,305	$57,884	$2,524,447	$6,068
Nelson	Dakota Prairie 1	299	$1,891,922	$1,001,383	$196,187	$0	$3,089,491	$10,333
	Lakota 66	232	$867,822	$883,013	$101,384	$0	$1,852,220	$7,984
Traill	Central Valley 3	274	$939,537	$908,543	$76,372	$0	$1,924,452	$7,024
	Hatton 7	240	$862,284	$933,470	$115,515	$25,000	$1,936,269	$8,068
	Hillsboro 9	411	$1,418,238	$1,201,007	$445,311	$23,992	$3,088,548	$7,515
	May-Port CG 14	583	$2,036,645	$1,580,120	$166,585	$137,936	$3,921,286	$6,726
Walsh	Adams 128	75	$347,365	$323,901	$124,069	$79,580	$874,915	$11,666
	Edinburg 106	128	$371,553	$552,632	$18,125	$10,561	$952,872	$7,444
	Fordville-Lankin 5	104	$514,266	$491,999	$142,769	$12,000	$1,161,034	$11,164
	Grafton 3	963	$2,121,030	$3,025,477	$840,862	$0	$5,987,369	$6,217
	Minto 20	231	$720,905	$857,769	$72,014	$0	$1,650,688	$7,146
	Nash 51	15	$225,698	$53,073	$21,065	$0	$299,836	$19,989
	Park River 78	404	$1,203,621	$1,464,953	$288,325	$47,663	$3,004,563	$7,437

[95] North Dakota Department of Public Instruction. Bismarck, ND. Phone: (701) 328-2260. Website: http://www.dpi.state.nd.us/resource/finfacts/index.shtm (accessed on July 20, 2006 and earlier). 2006 Finance Facts (Excel Version).

Table 84: Amount of Revenue per Student, by Source of Revenue, for School Districts in Polk County, Minnesota (FY 2005)[96]

County	School Districts	Number of Students	Local Revenue	State Revenue	Federal Revenue	Other Revenue	Total Revenue	Revenue Per Student
Polk	Climax	146	$310,930	$1,311,503	$641,860	$21,280	$2,285,573	$15,655
	Crookston (ASE)	1,469	$2,599,724	$10,756,572	$1,089,261	$373,645	$14,819,202	$10,088
	East Grand Forks	1,723	$1,130,832	$11,837,955	$816,334	$481,708	$14,266,829	$8,280
	Fertile (ASE)	533	$891,117	$4,587,352	$267,070	$85,321	$5,830,860	$10,940
	Fisher	294	$615,696	$2,109,690	$213,047	$58,510	$2,996,943	$10,194
	Fosston	650	$911,718	$5,019,529	$373,609	$94,185	$6,399,041	$9,845
	Win-E-Mac (ASE)	542	$793,040	$3,885,573	$365,769	$81,883	$5,126,265	$9,458

[96] Minnesota Department of Education. Roseville, MN. School District Financial Profiles. FY 2005. http://education.state.mn.us/mde/Accountability_Programs/Program_Finance/Financial_Management/School_District_Financial_Profiles/index.html (accessed September 11, 2006).

UNIVERSITIES AND TECHNICAL SCHOOLS

About 1,400 military personnel and large numbers of their spouses and dependents, as well as many civilian personnel who work on base, take classes in local universities and technical schools, several of which offer classes on base.

Table 85: Percent of 636 Military and APF Civilian Survey Respondents Who Said Members of Their Households Attended Higher Education Classes in the Last 12 Months

Survey	Respondents	Spouses	Dependent(s)
Military Survey (496 respondents)	27%	16%	2%
Civilian Appropriated-Fund Employee Survey (140 respondents)	18%	20%	10%

The Grand Forks Air Force Base Education Center offers classes and degrees through seven schools including those shown in the table below.[97] About 50 degree programs are available, including Vocational Certificates, Associates Degrees, Bachelors Degrees, and Masters Degrees. The classes are open to military and civilians on and off Grand Forks Air Force Base. In summary, 1,396 airmen were students in 2005 and the Air Force paid about $1 million to these schools in Tuition Assistance. In addition, over 633 dependents and civilians associated with the base also attended these schools. Appendix 8 provides contact information for these schools.

Table 86: Amount of AF Tuition Assistance Paid to Local Universities and Technical Schools and the Number of Grand Forks AFB Students (FY 2005)

Universities & Technical Schools	Amount of Tuition Assistance the AF Paid in FY 2005	Military Students	Dependents & Grand Forks AFB Civilian Students	Total Grand Forks AFB Students
Lake Region State College	$385,417	664	350	1,014
Park University	$266,448	396	240	636
Embry-Riddle Aeronautical University	$158,718	210	1	211
University of Mary	$59,750	81	Not Available	81*
Northland Community and Technical College	$18,900	15	Not Available	15*
Central Michigan University	$12,750	17	42	59
University of North Dakota	$12,144	13	Not Available	13*
Total	**$914,127**	**1,396**		**2,029***

* Does not include all AFB dependents

[97] http://benefits.military.com/misc/installations/Base_Content.jsp?select=done&scategory=EDUCDATA&stopic=COLLGUNIVER&stitle=Colleges+%26+Universities&id=3850&style=32.

For some of these schools, the students affiliated with Grand Forks AFB represent most of their student body in the region. For example, 1,014 of the 1,300 students at Lake Region State College are connected with the base; 636 of the 750 students at Park University are connected with the base; and 211 of the 287 students at Embry-Riddle Aeronautical University are connected with the base. The timing of the drawdown of current jobs on the base and the influx of new jobs to support the UAV mission, along with the potential for offering new areas of study, will be critical for most of these schools.

If one-third to one-half of these 2,000 plus students were eliminated, it would mean a loss of 670 to 1,000 students, and some of the over $1 million in Air Force Tuition Assistance and other funding associated with them.

The 2006-2007 school year tuition rates per student are provided below as a partial indicator of revenue per student. For example, if Park University loses one military student who is taking a 3-credit hour class at $166 per credit hour, it will lose $498 in tuition, plus additional payments for such things as lab fees, textbooks, and supplies, which depend on the course. These rates do not reflect federal and state funding which the public schools receive.

Lake Region State College
- $175 per credit hour for online learning.
- $142 per credit hour for classes on the Devil's Lake campus.
- $2,550 full-time tuition for the academic year on the Devil's Lake campus.

Park University
- $166 per credit hour for active duty military personnel.
- $240 per credit hour for non-military students.
- $16,025 per year for the nursing program on campus.

Embry-Riddle Aeronautical University
- $184 to $865 per credit hour for undergraduate courses.
- $307 to $895 per credit hour for graduate courses, depending on the course.

University of Mary
- $350 per credit hour for undergraduate courses.
- $445 per credit hour for graduate courses.
- $375 per credit for online courses.
- $5,550 per semester for full-time undergraduate courses.
- $5,950 per semester for full-time physical therapy and occupational therapy courses.

Northland Community and Technical College
- $139 per credit hour.
- $2,426 per semester for full time.

Central Michigan University
- $286 per credit hour for undergraduate courses.
- $373 per credit hour for graduate courses.
- $250 per credit hour for active duty military personnel.

University of North Dakota (North Dakota residents)
- $303.43 per credit hour.
- $5,792 for the academic year, full time, for undergraduate courses.
- $6,154 for the academic year, full time, for graduate courses.

IMPLAN modeling produce estimated impacts on private schools classified into two categories - elementary & secondary schools and colleges, universities & junior colleges. Property taxes provide funding for local public schools.

JOBS NEEDED TO SUPPORT THE UAS MISSION:

As discussed in Section 1, Introduction, the Air Force plans to assign Predator and Global Hawk Unmanned Aerial Systems to Grand Forks AFB by 2011. At this time, the Air Force estimates that 170 new positions will be associated with the UAS mission. However, faculty at the John D. Odegard School of Aerospace Sciences, University of North Dakota, and many others in the community believe there will be extensive opportunities related to UAS.[98] This section discusses some of the job and skills needed to operate and maintain military and commercial UAS.

The qualifications for the positions required to operate and maintain UAS, like the Predator and Global Hawk, are similar to those that already exist in the aviation field[99.] Following are general qualifications for:

- Pilots
- Sensor Operators
- Maintenance Technicians
- Communication Technicians

In the final analysis, the manufacturer of the UAS will define the training required to operate and maintain its equipment, subject to still evolving Federal Aviation Administration (FAA) regulations. Other types of analysts and systems personnel may be required depending on the UAS mission and payload.

[98] Marshall, Douglas M. Associate Professor, Director, Graduate Program, John D. Odegard School of Aerospace Sciences, University of North Dakota, 3980 Campus Road, Stop 9007, PO Box 9007, Grand Forks, ND 58202-9007. (701) 777-3557. (701) 777-3016 [Fax]. dmarshal@aero.und.edu Information provided in an email on July 31, 2006

[99] Wentz, Elaine. Workforce Solutions, Job Service North Dakota, 1000 E Divide Ave., Bismarck, MD 58501. Phone: (701) 328-3066. E-mail: ewentz@state.nd.us Information provided in an e-mail to Diane Blair on March 13, 2006. On July 28, 2006 Ms. Wentz confirmed that this is the most up to date information available.

PILOTS

At this time, the FAA has not defined the requirements for piloting unmanned aircraft. However, the following information provides an indication of the qualifications expected. The FAA has published a policy letter that says it does not expect all unmanned aircraft pilots to have actual flying time, but that will depend on what the unmanned aircraft is, what it does, and where it flies.

Pilots of small aircraft flown in the line of sight: Pilots should have experience in flying remote control aircraft. They need to be familiar with FAA regulations and procedures and understand airspace categories. An FAA-approved ground school can provide that training. Pilots should also have an FAA Class III medical certificate. Pilots of these small aircraft are not required to have a pilot's license.

Pilots of larger aircraft flown in the National Airspace or flown beyond the line of sight: Pilots should have completed an FAA-approved ground school, have an FAA Class II or III medical certificate, and have actual flying experience. For the largest unmanned aircraft, which will fly in the same airspace as commercial aircraft, pilots should have an FAA instrument rating and a commercial license if they are being paid to fly.

SENSOR OPERATORS

The qualifications depend on what the sensors are and how they will be used. If Sensor Operators have access to the controls, they need the same training as pilots. Sensor Operators assist the pilot and are familiar with the pilot's responsibilities for flying the aircraft. They must understand what is going on during the flight. They may be required to have an FAA Class III medical certificate.

MAINTENANCE TECHNICIAN:

Typically, Maintenance Technicians should have an Airframe and Powerplant license, as defined in 14 CFR 65 (Code of Federal Regulations). These requirements include the following:

An appropriate graduation certificate or certificate of completion from a certificated aviation maintenance technician school or documentary evidence of:

- At least 18 months of practical experience with the procedures, practices, materials, tools, machine tools, and equipment generally used in constructing, maintaining, or altering airframes, or powerplants appropriate to the rating sought.
- At least 30 months of practical experience concurrently performing the duties appropriate to both the airframe and powerplant ratings.

Each applicant for a mechanic certificate or rating must pass an oral and a practical test for the rating he seeks.

COMMUNICATIONS TECHNICIANS:

Typically, a Communication Technician should meet the provisions of 14 CFR Part 65 Subpart E, Paragraph 65.101 (Repairman). He should have at least 18 months of practical experience in the procedures, practices, inspection methods, materials, tools, machine tools, and equipment generally used in the maintenance duties of the specific job for which the person is employed.

Some of the skills needed are a knowledge of the frequency spectrum and the ability to manage data link equipment; an understanding of the Federal Communications Commission power and frequency standards and the reporting and waiver requirements; an understanding, for beyond line-of-site purposes, of satellite communications systems, equipment and capabilities.

Following are four recent job listings for UAV pilots and various types of maintenance technicians at General Atomics, the manufacturer of the Predator.

UAV PILOT: GENERAL ATOMICS[100]

Position Type	Full-Time Employee
Company Name	General Atomics
Location	Adelanto, CA; Palmdale, CA
Salary	Unspecified
Date Posted	July 17, 2006
Experience	5-10 Years Experience

Company Information

TJ611-2013 General Atomics Aeronautical Systems, Inc.[101] (GA-ASI) is focused on the design and production of unmanned aircraft systems. These state-of-the-art reconnaissance systems are in extensive use by the U.S. government including the U.S. Air Force, NASA, Department of Energy and the U.S. Navy as well as by overseas customers. GA-ASI has a manufacturing facility in Rancho Bernardo, CA and three facilities in Adelanto, CA (two flight test facilities and one R&D facility) which are located 40 miles north of Los Angeles. At this facility we perform flight-testing, flight-training, aircraft final checkout and other operations such as modifications to our aircraft requested by our clients.

Job Description: Pilot a UAV by means of ground control, be responsible for ground piloting the vehicle from take-off to landing, and any additional flight related collateral duties while supporting flight operations on overseas and domestic deployments and oversee flight performed by civilian and military customers.

[100] http://hotjobs.yahoo.com/jobseeker/jobsearch/job_detail_print.html?job_id=J958355RP (accessed August 2, 2006).
[101] http://www.uav.com/home/index.html (accessed August 2, 2006).

Job Requirements

- Travel (premium compensation) for 6 to 8 months (2-3 month rotational schedule) of the year both within and outside the Continental United States.
- Must be able to obtain a Department of Defense "Secret" Security Clearance.
- Commercial pilot's license and instrument rating.
- Instructor's rating is preferred.
- Prior experience in UAV operation, mission planning and actual control of aircraft is desirable.

STRUCTURAL/ASSEMBLY MECHANICS: GENERAL ATOMICS AERONAUTICAL SYSTEMS, INC.[102]

Position Type	Full-Time Employee
Company Name	General Atomics Aeronautical Systems, Inc.
Location	Adelanto, CA; Palmdale, CA
Salary	Unspecified
Date Posted	July 17, 2006
Experience	5-10 Years Experience

Due to intense industry growth we currently have several openings for Structural/Assembly Mechanics to work with production and deployable unmanned air vehicles (UAVs). These positions are located 40 miles north of Los Angeles at our El Mirage Flight Operations Facility in Adelanto, CA (near Victorville & Palmdale, CA).

At this facility we perform flight-testing, flight-training, aircraft final checkout and other operations such as modifications to our aircraft requested by our clients.

Job Description: Perform initial integration assembly of various unmanned air vehicles including the installation of landing gear, servos (tail, aileron & flap) and fuel systems. Work involves modifying airframes, setting up surfaces and testing installed equipment as well as performing pre-flight testing and auto-pilot checks.

Job Requirements:

- 1-5+ years aviation maintenance/repair experience or equivalent experience (small planes, motorcycles, etc.).
- Experience in aircraft research & development and a background with composite structures are desired.
- A background in composite structures including lay up and trim preferred.
- Airframe & Powerplant license preferred.
- Must be able to obtain a Department of Defense "Secret" Security Clearance.
- NO Travel required for these positions.

[102] http://hotjobs.yahoo.com/jobseeker/jobsearch/job_detail_print.html?job_id=J246539DR (accessed August 2, 2006).

ELECTRONICS TECHNICIAN (AVIONICS): GENERAL ATOMICS AERONAUTICAL SYSTEMS, INC.[103]

Position Type	Full-Time Employee
Company Name	General Atomics Aeronautical Systems, Inc.
Location	Adelanto, CA; Palmdale, CA
Salary	Unspecified
Date Posted	July 17, 2006
Experience	2-5 Years Experience

Job Description: Test, troubleshoot, repair and operate UAV electronic systems, ground control stations, ground data terminals and ground support equipment, as well as support flight operations on overseas and domestic deployments and oversee maintenance performed by civilian and military customers.

Job Requirements

- Travel (premium compensation) for 6 to 8 months (2-3 month rotational schedule) of the year both within and outside the Continental United States.
- Must be able to obtain a Department of Defense "Secret" Security Clearance.
- AA degree or military trade school or equivalent.
- 2 - 5 years experience.
- Knowledge of digital, analog and RF circuits.
- Strong electronic theory and troubleshooting skills.
- Long hours required.

AIRFRAME & POWERPLANT SPECIALIST: GENERAL ATOMICS AERONAUTICAL SYSTEMS, INC.[104]

Position Type	Full-Time Employee
Company Name	General Atomics Aeronautical Systems, Inc.
Location	Adelanto, CA; Palmdale, CA
Salary	Unspecified
Date Posted	July 17, 2006
Experience	1-2 Years Experience

Job Description: A&P Specialist: test, maintain & operate the UAVs and related ground support equipment.

Job Requirements

- Travel (premium compensation) for 6 to 8 months (2-3 month rotational schedule) of the year both within and outside the Continental United States.
- Must be able to obtain a Department of Defense "Secret" Security Clearance.
- 1-5+ years aviation maintenance/repair experience or equivalent experience (small planes, motorcycles, etc.).
- Experience in aircraft research & development and a background with composite structures are desired.
- A background in reciprocating engines including engine teardown & buildup.

[103] http://hotjobs.yahoo.com/jobseeker/jobsearch/job_detail_print.html?job_id=J458542RJ (accessed August 2, 2006).
[104] http://hotjobs.yahoo.com/jobseeker/jobsearch/job_detail_print.html?job_id=J434581GU (accessed on August 2, 2006).

- Airframe & Powerplant license preferred.

REGIONAL TRAINING CAPABILITIES TO PREPARE AND RETRAIN THE LABOR FORCE

The Grand Forks Region has a number of education and training institutions that are preparing to train people for jobs associated with the UAV mission at Grand Forks Air Force Base and for different jobs in the community. Appendix 8, Local Colleges and Universities, provides more information about these institutions.

SECTION 6
IMPACT ON SOCIAL SERVICES

Grand Forks Air Force Base is a small city with over 5,000 people associated with military members (that includes both airmen and their dependents) and over 1,000 civil service and contractor personnel who work on base. This section explores the impact a reduction of about 1,000 positions might have on the social service providers, non-profit organizations, and special needs facilities both on Grand Forks AFB and in the surrounding communities. People associated with the base are both contributors to social services and users of the services. People contribute both their time and money to local social service and non-profit organizations.

The base provides for many of the social service needs of the military personnel and their family members. Because of this, the research team believes the reduction in military positions may have little impact on community social services, non-profits, and special needs facilities.

While some spouses and children of military personnel currently utilize special medical, educational, or mental health community resources, the research team estimates the number is small. By the nature of its work, the military community does not reflect the demographics of the wider population. In general, it is younger and military members themselves must be physically and mentally prepared to serve. Therefore, the special-needs population related to the Air Force Base is limited to the dependents of military personnel (e.g., spouses, children, and accompanying parents) and to civilian personnel and their families.

Military personnel and their families assigned to Grand Forks Air Force Base are a transient population. In general, they move every two years. Consequently, dependents of military members are not likely to be long-term users of off-base social services and special-needs facilities. Finally, it is difficult to estimate the number of dependents with special needs who will be assigned to Grand Forks Air Force Base in the future or which particular services they will need in the local community.

This research project included two direct methods of examining the monetary involvement of the base in charitable activities. First, questions concerning charitable contributions and receipt of support were included in both the military and civilian surveys. Second, the IMPLAN model yields estimates of impact engendered by the BRAC associated reduction.

The survey of airmen yielded only 113 responses that indicated the amount contributed. The average contribution of these 113 to churches and other local charities was $235 per month. The average contribution to other local charities alone was $79 based on 51 responses. No response indicated receiving any support from off-base charities.

Similar questions were contained in the survey of civilian employees. Over one-half (83) of the 171 respondents indicated the monthly amount of contribution to the local church and other charities. The amount averaged $210 per respondent. Almost one-quarter (38) of the responses indicated a monthly contribution to other local charities. The amount averaged about $76. Only one respondent confirmed the receipt of charitable support in the last 12 months.

Given the small number of responses to the questions, coupled with the size of the average contribution, these figures should be regarded with care. There could be a number of factors that contributed to this situation. The issue of donation and receipt of support by a charity can be sensitive. Perhaps, people are not comfortable sharing the details. People contributing small amounts may be reticent to report as well. This could bias the average contribution upwards. Additionally, the military population contains a large number of young people, just starting their careers and young families with somewhat limited incomes. This could contribute to a lower rate of contributing than would be encountered in an older household with more resources.

The IMPLAN model yielded more definitive results. Two categories in IMPLAN address non-profit and charitable organization – 1) Grant Making and Giving and Social Advocacy Organizations, and 2) Religious Organizations. The estimated impact on these categories for the five-county area is presented in the table below. As indicated, the total annual impact in 2011 is over $123 thousand. Over $97 thousand is the direct reduction based on the 34.4 percent reduction in the number of military and civilian positions and the loss of contracts. Another nearly $26 thousand is attributed to the induced impact resulting in a loss of giving by others in the community through the reduction in household spending.

Table 87: Value of Losses of Economic Activity by Charities in the Five-County Area

	Direct	Induced	Total
Religious organizations	(62,077)	(16,560)	(78,637)
Grant Making and giving and social advocacy organizations	(35,224)	(9,394)	(44,619)
Total	**(97,301)**	**(25,954)**	**(123,256)**

Appendix 9 provides a detailed list of some of the social-service providers located both on Grand Forks AFB and in the surrounding communities.

APPENDICES

APPENDIX 1
METHODOLOGY AND ASSUMPTIONS

SECTION 1: INTRODUCTION

To estimate the impact of the BRAC 2005 decision to move the KC-135 tanker fleet out of Grand Forks Air Force Base and to move an Unmanned Aerial Vehicle mission to the base, project staff interviewed Department of Defense, Department of the Air Force, and Grand Forks Air Force Base officials. Project staff also interviewed a professor at the University of North Dakota, School of Aerospace Science, regarding the broader potential for the school's role in developing and testing Unmanned Aerial Vehicles. Project staff reviewed BRAC 2005 documents produced by the Department of Defense, Department of the Air Force, and the Defense Base Closure and Realignment Commission. Finally, project staff used data provided by the Grand Forks Air Force Base Public Affairs Office, as the baseline for military and civilian positions and payrolls as of September 30, 2005.

SECTION 2 AND 3: ECONOMIC ASSUMPTIONS AND IMPACTS

The methodology used to estimate the potential impact of the BRAC-related changes on the five-county area entailed the use of two components: the IMPLAN software package and the data. The following section presents a description of these components and how they were used.

IMPLAN

"IMPLAN (IMpact Analysis for PLANning) was developed by the USDA Forest Service in cooperation with the Federal Emergency Management Agency and the USDI Bureau of Land Management to assist the Forest Service in land and resource management planning. The IMPLAN accounts closely follow the accounting conventions used in the Input-Output Study of the U.S. Economy by the Bureau of Economic Analysis (1980) and the rectangular format recommended by the United Nations."[105]

Based on early work by Wassily Leontief, the method traces market flows between the producers of goods and services and both industrial and non-industrial consumers. Non-industrial consumers consist of households, governments, investment and trade (both domestic and foreign). This approach has been more recently augmented to allow the use of Social Accounting Matrices (SAM). This means that non-market flows become part of the model. Non-market flows or inter-institutional transfers include the flow of tax payments by households to the government or payments by the government to individuals. The term

[105] THE IMPLAN INPUT-OUTPUT SYSTEM, Scott A. Lindall and Douglas C. Olson, MIG, Inc.

institution in SAM context is any non-industry sector and includes households and governments.

This technique is useful in estimating the impact of an anticipated change on a community. The analyst constructs a model of the local economy as it exists and then changes some aspect of the model. In this case, households represented X number of airmen, Y number of base employees and their families, together with their incomes, are removed from the local economy, along with Z dollars worth of contracts for products and services. A change in an economy, like this reduction, can have three types of impacts – direct, indirect and induced.

Direct impacts are the immediate changes in Employment, Value Added, Total Output and other economic metrics associated with the initial (or first round) change in demand for products or services of an industry or set of industries - in this case the reduction in military and civilian personnel and contracting reductions called for by BRAC reduction. In models that include the removal of households, it also represents the first round of induced impacts caused by the loss of spending by those households.

Indirect impacts are the iterative sets of changes in purchases by industry of outputs from other industries caused by the initial change in demand. In this case, the indirect impact begins with the impact of the change in vendor and other local contracts on the demand for the materials and products that would have been used in the execution of those contracts. It continues on as the secondary industries, in turn, cut back on their inputs and so on.

Induced impacts are those caused by a change in demand associated with the change in household purchases.

Input data

In order to properly implement the model, appropriate data must be available to the software.

The first type of data consists of a model of any regional economy to be modeled. In this case, the data consists of separate models of the five counties – Grand Forks, Nelson, Traill and Walsh in North Dakota and Polk in Minnesota. IMPLAN Pro has the flexibility, at the user's option, to make use of each of the county models separately or in combination as multi-county market regions. The analysis took advantage of this feature to model the five-county region, the two-county Grand Forks MSA, and the individual counties. Each of these models is based on the latest data available from Minnesota IMPLAN Group (MIG) and is based on 2003 data.

Vendor and contractors

Data on expenditures going to private sector entities was taken from two sources – Vendor records for FY2001 through FY2005 acquired from Grand Forks AFB and Grand Forks AFB Economic Impact Reports for the years 2003 through 2005. A discussion of both follows.

The project team acquired comprehensive vendor records for FY2001 through FY2005 and identified those with addresses located in the five-county area. These records were selected for inclusion in the analysis. Next, project team members sought to identify other vendor firms that, although not local, could either have a local office or draw on local labor. They solicited BRIC point of contact assistance in the identification of firms that might have local offices or might use local labor for inclusion in the analysis. Project staff also contacted 12 construction firms to gather their perspective.

As a result of these activities, it was learned that major construction firms frequently bring their own management and supervisory staff with them for projects in the area, but use trades and unskilled labor from the surrounding areas. It was estimated that 50 percent of the labor costs might go to these local employees. An examination of data in R.S. Means Residential and Repair & Remodeling Cost manuals indicated that about 50 percent of costs go to material and 50 percent go to labor (with a lot of variation.) Adopting this ratio, local labor force might account for 25 percent of construction cost for these builders. This percent was used to estimate the amount of local revenue generated by these firms. The costs given in the vendor records of those builders were weighted by 25 percent for inclusion in the analysis.

The next phase entailed classifying each of the firms into usable IMPLAN compatible categories for entry into the Grand Forks AFB model. This entailed a multi-step approach.

Each vendor record is flagged with a Commercial and Government Entity (CAGE) Code. A CAGE Code is a five character code created by the Central Contractor Registry (CCR) and used by organizations applying for DOD and NASA awards.[106] Organizations must have a separate CAGE Code for each physical location or separate division at the same physical location. Project staff used the conversion facility at http://nspires.nasaprs.com/external/helpGlossary.do to identify the appropriate North American Industry Classification System (NAICS) Code for each. Where needed, project staff sought amplifying information online or from local sources to select among multiple possible NAICS code.

The U.S. Department of the Census provides the following information concerning the NAICS. It is "An industry classification system used by statistical agencies to facilitate the collection, tabulation, presentation, and analysis of data relating to establishments. NAICS is erected on a

[106] http://nspires.nasaprs.com/external/helpGlossary.do.

production-oriented conceptual framework that groups establishments into industries according to similarity in the process used to produce goods or services. Under NAICS, an establishment is classified to one industry based on its primary activity. NAICS was developed jointly by Canada, Mexico, and the United States to provide comparability in economic statistics. It replaced the Standard Industrial Classification (SIC) system in 1997."[107]

IMPLAN provides a facility to allow conversion of NAICS Code into IMPLAN Codes. Project staff generally used this Vendor-Name-to-CAGE-to-NAICS-to-IMPLAN-Code process to classify each local vendor record.

Once all records associated with the five-county area were coded with an IMPLAN Code, the expenditure data for each year FY2001 – FY2005 was consolidated by IMPLAN Code and inflated to 2006 dollars to provide a common basis. The results were used to compute average vendor expenses over the five-years. It should be noted that the inflation factor was based on an average of the monthly CPI figures for the Midwest Region.

Additional Contract Data

Vendor records did not provide completely comprehensive information on base procurements. Additional information on private sector expenditures associated with other contractual work performed for Grand Forks AFB was examined. This data is contained in Table 3 of the annual Grand Forks AFB Economic Impact Reports. The table provides summary level data by major expenditure category. It was decided to use the average of the three years as a proxy for additional costs that might occur in any year. A number of data-related questions needed to be addressed. First, is the data representative? If not, what could be done to make the data more representative? Second, how much of the data was redundant with that in the detailed vendor data?

Communication from the Grand Forks AFB Comptroller Squadron indicated that averages of the costs seemed fairly accurate considering that the BRAC realignment had no impact on Military Construction (MILCON) levels. The source also indicated that other non-recurring costs would be minimal. Given this the data was accepted as a good representation of annual contract expenditures.

Subsequent inquiries yielded the following information. All $36.6 million of FY05 vendor expenses were included in $193 million in Table 3 of the 2005 Grand Forks AFB Economic Impact Report. This accounts for about 19 percent of the contract costs. For FY04 and FY03 respectively, total vendor data was $63.9 million and $66.5 million, or 32 percent and 37 percent of the contract costs. The primary driver in the change in the vendor data was the Operation and Maintenance (O&M) costs. In FY 2003, it accounted for $41.5 million and in

[107] http://help.econ.census.gov/econhelp/glossary/#N.

FY2004 it was $38.1 million. In FY2005, it fell to $8.4 million. The FY2003 and FY2004 amount were the largest in some time. The FY2004 included $27.4 million for a runway project. The contact indicated that $10 million would be a more appropriate annual amount of O&M. Further examination of vendor data indicated there was an average of $10 million in O&M expenditures accounted for. The Grand Forks AFB Comptroller Squadron also clarified that the average fuel costs of $66.6 million would all fall outside of the five-county region.

Given this guidance, project staff developed more representative data for FY2003 and FY2004 by removing the O&M costs found in the contract data and subtracting all fuel costs. Project staff then inflated the three years' contract cost entries to 2006 dollars and computed the average for the three year period. The resulting average contract costs came to $88.3 million. Next, project staff deducted an amount equivalent to vendor costs to avoid double-counting. Project staff estimated this share by dividing the average vendor results of $39.0 million by the $88.3 million. This ratio was in turn used to reduce the amounts in each category of contract expenditures.

Grand Forks AFB was unable to supply any data that would aid in identifying the location of the firms reflected in the contract summary data, so the project team was required to adopt a simplifying assumption. It is that contract expenditures go to firms in the five-county area in the same proportion as vendor expenditures. Based on this assumption, the in-area proportion was estimated to be approximately 45 percent. Overall, this share resulted in a total contract amount of five-county expenditures of approximately $22.6 million. Project staff examined the data and developed a set of weighting factors for each category, as deemed appropriate to achieve an overall reduction of 45 percent. Subsequent analysis of the data indicated a further allocation of 98.5 percent of the costs to Grand Forks County firms and 1.5 percent to firms in Polk County.

Airmen and Civilian Employees of Grand Forks AFB

The number of airmen and civilian employees is based on data in the 2005 Grand Forks Air Force Base Economic Impact report. That report listed the number of military as 2,450, with 1,541 living on base and 909 living off base. This level of staff was chosen as the level to be used in the model.

The base also supplied a listing of Grand Forks AFB Air Force military personnel pay grades, by ZIP Code of residence, and marital status, data on the number of personnel receiving flight play, and a listing of the ZIP Codes of civilian employees' residences. Project staff gathered additional information on Basic Pay, Basic Allowance for Housing, and Basic Allowance for Subsistence.

The Air Force listing contained some ZIP Code listings that correspond to locations outside the five-county area. This information was taken as erroneously entered home-of-record data rather than local residence. As a result, project staff regarded any address outside the five-

county area as suspicious and reassigned them proportionately to ZIP Codes within the areas. This reassignment was proportionate to the entries on the list, considering rank, marital status and the number of personnel known to be living on-base and off-base. Since the number of entries on this list (2,394) was less than the number of Air Force military personnel given on the 2005 Grand Forks AFB Economic Impact Report, it was factored up proportionately to 2,450.

The project team conducted three surveys to gather additional information, including one of airmen stationed at Grand Forks AFB and one of civilian employees of the base. Data from the responses produced additional information on the location of residences, accompaniment status, and military-to-military marriages that resulted in further refinement of airman residence estimation. Most significantly, a total of 2,303 military residences - households and single airmen - were estimated in recognition of an approximate 10 percent presence of military-married-to-military couples. Since data on the specific incidence of these types of marriages at Grand Forks AFB was not available, the analysis made use of an estimate of the trend Army-wide available in U.S. Army published data.[108] A weighting scheme to reflect these considerations was developed and used with the individual survey responses to project the estimated number of personnel living both on- and off-base by ZIP Code, by pay grade, and accompanied status.

The airman survey also produced the data used to serve as a measure of the direct impact when personnel are lost to BRAC - compensation. Project team had assembled data from on-line and Grand Forks AFB sources on Basic Pay, Basic Allowance for Housing, Basic Allowance for Subsistence and other allowances. A comparison of these data and survey information on rank and time in service to survey responses on gross pay convinced the team that the respondents' estimates were reasonable and would serve as a better reflection of the occurrence of individual circumstances. Given this, airmen responses on Air Force and other pay was used as the estimate of household income. This data, in turn, was also used to classify each airman by household income level category for use in the model.

Similar information was available for the civilian employees. The 2005 Economic Plan indicated 385 appropriated-fund and 215 non-appropriated fund employees at Grand Forks AFB in 2005. Residential data on appropriated-fund employees was obtained from Grand Forks AFB. This data was used, in conjunction with survey responses, to develop residential location for appropriated-fund civilian employees.

No address data for non-appropriated fund employees was provided, and the survey response rate among them was meager. Since these jobs are typically low-paying jobs, project staff assumed that they commute short distances and therefore tend to live in Grand Forks County. Their income levels were estimated by assuming them to be equally proportionate to the share of the funds presented in Table 2 of the 2005 Economic Impact Analysis Report.

[108] Army Profile FY04.

Defense Commissary Agency (DeCA), Exchange and private business employment other than contract civilians was modeled under the IMPLAN codes for the corresponding industries. Although, contract civilian and school district employment numbers were given, the associated costs were included in the summary contract data (including impact aid and tuition assistance.) Given this, the loss of personnel from these categories was not modeled separately.

IMPLAN Modeling

Once the number of airmen and civilian residential locations and incomes had been estimated using the foregoing approaches, the individual airmen, appropriated-fund employees and non-appropriated fund employees were assigned into household categories based on their level of income.

To simulate the BRAC changes, 34.4 percent of each household category and their associated incomes along with 34.4 percent of contractor expenditures were removed from the IMPLAN base model data and an analysis of the impact of reduction performed. Project staff used IMPLAN county-level output, along with Census and survey data, to allocate county-level impacts to individual cities. The results are presented in Section 3.

SECTION 4: IMPACT ON THE REAL ESTATE MARKET

The real estate market information contained in this report is designed to give the user a broad overview of the real estate market in Grand Forks and the surrounding counties. In order to present the most comprehensive information possible on this market, the report relies on both statistical as well as empirical data. In conducting research on the Grand Forks real estate market, The Concourse Group consulted numerous sources, including local public officials, real estate brokers, real estate developers, and entrepreneurs, as well as publications and reports from national research organizations, financial rating agencies, and governmental agencies. While the Grand Forks real estate market is constantly developing and changing, the information contained in this report is meant to present the current status of the Grand Forks real estate market, and is based on the most current data available.

SECTION 5: IMPACT ON SCHOOLS

In order to obtain information about the relationship of local schools and universities to Grand Forks Air Force Base, project staff interviewed officials in some of the local schools, at the base, and in the U.S. Department of Education, and the North Dakota Department of Public Instruction. Project team members accessed various databases and obtained financial and demographic profiles of each of the school districts in the five-county area. They reviewed information available at school websites. In some cases, the team reviewed data going back five and ten years to determine the trend lines. While the number of students and other

information is constantly changing, project staff obtained the most current published data that could be analyzed in conjunction with data from our other sources.

APPENDIX 2
DEFENSE BASE REALIGNMENT AND CLOSURE COMMISSION RECOMMENDATIONS TO REALIGN GRAND FORKS AIR FORCE BASE, ND AND HECTOR INTERNATIONAL AIRPORT AIR GUARD STATION, FARGO, ND

Following are the recommendations that the BRAC 2005 Commission made that affect Grand Forks Air Force Base, ND. The recommendations were made in Appendix Q, Volume 2 of the Commission's final report, pages Q-48 and Q-49. (*Defense Base Closure and Realignment Commission Report to the President* (Arlington, Virginia: September 8, 2005).

In the Commission's report, this section is subtitled, "A Bill to Make Recommendations to the President Under the Defense Base Closure and Realignment Act of 1990. Chapter III. Department of the Air Force Recommendations."

104. GRAND FORKS AIR FORCE BASE, ND (AF 37)

a. Realign Grand Forks Air Force Base (AFB), ND. Distribute the 319th Air Refueling Wing's KC-135R/T aircraft to meet the Primary Aircraft Authorizations (PAA) requirements established by the Base Closure and Realignment recommendations of the Secretary of Defense, as amended by the Defense Base Closure and Realignment Commission. Establish the following KC-135R/T PAA:

- The 126th Air Refueling Wing (ANG), Scott AFB, IL (eight PAA KC-135R/T). The 126th Air Refueling Wing KC-135E aircraft will be transferred to the Aerospace Maintenance and Regeneration Center (AMARC) at Davis-Monthan AFB, AZ, for appropriate disposal as economically unserviceable aircraft.
- The 916th Air Refueling Wing (AFR), Seymour-Johnson AFB, NC (16 PAA KC-135R/T), which will host an active duty associate unit.
- The 6th Air Mobility Wing, MacDill AFB, FL (16 PAA KC-135R/T), which will host a Reserve association with 927th Air Refueling Wing (AFR) manpower realigned from Selfridge ANGB, MI.
- The 154th Wing (ANG), Hickam AFB, HI (12 PAA KC-135R/T), which will host an active duty associate unit.
- The 22d Air Refueling Wing, McConnell AFB, KS (48 PAA KC-135R/T), which currently associates with the 931st Air Refueling Group (AFR).

Modify infrastructure at Grand Forks AFB to accommodate the emerging Unmanned Aerial Vehicle (UAV) mission. The Secretary of Defense will maintain eight KC-135 aircraft at Grand Forks Air Force Base to facilitate an efficient and cost effective bed down of UAVs. The Secretary will keep the tankers in place until the UAVs are operational at Grand Forks, but not later than 31 Dec 2010 unless otherwise required by the Department of Defense for National Emergencies. Grand Forks will remain an

active Air Force installation with a new active duty/Air National Guard association unit created in anticipation of emerging missions at Grand Forks.[109]

b. Realign McConnell Air National Guard (ANG) Base by distributing the 184th Air Refueling Wing's (ANG) nine KC-135R/T aircraft to meet the PAA requirements established by the Base Closure and Realignment recommendations of the Secretary of Defense, as amended by the Base Closure and Realignment Commission. Establish 12 Primary Aircraft Authorization KC-135R/T aircraft at the 190th Air Refueling Wing, Forbes Field AGS, KS. The 184th Air Refueling Wing KC-135E aircraft will be transferred to the AMARC at Davis-Monthan AFB, AZ, for appropriate disposal as economically unserviceable aircraft.[110]

105. HECTOR INTERNATIONAL AIRPORT AIR GUARD STATION, ND (AF 38)

a. Realign Hector International Airport Air Guard Station, ND. The 119th Fighter Wing (ANG) will be redesignated as an Unmanned Aerial Vehicle wing; the Armed Forces Reserve Center planned for construction on Hector Field will be expanded to include sufficient facilities to accommodate at minimum the UAV ground control and intelligence analysis functions and expeditionary combat support elements, including fire, crash and rescue services, of the 119th Wing (ANG), in addition to the units already identified in Army Recommendation 73, **Reserve Component Transformation in North Dakota**; and the Air Force will retain, adapt or construct appropriate facilities on

[109] By Motion 104-4A, the Commission struck the language "Distribute the 319th Air Refueling Wing's KC-135R aircraft to the 126th Air Refueling Wing (ANG), Scott AFB, IL (12 aircraft), which retires its eight KC-135E aircraft; the 916th Air Refueling Wing (AFR), Seymour-Johnson AFB, NC (eight aircraft), which will host an active duty associate unit; the 6th Air Mobility Wing, MacDill AFB, FL (four aircraft), which will host a Reserve association with 927th Air Refueling Wing (AFR) manpower realigned from Selfridge ANGB, MI; the 154th Wing (ANG), Hickam AFB, HI (four aircraft), which will host an active duty associate unit; and the 22d Air Refueling Wing, McConnell AFB, KS (eight aircraft), which currently associates with the 931st Air Refueling Group (AFR)" and inserted in its place the language, "Distribute the 319th Air Refueling Wing's KC-135R/T aircraft to meet the Primary Aircraft Authorizations (PAA) requirements established by the Base Closure and Realignment recommendations of the Secretary of Defense, as amended by the Defense Base Closure and Realignment Commission. Establish the following KC-135R/T PAA:
The 126th Air Refueling Wing (ANG), Scott AFB, IL (eight PAA KC-135R/T). The 126th Air Refueling Wing KC-135E aircraft will be transferred to the Aerospace Maintenance and Regeneration Center (AMARC) at Davis-Monthan AFB, AZ, for appropriate disposal as economically unserviceable aircraft.
The 916th Air Refueling Wing (AFR), Seymour-Johnson AFB, NC (16 PAA KC-135R/T), which will host an active duty associate unit.
The 6th Air Mobility Wing, MacDill AFB, FL (16 PAA KC-135R/T), which will host a Reserve association with 927th Air Refueling Wing (AFR) manpower realigned from Selfridge ANGB, MI.
The 154th Wing (ANG), Hickam AFB, HI (12 PAA KC-135R/T), which will host an active duty associate unit.
The 22d Air Refueling Wing, McConnell AFB, KS (48 PAA KC-135R/T), which currently associates with the 931st Air Refueling Group (AFR).
Modify infrastructure at Grand Forks AFB to accommodate the emerging Unmanned Aerial Vehicle (UAV) mission. The Secretary of Defense will maintain eight KC-135 aircraft at Grand Forks Air Force Base to facilitate an efficient and cost effective bed down of UAVs. The Secretary will keep the tankers in place until the UAVs are operational at Grand Forks, but not later than 31 Dec 2010 unless otherwise required by the Department of Defense for National Emergencies."

[110] By Motion 104-4A, the Commission struck the language "**Realign McConnell Air National Guard (ANG) Base** by relocating the 184th Air Refueling Wing (ANG) nine KC-135R aircraft to the 190th Air Refueling Wing at Forbes Field AGS, KS, which will retire its eight assigned KC-135E aircraft." and inserted in its place, "**Realign McConnell Air National Guard (ANG) Base** by distributing the 184th Air Refueling Wing's (ANG) nine KC-135R/T aircraft to meet the PAA requirements established by the Base Closure and Realignment recommendations of the Secretary of Defense, as amended by the Base Closure and Realignment Commission. Establish 12 Primary Aircraft Authorization KC-135R/T aircraft at the 190th Air Refueling Wing, Forbes Field AGS, KS. The 184th Air Refueling Wing KC-135E aircraft will be transferred to the AMARC at Davis-Monthan AFB, AZ, for appropriate disposal as economically unserviceable aircraft."

Grand Forks Air Force Base appropriate to launch, recover, maintain and support the Unmanned Aerial Vehicles assigned to the 119th Wing (ANG). The Commission explicitly rejects the language contained in justification to the recommendation by the Secretary of Defense that there will be 'no flying mission backfill' at Hector Field. [111] The wing's expeditionary combat support elements remain in place.

[111] By Motion 105-4A, the Commission struck the language the Commission strike the language "The 119th Fighter Wing's F-16s (15 aircraft) retire," and insert in its place "With the consent of the State of North Dakota, as expressed in the Governor's August 4th letter to the Commission, and consistent with Air Force plans, the 119th Fighter Wing (ANG) will be redesignated as an Unmanned Aerial Vehicle wing; the Armed Forces Reserve Center planned for construction on Hector Field will be expanded to include sufficient facilities to accommodate at minimum the UAV ground control and intelligence analysis functions and expeditionary combat support elements, including fire, crash and rescue services, of the 119th Wing (ANG), in addition to the units already identified in Army Recommendation 73, Reserve Component Transformation in North Dakota; and the Air Force will retain, adapt or construct appropriate facilities on Grand Forks Air Force Base appropriate to launch, recover, maintain and support the Unmanned Aerial Vehicles assigned to the 119th Wing (ANG). The Commission explicitly rejects the language contained in justification to the recommendation by the Secretary of Defense that there will be 'no flying mission backfill' at Hector Field."
The Commission also made an additional statement that "This motion, even though it deletes the language "the 119th Fighter Wing's F-16s retire," does not preclude the Air Force from executing the already programmed retirement of the aircraft currently based at Hector Field. All that deletion is intended to do is to ensure flexibility for the Air Force and to keep the Commission out of business that is purely programmatic, outside the realm of the Base Closure Act. If the Air Force isn't permitted to retire those aircraft as programmed, this action wouldn't make any sense."
As a technical correction, the Commission deleted the language "With the consent of the State of North Dakota, as expressed in the Governor's August 4th letter to the Commission, and consistent with Air Force plans," from the motion. The portion of the August 4, 2005 letter from the Governor and Congressional Delegation that referred to the 119th Fighter Wing first urged the Commission to strike the recommendation of Secretary of Defense, retaining the F-16 aircraft at Hector Field with the 119th Fighter Wing. Failing that, the letter asked that the Commission amend the Secretary's recommendation to strike the "no flying mission" language found in the Secretary's justification and insert language to reflect the statements of the Air Force that the 119th Fighter Wing would receive an Unmanned Aerial Vehicle.

APPENDIX 3
PREDATOR AND GLOBAL HAWK
UNMANNED AERIAL VEHICLES AND FACT SHEETS

Predator (MQ-1)

Predator is a long endurance, medium altitude, unmanned aircraft system for surveillance, reconnaissance and interdiction missions. The Predator system first flew in 1994 and entered production in August 1997. The MQ-1 Predator is a system, not just an aircraft.

The Predator systems require airlift to deploy and redeploy air vehicles, support equipment, and personnel from their main operating base to operate from locations outside of the continental United States. Predator missions outside the Continental United States (OCONUS) can be controlled from locations such as Creech AFB NV.; Grand Forks or Hector International Airport via satellite. Some of the positions required to operate these systems will be based at Grand Forks. These positions need to be considered when projecting the number of military and civilian positions authorized at the base.

Starting in the 2nd Quarter of Fiscal Year 2009, the Air Force Air Combat Command Manpower Requirements Office plans to support 8 Primary Aircraft Authorizations (PAA) MQ-1 Predator Unmanned Aerial Vehicles (UAVs), 2 Ground Control Stations, 1 Launch and Recovery Ground Control Station, 1 Predator Primary Satellite Link, along with spares and repairs for Predator operations at Grand Forks AFB and Hector International Airport.[112] Support personnel from the North Dakota ANG will perform launch and recovery operations for the Predator aircraft based at Grand Forks AFB, and the aircraft will be flown via satellite link by personnel assigned to the North Dakota ANG unit at Hector International Airport in Fargo, N.D.

The North Dakota ANG will be responsible for maintaining one steady state MQ-1 orbit, surge capability for one additional orbit, and for maintenance of the two Ground Control Stations at Hector. The Air Force Manpower Requirements Office shows personnel requirement at Grand Forks AFB for operation and maintenance in support of the Predator UAVs as 37 officer and

[112] Ellis, James. Air Combat Command point paper, May 30, 2006.

132 enlisted personnel positions for a total of 169 additional military positions at Grand Forks.[113]

Predators are currently in production for the US Air Force and are operational with the USAF 11th, 15th and 17th Reconnaissance Squadrons at Creech Air Force Base, Las Vegas N.V. General Atomics is the prime contractor and the main subcontractors include: Versatron / Wescam; Northrop Grumman; L3 Communication; and Boeing.

RQ-4 Global Hawk

The Global Hawk Unmanned Aerial Vehicle provides Air Force and joint battlefield commanders with near-real-time, high-resolution, intelligence, surveillance and reconnaissance imagery.

The Air Combat Command (ACC) currently bases its RQ-4 Global Hawk aircraft at Beale Air Force Base in California. Current plans are to establish a second Global Hawk main operating base for 6-8 RQ-4 Global Hawks at Grand Forks Air Force Base in Fiscal Year 2010.[114] The unit would be an active duty unit with estimated end strength of 393 personnel (81 officers, 304 enlisted and 8 contractors). The Air Force is investigating the feasibility of control of RQ-4 Global Hawk missions outside the continental United States from Grand Forks Air Force Base via satellite.

Air Force fact sheets on the MQ-1 Predator and the MQ-4 Global Hawk are provided next.

[113] Holland, James, Colonel. Interview with AF Base Realignment and Closure Division-A/F Manpower-Col Holland, Capt Tartowski (703) 614- 4339. May 2006.
[114] Ellis, James. Air Combat Command point paper, May 30, 2006.

MQ-1 Predator Unmanned Aerial Vehicle[115]

Mission

The MQ-1 Predator is a medium-altitude, long-endurance, remotely piloted aircraft. The MQ-1's primary mission is interdiction and conducting armed reconnaissance against critical, perishable targets. When the MQ-1 is not actively pursuing its primary mission, it acts as the Joint Forces Air Component Commander-owned theater asset for reconnaissance, surveillance and target acquisition in support of the Joint Forces commander.

Features

The MQ-1 Predator is a system, not just an aircraft. A fully operational system consists of four aircraft (with sensors), a ground control station, a Predator Primary Satellite Link, and approximately 55 personnel for deployed 24-hour operations.

The basic crew for the Predator is one pilot and two sensor operators. They fly the aircraft from inside the ground control station via a C-Band line-of-sight data link or a Ku-Band satellite data link for beyond line-of-sight flight. The aircraft is equipped with a color nose camera (generally used by the pilot for flight control), a day variable-aperture TV camera, a variable-aperture infrared camera (for low light/night), and a synthetic aperture radar (SAR) for looking through smoke, clouds or haze. The cameras produce full motion video while the SAR produces still frame radar images.

The MQ-1 Predator carries the Multi-spectral Targeting System with inherent AGM-114 Hellfire missile targeting capability and integrates electro-optical, infrared, laser designator and laser illuminator into a single sensor package. The aircraft can employ two laser-guided Hellfire anti-tank missiles with the MTS ball.

The system is composed of four major components which can be deployed for worldwide operations. The Predator aircraft can be disassembled and loaded into a "coffin." The ground control system is transportable in a C-130 (or larger) transport aircraft. The Predator can operate on a 5,000 by 75 feet (1,524 meters by 23 meters), hard surface runway with clear line-of-sight. The ground data terminal antenna provides line-of-sight communications for takeoff and landing. The PPSL provides over-the-horizon communications for the aircraft.

An alternate method of employment, Remote Split Operations, employs a smaller version of the GCS called the Launch and Recovery GCS. The LRGCS conducts takeoff and landing

[115] US Air Force Fact Sheet, Air Combat Command, October 2005. MQ-1 Predator Unmanned Aerial Vehicle, http://www.af.mil/factsheets/factsheet.asp?fsID=122 (accessed July 20, 2006).

operations at the forward deployed location while the CONUS based GCS conducts the mission via extended communications links.

The aircraft includes an ARC-210 radio, an APX-100 IFF/SIF with Mode 4, an upgraded turbo-charged engine and glycol-weeping "wet wings" for ice mitigation. The latest upgrade includes fuel injection, longer wings, dual alternators and other improvements.

Background

The "M" is the Department of Defense designation for multi-role and "Q" means unmanned aircraft system. The "1" refers to the aircraft being the first of a series of purpose-built remotely piloted aircraft systems.

The Predator system was designed in response to a Department of Defense requirement to provide persistent intelligence, surveillance and reconnaissance information to the warfighter.

In April 1996, the secretary of defense selected the U.S. Air Force as the operating service for the RQ-1 Predator system. A change in designation from "RQ-1" to "MQ-1" occurred in 2002 with the addition of the armed reconnaissance role.

Operational squadrons are the 11th, 15th and 17th Reconnaissance Squadrons, Indian Springs Air Force Auxiliary Field, Nev.

General Characteristics

Primary Function:	Armed reconnaissance, airborne surveillance and target acquisition
Contractor:	General Atomics Aeronautical Systems Incorporated
Power Plant:	Rotax 914 four cylinder engine producing 101 horsepower
Length:	27 feet (8.22 meters)
Height:	6.9 feet (2.1 meters)
Weight:	1,130 pounds (512 kilograms) empty, maximum takeoff weight 2,250 pounds (1,020 kilograms)
Wingspan:	48.7 feet (14.8 meters)
Speed:	Cruise speed around 84 mph (70 knots), up to 135 mph
Range:	up to 400 nautical miles (454 miles)
Ceiling:	up to 25,000 feet (7,620 meters)
Fuel Capacity:	665 pounds (100 gallons)
Payload:	450 pounds (204 kilograms)
System Cost:	$40 million (1997 dollars)
Initial operational capability:	March 2005

Global Hawk (RQ-4)[116]

The Global Hawk Unmanned Aerial Vehicle provides Air Force and joint battlefield commanders with near-real-time, high-resolution, intelligence, surveillance and reconnaissance imagery.

Cruising at extremely high altitudes, Global Hawk can survey large geographic areas with pinpoint accuracy, to give military decision-makers the most current information about enemy location, resources and personnel.

Once mission parameters are programmed into Global Hawk, the UAV can autonomously taxi, take off, fly, and remain on station capturing imagery, return and land. Ground-based operators monitor UAV health and status, and can change navigation and sensor plans during flight as necessary.

Global Hawk currently is undergoing flight testing at the Air Force Flight Test Center at Edwards Air Force Base, California. The Global Hawk Program, Reconnaissance Systems Program Office, Aeronautical Systems Center is located at Wright-Patterson AFB, Ohio, which assumed total program control on Oct. 1, 1998.

To demonstrate interoperability between U.S. and Australian military systems, Global Hawk flew 7,500 miles nonstop across the Pacific to Australia on April 22-23, 2001, setting new world records for UAV endurance. U.S. and Australian Defense Science Technology Organization officials evaluated UAV performance and future military potential during 11 sorties in the land-sea environment before it flew home to Edwards AFB, six weeks later.

In March 2001, Global Hawk entered the Engineering, Manufacturing and Development phase of defense acquisition.

Global Hawk, which has a wingspan of 116 feet (35.3 meters) and is 44 feet (13.4 meters) long, can range as far as 12,000 nautical miles, at altitudes up to 65,000 feet (19,812 meters), flying at speeds approaching 340 knots (about 400 mph) for as long as 35 hours. During a typical mission, the aircraft can fly 1,200 miles to an area of interest and remain on station for 24 hours. Its cloud-penetrating, Synthetic Aperture Radar/Ground Moving Target Indicator, electro-optical and infrared sensors can image an area the size of Illinois (40,000 nautical square miles) in just 24 hours. Through satellite and ground systems, the imagery can be relayed in near-real-time to battlefield commanders.

[116] US Air Force Fact Sheet, Air Combat Command, October 2005. Global Hawk (RQ-4), http://www.af.mil/factsheets/factsheet.asp?fsID=175 (accessed July 20, 2006).

When fully-fueled for flight, Global Hawk weighs approximately 25,600 pounds (11,612 kilograms). More than half the UAV's components are constructed of lightweight, high-strength composite materials, including its wings, wing fairings, empennage, engine cover, engine intake and three radomes. Its main fuselage is standard aluminum, semi-monocoque construction.

The principal contractors for Global Hawk are:

- Northrop Grumman's Ryan Aeronautical Center, San Diego, Calif. -- prime contractor.
- Raytheon Systems Company units at Falls Church, Va., and El Segundo, Calif. -- ground segment and sensors.
- Rolls-Royce Allison, Indianapolis, Ind. -- turbofan engine.
- Vought Aircraft Company, Dallas, Texas. -- carbon-fiber wing.
- L3 Com, Salt Lake City, Utah -- communications systems.

APPENDIX 4
SURVEY RESPONSES FROM AIRMEN AND CIVILIANS AND CIVILIAN EMPLOYMENT DATA

This section summarizes the results of the online surveys of airmen and appropriated-fund civilian employees at Grand Forks AFB. The resulting data served multiple purposes. Rank, residence, and income provided input to the IMPLAN modeling. Data regarding the shopping habits of airmen and civilian employees was used, along with government data on population and economic characteristics of the cities within the five counties, to extend the county-level IMPLAN projected impacts to major cities within the five counties.

Still other survey results serve to provide insights into facets of the BRAC change not reflected in the INPLAN output or the resulting county-to-city extensions. This data includes the types of non-military jobs held by airmen and the employment of civilian spouses and dependents.

Airmen Survey

A total of 496 active-duty members of the Air Force provided at least partial appropriate response data to the online airman survey. The survey asked questions about the airmen, including their incomes, where they live, and their spending habits. Table A-1 presents a breakdown of the respondents by rank.

Table A-1: Responses by Rank

Rank	Count	Rank	Count
O-1	7	E-1	4
O-2	31	E-2	9
O-3	38	E-3	41
O-4	12	E-4	62
O-5	12	E-5	96
O-6	2	E-6	115
		E-7	59
		E-8	7
		E-9	1
Total	**102**	**Total**	**394**

Airmen were asked to provide information about their own employment and that of their family members at Grand Forks AFB. Five percent of airmen indicated they have secondary jobs when they are not on duty. 26 percent indicated that their spouses had jobs. About 6 percent indicated that one or more dependents had jobs. The employment response data is presented in Tables A-2 through A-4.

Table A-2: Airmen Reported Part-Time Occupations

Job Description	Employer	Monthly Pay
Administrator	USAF	Not Specified
Aircraft Technician	UND/NASA	$600
Bartender	American Legion	$250
Bingo Caller	Arc Upper Valley	$250
Bioenvironmental Engineer	USAF	Not Specified
Cashier	Target	$750
CNA	Valley Memorial	$1,500
Commissary Bagger	Commissary	$250
Farm Laborer	Scott Knutson Inc	Not Specified
Farmer	Not Specified	$750
FCC	Not Specified	Not Specified
Freelance Artist	Myself	$250
Landlord	Self	$250
Liquid Fuel Maintenance	CE	Not Specified
Logistics Planner	USAF	Not Specified
Maintenance	Not Specified	$250
Mechanic	Outdoor Rec.	$750
Medical Records	Altru Hosp	$2,500
None	None	Not Specified
Partner	Self	$3,500
Parts Guy	Napa	$750
Projectionist	AAFES	$250
Quality Assurance	Not Specified	Not Specified
Radiology Tech	USAF	$2,000
Seasonal Farm Work	Not Specified	Not Specified
Security Forces	USAF	Not Specified
Self Employed	Custom Blinds Of ND/Dakota Blinds	$1,500
Superintendent	USAF	Not Specified
Tow Truck Driver	319th Services	$250
Weather Observer	Federal Aviation Administration	$1,500
Welder	Wheelers Welding	$250
Work From Home	Self-Employed	$250
Weather Observer	Control Systems	$750

Table A-3: Airman Spousal Employment

Job Title	Employer	Monthly Pay
Accounting	Scotts Express	$1,500
Accounting Clerk	Simonsons Fuel	$1,500
Administrative	Apptis	$1,500
Adult Services Coordinator	Development Homes	$2,500
Altell Sales Rep	Altell Industries	$1,500
Bank Teller	Bremer Bank	$3,500
Bank Teller	Gates City Bank	$1,500
Bank Teller	1st Liberty Federal	Not Specified
Bank Teller	1st Liberty Federal	$1,500
Banker	University FCU	$4,500
Bill Collector	Not Specified	$1,500
Business Owner	Not Specified	$2,500
Call Attendant	Triwest	$750
Cashier	DeCA	Not Specified
Cashier	Jr Rockers	$750
Cashier At Military Clothing, Dining Hall	Not Specified	Not Specified
CEO	Development Homes	$2,500
Cert Nurse Asst	Altru	$1,500
Chapel Music Director	CTOF	$250
Chaplain	Altru Hospital	$3,500
Child Care	CDC	$1,500
City Administrator	City Of Northwood	$3,500
Civ Employee	NAF	$750
Cleaning Houses After Construction	Merry Maids	$1,500
Clerk	Warrior Inn	$750
Clerk	Army Corps Of Engineers	$2,500
Clinic Nurse	USAF	$3,500
Construction	Sand Steel	$2,500
Consultant	Pampered Chef	$1,500
Cook	Bowling Alley	$1,500
Cook	Village Inn	$1,500
Cosmotologist	Heather @ The Ultimate Look	$4,500
Cosmotologist	Super Cuts	$750
Counselor	Salvation Army	$2,500
CSR	Target	$750
Customer Service	Outdoor Rec.	$750
Day Care	Self	$250
Daycare Provider	Self Employed	$1,500
Delivery Driver	Dominos	$250
Delivery Driver	Domino's Pizza	$1,500
Dept Manager	Wal-Mart	$4,500
Desk Clerk	Warrior Inn	$1,500
Doctor	Altru	$4,500

Job Title	Employer	Monthly Pay
Editor	Hatton Free Press	$250
Education Director	American Red Cross	$1,500
Engineer	Cirrus	$3,500
Fast Eddies	NAF	$750
Financial Aid Representative	Mayville State University	$3,500
Financial Analysis	Ecolab	$4,500
Florist	Northwood Floral	$750
Freight/Receiving	The Christian Bookshelf	$1,500
Gas Station Attendant	Superpumper Tesero	$1,500
Graduate Teaching Assistant	UND	$750
Graphic Designer	BBI Media	$1,500
Health Unit Coordinator	Altru	$4,500
Home Health Aid	Good Samaritan	$1,500
Housekeeping	National Maint	$1,500
IBM	IBM	$6,500
Instructor	Perfect Pages Plus	$250
Intern	Grafton Newspaper	$750
Intern	Grafton Newspaper	$750
Laborer	OK Glass	$1,500
Law Clerk	Crookston Circuit Court	$3,500
Librarian	SVS	$3,500
Lifeguard	319 SVS	$1,500
LPN	Altru	$2,500
Lunch Room Associate	Grand Forks School District	$750
Manager	Services	$1,500
Manager	Sunland	$750
Manger	AAFES	$1,500
MCSS Manager	AAFES	$2,500
Mechanical Technician	EAPC Architects And Engineers	$2,500
Med Transcription	Altru	$1,500
Merchandise Coordinator	TJ Maxx	$2,500
Merchandising Contractor	Multiple Companies	$1,500
Not Specified	Dept Of Defense	$3,500
Not Specified	Commissary	$750
Not Specified	Opticare	Not Specified
Not Specified	Centre	$1,500
Nurse	Altru	$1,500
Nurse	Altru Health System	$3,500
Nurse	Alerus Center	$4,500
Office Manager	Dakota Peat And Equipment	$2,500
Para	Grand Forks County Schools	$1,500
Para	Grand Forks Public School System	$2,500
Paraeducator	Twining Middle School	$3,500
Paraeducator	Grand Forks Public Schools	$2,500
Partner	Self	$5,500

Job Title	Employer	Monthly Pay
Pastry Chef	Dakota Harvest Bakers	$2,500
Pharmacy Technician	Wall's Pharmacy	$4,500
Pig Farmer	Pig Farms Of Larimore	$1,500
Produce Team	DeCA	$1,500
Program Director	REM	$3,500
Prospect Researcher	UND	$3,500
QC Inspector	Gracon	$3,500
Rec Assistant	GFAFB Youth Center	$1,500
Registered Nurse	Altru	$3,500
Registered Nurse	Northwood Hospital	$1,500
Registered Nurse	Altru	$2,500
Registered Nurse	Altru	$4,500
Registered Nurse	Altru	$2,500
Residential Specialist	Not Specified	$1,500
Restocker/Driver	Target/Dominos	$1,500
RN	Altru	$4,500
Sales	Eddie Bauer	$1,500
Sales	Skinceuticals	$3,500
Sales Person	Optical Shop	$2,500
Sales Rep	Kraft	$1,500
Sales Rep	Not Specified	Not Specified
Salon Owner	Self	$1,500
SARC	DoD	$2,500
School Bus Driver	B Mar	$1,500
School Teacher	NTBC School	$250
Secretary	Minn Dak	$1,500
Secretary	Not Specified	Not Specified
Secretary	DoD	$2,500
Secretary	Altru	$1,500
Self Employed	Custom Blinds Of ND/Dakota Blinds	$1,500
Self Employed	Self Employed	$750
Service Advisor	Not Specified	$2,500
Shoe Salesman	JC Penny	$1,500
Staff Writer/Journalist	BBI Media	$1,500
Stock Supervisor	DeCA	$2,500
Store Owner	Quilter's Eden	$3,500
Supervisor	Amazon.com	$2,500
Teacher	Not Specified	$1,500
Teacher	East Grand Forks School District	$3,500
Teacher	GF School District	$2,500
Theatre Worker	AAFES	$250
Telemetry Clerk	Altru	$2,500
Training Cord.	Bio Life	$3,500
Vendor	Hallmark	$250

Table A-4: Airman Dependent Employment

Job Title	Employer	Monthly Pay
Airport Labor	UND	$1,500
Waiter	UND	$250
Paper Route	Not Specified	$250
Driver	Roma	$250
Graphic Artist	Behl Photography	$250
Nurse	AAFES	$750
Newspaper Delivery	USAF	$3,500
Cashier	J R Rockers	$1,500
Outdoor Rec Aid	USAF	$1,500
Child Care Worker	NAF	$250
Cook	USAF	$750
Coffee Server	USAF	$1,500
Admin	319 Mdg	$750
CNA	Valley Memorial	$250
Maint Asst	Home Of Economy	$750
Maint Tech	Chevrolet Dealer	$7,500
Concession Stand	Carmike Cinemas	$750
Crew Person	Burger King	$1,500
Medical Lab	Altru	$1,500
Cashier	Grand Forks Herald	$250
Not Specified	Summer Hire at Grand Forks AFB	$1,500
CNA	Valley Memorial	$2,500
Sales Rep	USAF	$750
Teacher	East Grand Forks School District	$250
Cashier	AAFES	$750
Stocker	Wal-Mart	$750
Assistant	Unknown	$2,500
Waitress	Dairy Bar	$1,500
Unknown	East Grand Forks School District	$3,500
Editor	Hatton Free Press	$1,500
Service Advisor	Interstate Diesel	$750

The survey also asked airmen about their spending habits. Responses from 495 airmen indicated that each airman (and family, if accompanied) accounts for about $388 per month in retail goods sales, approximately $192 in services, and around $109 in construction trades – totaling about $600. These expenditures total to an estimated $1.4 million of spending each month. A breakdown of spending by the respondents is presented by city of residence in Table A-5.

Table A-5: Airmen Respondents' Monthly Off-Base Spending Excluding Charities Totaled by City of Residence

City of Residence	Monthly Retail Spending	Monthly Services Spending	Monthly Construction Trades Spending	Total
Grand Forks	$67,525	$32,394	$5,364	$105,283
Grand Forks AFB	$51,815	$27,170	$1,895	$80,880
East Grand Forks	$7,715	$4,340	$1,325	$13,380
Larimore	$6,600	$2,350	$450	$9,400
Hatton	$5,000	$1,150	$350	$6,500
Emerado	$4,800	$1,150	$200	$6,150
Northwood	$3,675	$1,595	$600	$5,870
Thompson	$1,000	$800	$200	$2,000
Petersburg	$1,500	$400	$50	$1,950
Mekinock	$900	$400	$100	$1,400
Gilby	$700	$550	$0	$1,250
Hillsboro	$600	$200	$400	$1,200
Manvel	$800	$200	$0	$1,000
Euclid	$600	$325	$50	$975
Arvilla	$500	$280	$150	$930
Grafton	$600	$100	$50	$750
Crookston	$400	$100	$0	$500
Fordville	$400	$100	$0	$500
McCanna	$325	$100	$25	$450
Mayville	$200	$50	$0	$250
Grand Total	**$155,655**	**$73,754**	**$11,209**	**$240,618**
Average	**$388**	**$192**	**$109**	**$600**

444 responses concerning on-base spending versus off-base spending indicated that average off-base spending came to approximately $517. A breakdown of these responses is presented in Table A-6.

Table A-6: Airmen Respondents' Monthly On-Base Versus Off-Base Spending Totaled by City of Residence

City of Residence	Monthly On-Base Spending	Monthly Off-Base Spending
Arvilla	$750	$900
Crookston	$200	$250
East Grand Forks	$5,352	$17,450
Emerado	$3,350	$4,150
Euclid	$400	$800
Fordville	$1,100	$500
Gilby	$550	$1,250
Grafton	$700	$600
Grand Forks	$42,480	$95,014
Grand Forks AFB	$87,925	$82,365
Hatton	$3,400	$5,450
Hillsboro	$200	$800
Larimore	$7,550	$8,850
Manvel	$100	$1,000
Mayville	$50	$250
McCanna	$375	$450
Mekinock	$1,400	$1,600
Northwood	$3,100	$5,300
Petersburg	$1,700	$1,600
Thompson	$800	$1,000
Grand Total	**$161,482**	**$229,579**
Average	**$364**	**$517**

Table A-7 presents a tabulation of responses indicating the communities where airmen tend to shop. The respondents indicate 38 communities including Grand Forks AFB and communities outside the five-county area. The average spending for Minnesota and North Dakota combined to $594.

Table A-7: Total Dollars Spent Shopping by Airmen Respondents by Community of Expenditures

Minnesota			North Dakota	
East Grand Forks	$16,805		Grand Forks	$200,588
Minneapolis	$1,665		Fargo	$12,898
Crookston	$1,005		Emerado	$3,495
Bloomington	$300		Larimore	$3,050
Argyle	$200		Northwood	$3,010
Brainerd	$200		Hatton	$1,300
Grygla	$200		Devils Lake	$1,000
Karlstad	$200		Manvel	$590
Thief River Falls	$125		Hillsboro	$500
Mentor	$100		Petersburg	$300
Waubun	$100		Mayville	$275
Duluth	$50		Michigan	$200
Fisher	$50		Valley City	$200
Warren	$50		Bismark	$170
Bemidji	$30		Park River	$150
Warroad	$30		Arvilla	$120
			Carrington	$100
			Grafton	$100
			Jamestown	$100
			Thompson	$100
			Fordville	$85
			Mekinock	$50
Total	**$21,110**		**Total**	**$228,381**
Average	**$50**		**Average**	**$544**

Airmen were also asked if they or anyone else in the household has attended any continuing higher education classes at NCTC, UND or similar institutions in the last 12 months. Of 496 responses, 27 percent (132) of airmen indicated that they had taken continued higher education, 16 percent (80) indicated that their spouse had enrolled in continued higher education courses and 2 percent (12) indicated that they had dependents who had taken continuing higher education courses.

About 23 percent of airmen (113 responses) indicated that they donated to churches and other local charities. The total amount of these donations amounted to $26,510 a month for an average monthly airman donation of about $235 a month. The average contribution to other local charities alone was $79 based on 51 responses. No response indicated receiving any support from off-base charities.

Civilian Survey

A survey of civilian employees of Grand Forks AFB was also conducted; a total of 140 appropriated-fund civilian employees of the Air Force provided at least partial appropriate response data. Responses from non-appropriated fund personnel were meager. The questions were similar to those posed to the airmen.

Respondents indicated that they spend approximately $670 on retail purchases, $215 on services, and $48 on construction trades. Respondents indicate that the civilians shop in 20 local communities. Table A-8 presents these results.

Table A-8: Civilian Respondents' Monthly Spending Excluding Charities Totaled by City of Residence

City of Residence	Monthly Retail Spending	Monthly Services Spending	Monthly Construction Trades Spending	Total
Grand Forks	$46,800	$16,530	$3,630	$67,027
East Grand Forks	$6,650	$2,500	$450	$9,608
Larimore	$6,100	$2,175	$395	$8,683
Emerado	$6,150	$1,725	$300	$8,184
Thompson	$5,800	$1,200	$445	$7,452
Hatton	$4,325	$2,225	$450	$7,009
Arvilla	$5,350	$700	$330	$6,387
Michigan	$2,300	$400	$0	$2,702
Gilby	$2,000	$400	$100	$2,501
Minot	$1,000	$1,000	$500	$2,501
Northwood	$2,100	$200	$0	$2,301
Thief River Falls	$1,400	$20	$0	$1,421
GFAFB	$775	$525	$0	$1,306
Buxton	$900	$0	$100	$1,001
Mekinock	$900	$100	$0	$1,001
Petersburg	$560	$140	$0	$702
Alvarado	$250	$50	$0	$301
Ardoch	$200	$100	$0	$301
Eveleth	$180	$30	$10	$221
Niagara	$100	$100	$0	$201
Total	**$93,840**	**$30,120**	**$6,710**	**$130,810**
Average	**$670**	**$215**	**$48**	**$934**

Respondents indicated that they shop in 31 communities throughout the area and beyond in Minnesota and North Dakota. According to the data, these shoppers account for slightly less than $1,000 each per month, a figure consistent with the sector spending data above. This data is presented in Table A-9.

Table A-9: Total Dollars Spent Shopping by Civilian Respondents by Community of Expenditures

Minnesota			North Dakota	
East Grand Forks	$7,850		Grand Forks	$103,305
Bemidji	$1,350		Larimore	$23,675
Thief River Falls	$1,000		Fargo	$5,825
Bloomington	$400		Hatton	$4,075
Park Rapids	$240		Minot	$2,500
Detroit Lakes	$200		Emerado	$1,735
Oslo	$150		Northwood	$1,250
Minneapolis	$100		Bismarck	$1,000
Moorhead	$100		Michigan	$800
Duluth	$80		Thompson	$695
Crookston	$50		Devils Lake	$675
Erskine	$50		Mayville	$490
Eveleth	$40		Lakota	$300
Fosston	$40		Oakes	$300
			Arvilla	$170
			Cavalier	$40
			Manvel	$30
Grand Total	**$11,650**		**Grand Total**	**$146,865**
Average	**$85.04**		**Average**	**$1,072.01**

About 22 percent (31 respondents) indicated they had other off-base jobs in their off-time. Around 41 percent (58 respondents) provided information on their spouses' off-base employment. About 15 percent (21 respondents) indicated one or more dependents had jobs off base. This information was also considered in the estimation of household incomes. Details of employment can be found in Tables A-10 through A-12.

Table A-10: Civilian Part-time Occupation

Job Title	Employer	Monthly Pay
Handyman	Multiple	$250
Medical Transcriptionist	Medquist	$750
Student Manager	University Of North Dakota - Dining Services	$750
Farm Manager	Not Specified	$1,500
Tile Setter	Self Employed	$750
Construction Worker	Various	$2,500
Runner	Brad Rockstad	$250
Black Jack Dealer	Developmental Homes	$750
Gaming Manager	American Legion	$250
Customer Service	JC Penney	$250
Gaming	Unknown	$250

Job Title	Employer	Monthly Pay
Farm Laborer	Not Specified	$1,500
Farm Hand	Brother-In-Law	$750
Janitor	Brymak & Adssoc	$1,500
Self Employed	Self Employed	$12,000
Vender Stocker	Procter & Gamble & Rampart Marketing	$250
Usher Supervisor	Ralph Englestad Arena	$250
Security	Compass Facility	$250
Warehouse Worker	Sears	$250
Office Manager	Blue Stone Photography	$750
Instructor	US Army Reserve	$750

Table A-11: Civilian Spousal Employment

Job Title	Employer	Monthly Pay
Accountant	GFG	$1,500
Accountant	Not Specified	$2,500
Administrative Asst	Community Bank	$3,500
AG Pilot	Morton Airspray	$2,500
Amazon Customer Service	Amazon.com	$1,500
Assistant Professor	UND	$5,500
Bartender	Improvement	$1,500
Business Owner	Self	$2,500
Caterer	Self Employed	$750
Clerical	Altru	$2,500
Custodian	GF Public Schools	$2,500
Customer Service	Amazon.com	$2,500
Day Care	Self Employed	$750
Engineer	US Army	$5,500
Feeder Driver	UPS	$5,500
Food Service Worker	Magic Chopstix	$1,500
Golf Course Asst	GF Park District	$750
Health Care	Valley Memorial	$1,500
HR	Alerus	$2,500
Independent Contractor	Self	$3,500
Industrial	Not Specified	$1,500
Librarian	City Of Larimore	$250
Library Systems Administrator	University Of North Dakota	$2,500
Licensed Practical Nurse	Altru	$1,500
Licensed Practical Nurse	Good Samaritan	$750
Manager	McDonalds	$2,500
Manager	Not Specified	$1,500
Medical Transcriptionist	Altru	$2,500
Merchandiser	News America	$1,500
Night Supervisor	Kmart	$2,500

Job Title	Employer	Monthly Pay
Not Specified	Not Specified	$250
Not Specified	Not Specified	$250
Para Educator	GF Public Schools	$750
Paralegal	Not Specified	$3,500
Parking Supervisor	Brad Rockstad	$250
Parts Manager	Hansen Cycle Marine	$1,500
Pastor	Our Saviors Lutheran Church	$3,500
Pharmacist	Altru	$3,500
Phlebotomist	PRACS	$1,500
Plant Manager	Folson Farms	$2,500
Pricing Analysis	Ecolab	$4,500
Professor	University Of North Dakota	$4,500
Railroad	BNSF	$4,500
Realtor	Greenberg Realty	$1,500
Receptionist	Not Specified	$750
Receptionist	Altru	$3,500
Registered Nurse	Altru Hospital	$3,500
Rep	Dakota Food And Equip	$1,500
Scanning Coordinator	Super One Foods	$2,500
Scholl Dist	Not Specified	$1,500
Social Worker	State	$2,500
Supervisor	Ideal Aerosmith	$2,500
Teacher	GF Public Schools	$4,500
Teacher	Midway School	$2,500
Training Resource Coordinator	Northland Technical College	$2,500
Truck Driver	Master Potatoes	$3,500
Vice President Youth Services	Lutheran Social Services	$5,500
Weight Loss Consultant	Curves For Women	$750

Table A-12: Civilian Dependents Employment

Job Title	Employer	Monthly Pay
Cook	Dairy Queen	$250
Delivery	Lowe's	$1,500
Pharmacist	Altru	$3,500
Sandwich Artist	Subway	$250
Cashier	Sudden Tan	$750
LPN	Good Sam.	$750
Food Service	Wendy's	$750
Cashier	Cashier	$250
Sandwich Maker	Subway	$750
Screen Printer	In Prints	$1,500
Maintenance	Dakota Mill	$1,500
Laborer	Not Specified	$1,500
Farm Hand	Emslie Farms	$3,500
Food Service	Services	$750
Cook	Buffalo Wild Wings	$1,500
Teller	Alerus	$750
Hostess	Red Lobster	$750
Service Attendant	Cenex	$1,500
CNA	Altru	$2,500
Asst To Elementary Principal	Thompson School	$1,500
Restaurant Worker	KFC	$250

Civilians were also asked if they or anyone else in the household has attended any continuing higher education classes at NCTC, UND or similar institutions in the last 12 months. Of 140 responses, approximately 18 percent (25) of respondents indicated that they had taken continuing higher education courses, about 18 percent (28) indicated that their spouse had enrolled in continuing higher education courses, and around 10 percent (14) indicated that they had dependents who had taken continuing higher education courses.

About 59 percent (83 respondents) indicated a monthly contribution to a local church or other charities. The amount averaged $210 per respondent. Almost one-quarter (38) of the total responses indicate monthly contributions to other local charitable organizations. The amount averaged about $76. Only one respondent confirmed the receipt of charitable support in the last 12 months.

Appropriated-Fund Civilian Job Descriptions

Table A-13 provides a fairly extensive list of appropriated-fund positions on Grand Forks AFB.

Table A-13: Appropriated-Fund Positions on Grand Forks AFB

Position Title
Accountant
Accounting Technician
Air Conditioning Equipment Mechanic
Air Operations Specialist
Air Traffic Control Specialist (Terminal)
Aircraft Electrician
Airfield Manager
Architect
Attorney-Advisory (General)
Automotive Mechanic
Automotive Mechanic Training Leader
Biological Scientist (Environmental)
Bowling Facility Manager
Boiler Plant Equipment Mechanic Leader
Budget Analyst
Budget Technician
Carpenter
Child Development Center Clerk
Child Development Director/Assistant
Child Development Program Assistant/Tech
Civil Engineer
Clinical Nurse/Community Health Nurse
Closed Microphone Reporter
Club Manager/Assistant Club Manager
Combat Operations Staff Officer
Community Support Chief
Comptroller Clerical Assistant
Computer Assistant
Construction Representative
Contract Specialist
Crisis Action Specialist
Demand Reduction
Dental Assistant
Deputy Services Officer
Education and Training Specialist
Education Services Specialist
Educational/Training Technicians
Electrical Engineer
Electrician
Engineering Equipment Operator (Asphalt Worker)
Engineering Technician
Environmental Engineer
Environmental Protection Specialist
Exercise Physiologist

Position Title
Facility Operations Specialist
Facility Services Assistant
Family Day Care Coordinator
Family Member Support Chief
Financial and Computer Support Assistant
Financial Management Specialist/Officer
Fire Protection (Chief, Lead, Inspectors)
Fitness and Sports Specialist (Supv)
Flight Planning Specialist
Fuel Distribution Systems Mechanic
General Engineer (Deputy/Supervisory)
General Supply Specialist
GEO Base Program Manager
Golf Facility Manager
Guidance Counselor
Health System Specialist
Health Technician (Optometry)
Heavy Mobile Equipment Mechanic/Supv
Heavy Mobile Equipment Repair Inspector
High Voltage Electrician
Historian
Housing Manager/Assistant
Human Resources Assistant
Human Resources Specialist
Industrial Engineer
Instrument Mechanic
Insulator
Landscape Architect
Legal Assistant
Locksmith
Logistics Management Specialist
Machinist
Maintenance and Operations Supervisor
Maintenance Mechanic
Management Agronomist
Management Analyst
Management Assistant
Materials Examiner and Identifier
Materials Handler (Forklift/Motor Vehicle Op)
Materials Handler Supervisor
Mechanical Engineer
Medical Financial Technician
Medical Readiness Specialist
Medical Records Technician
Medical Support Assistant
Mobile Equipment Maintenance Supervisor

Position Title
Mobile Equipment Metal Mechanic
Munitions Contract Monitor
Nutritionist
Office Automation Clerk
Packing Inspector
Pharmacy Technician
Plumber
Powered Support Systems Mechanic
Production Controller
Purchasing Agent
Quality Assurance Specialist
Readiness and Mobility Assistant
Readiness Program Specialist
Realty Officer/Specialist
Recreation Assistant
Recreation Specialist (Youth Activities)
Safety and Occupational Health Manager
School Age Development Coordinator
Secretary (Office Automation)
Security Assistants
Security Specialist
Service Contract Evaluator
Social Services Assistant
Social Worker
Supply Technician/Clerk
Telecommunications Manager/Specialist
Traffic Manager
Training and Curriculum Specialist
Training Specialist
Transportation Assistant
Treaty Compliance Officer
Utility Systems Operator
Utility Systems Repairer-Operator
Vehicle Maintenance and Operations Supv
Welder
Word Worker (Blocker/Bracer)
Work/Life Consultants (and Director)

APPENDIX 5
BUSINESS SURVEY RESPONSES CONCERNING DIFFICULT POSITIONS TO FILL & INPUT FOR BRIC

Table A-14: Difficult Positions to Fill - Indicated by Business Managers/Owners

Difficult Positions to Fill
Account Manager
Afternoon/Evening Cashier
Architects
Assembler
Associate Financial Advisor
Auto Service Technicians
Automotive Technician
Automotive Technicians
Banquet Server
Career Sales
Carpenters
Cellists
Center Faculty Chair
Certified Nurses Aide
Class A Truck Drivers
Clients
Cook
Data Entry
Direct Care Staff
Director Of Development
Dispatchers
DMV Title Clerk
Drafting Technicians
Early Care And Education Providers
Electrical Engineers
Engineers
Entry Level Sheet Metal Worker
Farm Workers
Front Desk
Gas Engine Technician
Generator Mechanics
Graphic Designer
High Level Engineers
Housekeepers
Installer
Installer Helper
Journalist
Labor
Labors
Licensed Practical Nurse

Difficult Positions to Fill
Loan Originator
LPN Charge Nurse
Mechanic
New Product Development Manager
Nursing
Over The Road Truck Drivers
Part-Time Labor
People That Can Think Outside The Box And Want To Work
Potato Warehouse Workers
Pressman
Principal Clarinet
Production
Project Estimator
Purchasing Agent
Radiation Therapists
Receptionist
Registered Nurse
Registered Nurse/Staff RN
Research Coordinator
Research Director
Restaurant Server
RN Charge Nurse
Sales
Sales
Second Shift
Secondary Teachers
Skilled
Skilled Labor
Substitute Providers
Teachers In Shortage Areas - Math, Science, Music, English
Technical Sales
Technicians
Tenants
Third Shift
Transportation Sales
Truck Drivers
Truck Mechanics
Truck Service Technicians
UAV Expert
Upper Management
Welder

Input for BRIC
Unedited Responses

"When would a closure take place if there is one?"

"We sincerely hope that the Brac Commission does not alter the present plans for the GFAFB that included the Unmanned Ariel mission support group."

"We need to know what services will not be available at GFAFB for both active duty and retired when the realignment is completed."

"We have seven commercial tenants: CrossCountry Courier,AmeriPride Linen, Hermes Floral, Midcontinent Communications, Modern Information Systems, All Pets Hospital and PELUSA. All of the above mentioned companies except PELUSA do business with the Grand Forks Air Force Base and their personnel. Our main business is the mini-storage and U-Haul rentals of which 40% to 45% of our customers are personnel from Grand Forks Air Force Base."

"We have our clients and don't rely on 'retail' walk-ins, therefore we expect little impact from BRAC."

"We do work with the base and would sure hate to see that business relationship altered. Our contacts are very professional."

"Trying to figure out what the opportunity are with the UAV mission (Predators and Global Hawks), the cold weather testing, and service companies to support the new mission Also want to see how the UND UAV Center for Excellence figures into the mix"

"The slow transition to a new mission will close and seriously hinder many area businesses."

"The position that I have for a Grand Forks, ND resident (currently occupied) is an intermittent Test Administrator with the US Office of Personnel Management, Midwest Testing. For this seasonal position, I had many people, including PHd's, applying from a small ad run in the Grand Forks Herald last summer. This indicates that the area is already severely depressed and jobs are few. It seems that closing the base would create a significant unemployment problem for Grand Forks."

"The new military housing units are a major part of our retail business. If the next phase of construction does not take place we will be laying off personel.

The base itself is down 50% in purchases form us in the last year. They have very few personel and little money to spend on regular construction projects. reallignment will only make things worse as the tankers moove off base."

"The drawdown will have a very serious impact on our airport boardings which in turn effects business developmnet in GF. Also, I am concerend about apartment vacancies and housing lisitngs. We have fought hard to recoever from the flood. Businesses have made inverstments based on continued growth and now much of that frowth will be slowed by the decrease in personel."

"The business we are in are with sales and service cars light trucks & heavy duty trucks we need all the business we can get to make the business cash flow. If we loose in any aera we will struggle or halfto close our doors."

"The biggest change needed is in changing government. Get rid of all statues and law that are not voted upon by the people of 3/4 vote. Go back to a Trail by Jury not trail with jury. GO back to real money of silver and gold not the fiat money used today without backing and inflationary. Enforce the Constitution for the united States of America and all Oaths taken. Any Oath violated person should be jailed and fined with three or more complaints. Get rid of law enforcement back to peace officers that help, not hinder. Get rid of miltary use in the states. take miltary form over seas bring back here to the states. use on mexican border"

"The base personnel will be missed for their many volunteer efforts with so many agencies that depend on good and solid volunteers."

"satisfied with current efforts by city council and others in state, govenor, senators ect. job well done by all. question need for mayors proposel to continue working group on base realignment. reason for continuation is not clear."

"Right now...if you talk to personell at the GFAFB they really do not the full extent of the BRAC as of yet so it really makes making any decisions difficult at this point not knowing what is really going to be the outfall of this situation. I would forseen a whole crew (8 to 10 employees)being layed-off once the downsizing is complete."

"None, I don't think we need the GF Air Base, we can do both the commiunites and service member alot of good by consolidating. Which will provide better facilities and save tax dollars"

"Loss of personel at the Base will have major impacts on our community. Whether a business feels it directly or indirectly the repercussions will be great to our community. This situation should be of great concern to all members of our community."

"Looking for clearer timelines as to when things will happen to better plan."

"If we allow downsizing to continue it will GREATLY affect many area families. We currently know of five businesses that may close and one that has already closed. We need to work on keeping the base at an even level until the day comes when we can work at increasing the size (personnel)of the base. Allowing the base to downsize even if it's only for a few years will affect the area more than most realize."

"If realignment entials new business in support of the new mission, the negative impact should be short term, and more growth could be anticipated as realignment progresses."

"I hope that Grand Forks (government, NGOs, and business sector) understand how BRIC can help us collectively and individually make the right decisions based on the re-alignment of GFAFB."

"I don't believe the closing would affect our business directly. However I believe reduction of the base from it's present size/capacity would have some dire results to our area and we are 45+ miles from Grand Forks."

"I am the owner of a drop-in child care center in Grand Forks. GFAFB families are a huge percentage of my clientele, due to reasons such as being new to town and not knowing any babysitters, spouses of deployed soldiers needing a break, and no family in the area to help them with the kids. I am incredibly concerned about the effect the realignment will have on the success of my business."

"Grand Forks Air Force Base needs to be a mult-mission base"

"Good Luck!! We are based in Fargo, but have an office and patient care team in Grand Forks."

"For the insurance industry it is like losing a town of clients. We have to make up the loss of policies somewhere to continue to employ the same amount of people and the marketing to do that and the cost of employee far outweighs the cost of keeping a current client. Plus the loss of incoming policies when someone is transferred to our area."

"Currently our business is able to use at little or no cost the live-fire training facility at the AFB to satisfy our annual refresher requirements. We hope to be able to continue that use in a post-BRAC environment."

"Continue working hard to increase the use of the GFAFB (missions, etc.)"

"A DECLINE IN BASE POPULATION WILL HAVE AN OBVIOUS IMPACT ON MY CLIENT BASE. I AM TENDING TO MARKET MORE AWAY FROM THE BASE POPULATION TO STABALIZE MY BUSINESS INCOME."

APPENDIX 6
DETAILED REAL ESTATE DATA FOR GRAND FORKS, NELSON, TRAILL AND WALSH COUNTIES IN NORTH DAKOTA AND FOR POLK COUNTY IN MINNESOTA

This appendix includes an overview of the real estate markets in the five counties in the region of Grand Forks Air Force Base.

North Dakota

- Grand Forks County (page A-45)
- Nelson County (page A-51)
- Traill County (page A-57)
- Walsh County (page A-64)

Minnesota

- Polk County (page A-71)

The information on the counties focuses on housing-related statistics from these counties, as well as assessor data illustrating the trend in valuation of commercial and residential property in each county over the past several years where available.

Grand Forks County, North Dakota

As of 2000, the population of Grand Forks County was 66,109. Its county seat and largest community is Grand Forks. Grand Forks County and Polk County, Minnesota make up the Greater Grand Forks metropolitan area. The median income for a household in the county was $35,785, and the median income for a family was $46,620. Males had a median income of $30,079 versus $21,426 for females. The per capita income for the county was $17,868. About 8.0% of families and 12.3% of the population were below the poverty line, including 12.0% of those under age 18 and 7.6% of those ages 65 or over.[117] Cities and towns in Grand Forks County include the following:

[117] http://en.wikipedia.org/wiki/Grand_Forks_County (accessed in June 2006).

Table A-15: Grand Forks County, ND Cities

Grand Forks County Cities
Emerado
Gilby
Grand Forks
Grand Forks AFB
Inkster
Larimore
Manvel
Niagara
Northwood
Reynolds
Thompson

Select data on the Grand Forks County Real Estate Market are presented below.

The following data are from the 2000 Census and includes information on Grand Forks County Housing.

Table A-16: Grand Forks County Data
Housing Occupancy[118]

	Number	Percentage
Total housing units	**27,373**	**100%**
Occupied housing units	25,435	92.9%
Vacant housing units	1,938	7.1%
For seasonal, recreational, or occasional use	123	0.4%
Homeowner vacancy rate	(x)	2.6%
Rental vacancy rate	(x)	6.6%

[118] Census 2000.

Table A-17: Grand Forks County Data
Housing Tenure[119]

	Number	Percentage
Occupied housing units	**25,435**	**100%**
Owner-occupied housing units	13,709	53.9%
Renter-occupied housing units	11,726	46.1%

Table A-18: Grand Forks County Data
Units in Structure[120]

	Number	Percentage
1-unit, detached	12,534	45.8%
1-unit, attached	2,344	8.6%
2 units	1,095	4%
3 or 4 units	1,468	5.4%
5 to 9 units	1,193	4.4%
10 to 19 units	2,392	8.7%
20 or more units	4,690	17.1%
Mobile home	1,657	6.1%
Boat, RV, van, etc.	0	0%

Table A-19: Grand Forks County Data
Year Structure Built[121]

	Number	Percentage
1999 to March 2000	701	2.6%
1995 to 1998	1,681	6.1%
1990 to 1994	1,569	5.7%
1980 to 1989	3,538	12.9%
1970 to 1979	6,929	25.3%
1960 to 1969	3,760	13.7%
1940 to 1959	4,787	17.5%
1939 or earlier	4,408	16.1%

[119] Census 2000.
[120] Census 2000.
[121] Census 2000.

Table A-20: Grand Forks County Data
Selected Characteristics[122]

	Number	Percentage
Lacking complete plumbing facilities	96	0.4%
Lacking complete kitchen facilities	108	0.4%
No telephone service	345	1.4%

Table A-21: Grand Forks County Data
Occupants per Room[123]

	Number	Percentage
Occupied housing units	**25,435**	**100%**
1.00 or less	24,804	97.5%
1.01 to 1.50	419	1.6%
1.51 or more	212	0.8%

Table A-22: Grand Forks County Data
Specified Owner-Occupied Units[124]

Value	Number	Percentage
Total	**10,542**	**100%**
Less than $50,000	991	9.4%
$50,000 to $99,999	5,060	48%
$100,000 to $149,999	2,991	28.4%
$150,000 to $199,999	953	9%
$200,000 to $299,999	425	4%
$300,000 to $499,999	107	1%
$500,000 to $999,999	10	0.1%
$1,000,000 or more	5	0%
Median (dollars)	92,800	(x)

[122] Census 2000.
[123] Census 2000.
[124] Census 2000.

Table A-23: Grand Forks County Data
Selected Monthly Owner Costs as a Percentage of Household Income In 1999[125]

	Number	Percentage
Less than 15 percent	3,743	35.5%
15 to 19 percent	2,282	21.6%
20 to 24 percent	1,673	15.9%
25 to 29 percent	1,034	9.8%
30 to 34 percent	579	5.5%
35 percent or more	1,187	11.3%
Not computed	44	0.4%

Table A-24: Grand Forks County Data
Specified Renter-Occupied Units[126]

Gross Rent	Number	Percentage
Total	**11,707**	**100%**
Less than $200	738	6.3%
$200 to $299	1,101	9.4%
$300 to $499	3,917	33.5%
$500 to $749	3,740	31.9%
$750 to $999	606	5.2%
$1,000 to $1,499	229	2%
$1,500 or more	105	0.9%
No cash rent	1,271	10.9%
Median (dollars)	477	(x)

[125] Census 2000.
[126] Census 2000.

Table A-25: Grand Forks County Data
Gross Rent as a Percentage of Household Income In 1999[127]

	Number	Percent
Less than 15 percent	2,053	17.5%
15 to 19 percent	1,775	15.2%
20 to 24 percent	1,585	13.5%
25 to 29 percent	1,028	8.8%
30 to 34 percent	823	7%
35 percent or more	2,998	25.6%
Not computed	1,445	12.3%

The following information was obtained from the Grand Forks County Finance and Tax Department. It includes the market value of residential properties and commercial properties between 2000 and 2005. Between 2000 and 2005, the value of residential property in Grand Forks County increased from $1,196,784,978 to $1,694,588,533, a 41.5 percent increase. During the same period, the value of commercial property increased from $744,463,720 to $976,144,280, a 31.1 percent increase.

Table A-26: Grand Forks County Data
Assessed Value of Residential Properties by Year[128]

Year	Value
2005	$1,694,588,533
2004	$1,485,629,911
2003	$1,359,879,311
2002	$1,276,165,333
2001	$1,215,821,889
2000	$1,196,784,978

[127] Census 2000.
[128] Nelson, Deborah. Grand Forks County Assessors Office.

Table A-27: Grand Forks County Data
Assessed Value of Commercial Properties by Year[129]

Year	Value
2005	$976,144,280
2004	$911,174,520
2003	$849,811,380
2002	$802,085,860
2001	$780,337,080
2000	$744,463,720

Nelson County, North Dakota

Nelson County is located in North Dakota. As of 2000, the population was 3,715. The county seat is Lakota.

The median income for a household in the county was $28,892, and the median income for a family was $37,406. Males had a median income of $27,163 versus $18,857 for females. The per capita income for the county was $16,320. About 7.20 percent of families and 10.30 percent of the population were below the poverty line, including 11.00 percent of those under age 18 and 10.30 percent of those ages 65 or over.[130]

Table A-28: Cities in Nelson County

Nelson County Cities
Aneta
Lakota
McVille
Michigan
Pekin
Petersburg
Tolna

Nelson County Development Activity

Current and recent real estate activity in Nelson County is very limited. A conversation with Julius Wangler of the Red River Council, which handles economic development for Nelson County revealed the following current and recent activity in the Nelson County real estate market.

[129] Nelson, Deborah. Grand Forks County Assessors Office.
[130] http://en.wikipedia.org/wiki/Nelson_County%2C_ND (accessed in June 2006).

In 2005, there was an expansion of the Dusty Willow Dairy. The expansion involved the addition of 100 cows, a new 1,200 square foot barn for 100 cows and new equipment. The total cost of the development was $282,000. Additionally, the Luneby Nursey, a wholesale nursery recently completed a new fence around the property for $50,000 to keep out deer. Both projects were financed by the Red River Council.

There are also discussions of a new 5,000 pig farrowing operation. Construction would commence in the Spring of 2007, and the project will encompass 80 acres at a project cost of $4,000,000.

Select data on the Nelson County Real Estate Market are presented below.

The following data are from the 2000 Census and include information on Nelson County Housing.

Table A-29: Nelson County Data
Housing Occupancy[131]

	Number	Percentage
Total housing units	**2,014**	**100%**
Occupied housing units	1,628	80.8%
Vacant housing units	386	19.2%
For seasonal, recreational, or occasional use	68	3.4%
Homeowner vacancy rate (percent)		4.5%
Rental vacancy rate (percent)		**13.7%**

Table A-30: Nelson County Data
Housing Tenure[132]

	Number	Percentage
Occupied housing units	**1,628**	**100%**
Owner-occupied housing units	1,306	80.2%
Renter-occupied housing units	322	19.8%
Average household size of owner-occupied unit	2.28	(x)
Average household size of renter-occupied unit	1.79	(x)
Total housing units	**2,014**	**100%**

[131] Census 2000.
[132] Census 2000.

Table A-31: Nelson County Data
Units in Structure[133]

	Number	Percentage
1-unit, detached	1,653	82.1%
1-unit, attached	13	0.6%
2 units	18	0.9%
3 or 4 units	105	5.2%
5 to 9 units	60	3%
10 to 19 units	32	1.6%
20 or more units	3	0.1%
Mobile home	126	6.3%
Boat, RV, van, etc.	4	0.2%

Table A-32: Nelson County Data
Year Structure Built[134]

	Number	Percentage
1999 to March 2000	14	0.7%
1995 to 1998	29	1.4%
1990 to 1994	42	2.1%
1980 to 1989	130	6.5%
1970 to 1979	397	19.7%
1960 to 1969	214	10.6%
1940 to 1959	322	16%
1939 or earlier	866	43%

[133] Census 2000.
[134] Census 2000.

Table A-33: Nelson County Data
Selected Characteristics[135]

	Number	Percentage
Lacking complete plumbing facilities	2	0.1%
Lacking complete kitchen facilities	2	0.1%
No telephone service	32	2%

Table A-34: Nelson County Data
Occupants per Room[136]

	Number	Percentage
Occupied Housing Units	**1,628**	**100%**
1.00 or less	1,622	99.6%
1.01 to 1.50	6	0.4%
1.51 or more	0	0%

Table A-35: Nelson County Data
Specified Owner-Occupied Units[137]

Value	Number	Percentage
Total	**848**	**100%**
Less than $50,000	528	62.3%
$50,000 to $99,999	290	34.2%
$100,000 to $149,999	20	2.4%
$150,000 to $199,999	10	1.2%
$200,000 to $299,999	0	0%
$300,000 to $499,999	0	0%
$500,000 to $999,999	0	0%
$1,000,000 or more	0	0%
Median (dollars)	36,100	(x)

[135] Census 2000.
[136] Census 2000.
[137] Census 2000.

Table A-36: Nelson County Data
Mortgage Status and Selected Monthly Owner Costs[138]

	Number	Percentage
With a mortgage	229	27%
Less than $300	11	1.3%
$300 to $499	51	6%
$500 to $699	86	10.1%
$700 to $999	61	7.2%
$1,000 to $1,499	20	2.4%
$1,500 to $1,999	0	0%
$2,000 or more	0	0%
Median (dollars)	609	(x)
Not mortgaged	619	73%
Median (dollars)	241	(x)

Table A-37: Nelson County Data
Selected Monthly Owner Costs as a Percentage
of Household Income In 1999[139]

	Number	Percentage
Less than 15 percent	481	56.7%
15 to 19 percent	126	14.9%
20 to 24 percent	62	7.3%
25 to 29 percent	59	7%
30 to 34 percent	26	3.1%
35 percent or more	80	9.4%
Not computed	14	1.7%

[138] Census 2000.
[139] Census 2000.

Table A-38: Nelson County Data
Specified Renter-Occupied Units[140]

Gross Rent	Number	Percentage
Total renter occupied	**280**	**100%**
Less than $200	70	25%
$200 to $299	80	28.6%
$300 to $499	75	26.8%
$500 to $749	19	6.8%
$750 to $999	0	0%
$1,000 to $1,499	0	0%
$1,500 or more	0	0%
No cash rent	36	12.9%
Median (dollars)	275	(x)

Table A-39: Nelson County Data
Gross Rent as a Percentage of Household Income in 1999[141]

	Number	Percentage
Less than 15 percent	89	31.8%
15 to 19 percent	38	13.6%
20 to 24 percent	39	13.9%
25 to 29 percent	23	8.2%
30 to 34 percent	19	6.8%
35 percent or more	30	10.7%
Not computed	42	15%

The following information was obtained from the Nelson County Office of Tax Equalization. It includes the market value of residential properties and commercial properties between 2000 and 2005. Between 2000 and 2005, the value of residential properties in Nelson County increased from $23,561,618 to $25,617,463, an 8.7 percent increase. Over the same time period, the value of commercial properties increased from $13,490,183 to $15,607,895, a 15.7 percent increase.

[140] Census 2000.
[141] Census 2000.

Table A-40: Nelson County Data
Assessed Value of Residential Properties by Year[142]

Year	Value
2005	$25,617,463
2004	$24,301,715
2003	$24,122,395
2002	$23,771,140
2001	$23,692,921
2000	$23,561,618

Table A-41: Nelson County Data
Assessed Value of Commercial Properties by Year[143]

Year	Value
2005	$15,607,895
2004	$14,604,986
2003	$14,828,001
2002	$14,210,900
2001	$13,426,682
2000	$13,490,183

Traill County, North Dakota

Traill County is located in North Dakota. As of 2000, the population was 8,477. The county seat is Hillsboro. The largest city is Mayville.

The median income for a household in the county was $37,445, and the median income for a family was $45,852. Males had a median income of $30,138 versus $20,583 for females. The per capita income for the county was $18,014. About 6.4 percent of families and 9.2 percent of the population were below the poverty line, including 9.6 percent of those under age 18 and 8.1 percent of those age 65 or over.[144]

[142] Linstad, Michelle. Director, Nelson County Office of Tax Equalization.
[143] Linstad, Michelle. Director, Nelson County Office of Tax Equalization.
[144] http://en.wikipedia.org/wiki/Traill_County%2C_ND.

Table A-42: Cities in Traill County

Cities
Blanchard
Buxton
Clifford
Galesburg
Hatton
Hillsboro
Mayville
Portland

Trail County Development Activity

A conversation with Rick Forsgren of the Traill County Economic Development Commission revealed the following current and recent activity in the Traill County real estate market.

The City of Hatton is offering residential lots for sale that include city infrastructure and streets. There are currently six lots available, and the prices are in the $10,000 to $12,000 range. All specials are paid up.

In Hillsboro, the city created a TIF district to develop 23 residential lots in the river bend addition. All lots have been sold for between, $20,000 and $30,000 and there are currently six homes under construction in the development. Additionally, the Hillsboro EDC bought additional land and has plans for another 33 lots. The land for this development has been platted, but no utilities have been put in place. There is a possibility of creating a TIF district here as well.

Additionally, there are plans for a 20-acre light manufacturing development at the Hillsboro Commercial Park. There is utility access to the site, and the existing tenant, MW Cornhead, occupies approximately 2.5 acres of land with a 4,800 square foot facility. Land in the development is approximately $3,000 per acre.

The Mayville Portland EDC owns 83 acres of land for future development. Plans call for a mix of uses between light commercial and residential. Approximately 40 residential riverfront lots are planned, with the remaining 10 to 15 acres to be used for commercial use. Prospective tenants of the commercial development include retail, storage, and construction supply and equipment users. The home sites will cost between $20,000 and $25,000 and will include city infrastructure, and the commercial land will be approximately $3,000 per acre. Additionally, the

May-Port EDC is negotiating to buy 22 acres of land with possible rail spur access, at a price of approximately $3,000 per acre.

Table A-43: Available sites in Traill County[145]

Name	City	Area (sq ft)	Main Floor (sq ft)	Office (sq ft)	Use
Gary's Electric	Portland	4,000	3,000	1000	General
Former Hatton Bank	Hatton	2,650	1,325	1,325	Office
Industrial Park	Hillsboro	20 acres MW Cornheads 4,800 sf			General
Mayville Airport Parcel	Mayville	80 ac.			Industrial
Tim Hauf Building	Hillsboro	5,000			General/Commercial
May-Port EDC Parcel	Mayville	80 ac. Has services available to it. 40 lots being put in			General
MayPort Farmers Parcel	Portland	70 ac. – Near bean processing plant. New bean plant 3 years			Industrial

Select data on the Traill County Real Estate Market are presented below.

The following data are from the 2000 Census and includes information on Traill County Housing.

Table A-44: Traill County Data
Housing Occupancy[146]

	Number	Percentage
Total housing units	**3,708**	**100%**
Occupied housing units	3,341	90.1%
Vacant housing units	367	9.9%
For seasonal, recreational, or occasional use	31	0.8%
Homeowner vacancy rate (percent)	(x)	3.8%
Rental vacancy rate (percent)	(x)	11.9%

[145] Forsgren, Rick. Traill County EDC.
[146] Census 2000.

Table A-45: Traill County Data Housing Tenure[147]

	Number	Percentage
Occupied housing units	**3,341**	**100%**
Owner-occupied housing units	2,427	72.6%
Renter-occupied housing units	914	27.4%
Average household size of owner-occupied unit	2.59	(x)
Average household size of renter-occupied unit	1.92	(x)
Total Housing Units	**3,708**	**100%**

Table A-46: Traill County Data Units in Structure[148]

	Number	Percentage
1-unit, detached	2,794	75.4%
1-unit, attached	39	1.1%
2 units	80	2.2%
3 or 4 units	236	6.4%
5 to 9 units	135	3.6%
10 to 19 units	177	4.8%
20 or more units	48	1.3%
Mobile home	199	5.4%
Boat, RV, van, etc.	0	0%

Table A-47: Traill County Data Year Structure Built[149]

	Number	Percentage
1999 to March 2000	46	1.2%
1995 to 1998	112	3%
1990 to 1994	89	2.4%
1980 to 1989	299	8.1%
1970 to 1979	788	21.3%
1960 to 1969	408	11%
1940 to 1959	661	17.8%
1939 or earlier	1,305	35.2%

[147] Census 2000.
[148] Census 2000.
[149] Census 2000.

Table A-48: Traill County Data Selected Characteristics[150]

	Number	Percentage
Lacking complete plumbing facilities	15	0.4%
Lacking complete kitchen facilities	2	0.1%
No telephone service	64	1.9%

Table A-49: Traill County Data Occupants per Room[151]

	Number	Percentage
Occupied housing units	**3,341**	**100%**
1.00 or less	3,293	98.6%
1.01 to 1.50	29	0.9%
1.51 or more	19	0.6%
Specified owner-occupied units	**1,808**	**100%**

Table A-50: Traill County Data Value[152]

	Number	Percentage
Less than $50,000	640	35.4%
$50,000 to $99,999	952	52.7%
$100,000 to $149,999	174	9.6%
$150,000 to $199,999	36	2%
$200,000 to $299,999	6	0.3%
$300,000 to $499,999	0	0%
$500,000 to $999,999	0	0%
$1,000,000 or more	0	0%
Median (dollars)	60,000	(x)

[150] Census 2000.
[151] Census 2000.
[152] Census 2000.

Table A-51: Traill County Data
Mortgage Status and Selected Monthly Owner Costs[153]

	Number	Percentage
With a mortgage	933	51.6%
Less than $300	6	0.3%
$300 to $499	148	8.2%
$500 to $699	289	16%
$700 to $999	332	18.4%
$1,000 to $1,499	142	7.9%
$1,500 to $1,999	13	0.7%
$2,000 or more	3	0.2%
Median (dollars)	713	(x)
Not mortgaged	875	48.4%
Median (dollars)	279	(x)

Table A-52: Traill County Data
Selected Monthly Owner Costs as a Percentage
of Household Income In 1999[154]

	Number	Percentage
Less than 15 percent	947	52.4%
15 to 19 percent	328	18.1%
20 to 24 percent	190	10.5%
25 to 29 percent	114	6.3%
30 to 34 percent	71	3.9%
35 percent or more	137	7.6%
Not computed	21	1.2%
Specified renter-occupied units	**845**	**100%**

[153] Census 2000.
[154] Census 2000.

Table A-53: Traill County Data Gross Rent[155]

	Number	Percentage
Less than $200	100	11.8%
$200 to $299	154	18.2%
$300 to $499	413	48.9%
$500 to $749	84	9.9%
$750 to $999	22	2.6%
$1,000 to $1,499	3	0.4%
$1,500 or more	0	0%
No cash rent	69	8.2%
Median (dollars)	344	(x)

Table A-54: Traill County Data
Gross Rent as a Percentage of Household Income in 1999[156]

	Number	Percentage
Less than 15 percent	243	28.8%
15 to 19 percent	107	12.7%
20 to 24 percent	131	15.5%
25 to 29 percent	70	8.3%
30 to 34 percent	52	6.2%
35 percent or more	165	19.5%
Not computed	77	9.1%

The following information was obtained from the Traill County Tax Director. It includes the market value of residential properties and commercial properties between 2001 and 2006. Between 2001 and 2006, the value of residential properties in Traill County increased from $113,418,711 to $152,382,684 a 34.3 percent increase. Over the same time period, the value of commercial properties increased from $76,423,281 to $91,070,677, a 19.2 percent increase.

[155] Census 2000.
[156] Census 2000.

Table A-55: Traill County Data
Assessed Value of Residential Properties by Year[157]

Year	Value
2006	$152,382,684
2005	$146,851,948
2004	$138,128,946
2003	$127,757,973
2002	$125,322,936
2001	$113,418,711

Table A-56: Traill County Data
Assessed Value of Commercial Properties by Year[158]

Year	Value
2006	$91,070,677
2005	$89,436,180
2004	$85,268,176
2003	$77,378,958
2002	$77,218,152
2001	$76,423,281

Walsh County, North Dakota

As of 2000, the population of Walsh County was 12,389. The county seat is Grafton.

Walsh County was organized in 1881 from the northern parts of Grand Forks County and Pembina County. It is named in honor of George H. Walsh.

The median income for a household in the county was $33,845, and the median income for a family was $41,619. Males had a median income of $28,080 versus $19,961 for females. The per capita income for the county was $16,496. About 7.70 percent of families and 10.90 percent of the population were below the poverty line, including 12.20 percent of those under age 18 and 8.80 percent of those age 65 or over.[159]

[157] Zerface, Barbara. Tax Director, Traill County.
[158] Zerface, Barbara. Tax Director, Traill County.
[159] http://en.wikipedia.org/wiki/Walsh_County%2C_ND.

Table A-57: Cities in Walsh County

Cities
Adams
Ardoch
Conway
Edinburg
Fairdale
Fordville
Forest River
Grafton
Hoople
Lankin
Minto
Park River
Pisek
Warsaw

Select data on the Walsh County Real Estate Market are presented below.

The following data are from the 2000 Census and include information on Walsh County Housing.

Table A-58: Walsh County Data
Housing Occupancy[160]

	Number	Percentage
Total housing units	**5,757**	**100%**
Occupied housing units	5,029	87.4%
Vacant housing units	728	12.6%
For seasonal, recreational, or occasional use	71	1.2%
Homeowner vacancy rate (percent)	(x)	3.9%
Rental vacancy rate (percent)	(x)	12.5%

[160] Census 2000.

Table A-59: Walsh County Data Housing Tenure[161]

	Number	Percentage
Occupied housing units	**5,029**	**100%**
Owner-occupied housing units	3,864	76.8%
Renter-occupied housing units	1,165	23.2%
Average household size of owner-occupied unit	2.49	(x)
Average household size of renter-occupied unit	2.04	(x)

Table A-60: Units in Structure[162]

	Number	Percentage
Total housing units	5,757	100%
1-unit, detached	4,370	75.9%
1-unit, attached	89	1.5%
2 units	155	2.7%
3 or 4 units	277	4.8%
5 to 9 units	217	3.8%
10 to 19 units	95	1.7%
20 or more units	65	1.1%
Mobile home	489	8.5%
Boat, RV, van, etc.	0	0%

[161] Census 2000.
[162] Census 2000.

Table A-61: Walsh County Data
Year Structure Built[163]

	Number	Percentage
1999 to March 2000	73	1.3%
1995 to 1998	135	2.3%
1990 to 1994	87	1.5%
1980 to 1989	480	8.3%
1970 to 1979	1,267	22%
1960 to 1969	891	15.5%
1940 to 1959	1,033	17.9%
1939 or earlier	1,791	31.1%

Table A-62: Walsh County Data
Selected Characteristics[164]

	Number	Percentage
Lacking complete plumbing facilities	30	0.6%
Lacking complete kitchen facilities	24	0.5%
No telephone service	49	1%

Table A-63: Walsh County Data
Occupants per Room[165]

	Number	Percentage
Occupied Housing Units	**5,029**	**100%**
1.00 or less	4,915	97.7%
1.01 to 1.50	64	1.3%
1.51 or more	50	1%

[163] Census 2000.
[164] Census 2000.
[165] Census 2000.

Table A-64: Walsh County Data Value[166]

	Number	Percentage
Specified Owner-Occupied Units	**2,828**	**100%**
Less than $50,000	1,346	47.6%
$50,000 to $99,999	1,150	40.7%
$100,000 to $149,999	219	7.7%
$150,000 to $199,999	69	2.4%
$200,000 to $299,999	42	1.5%
$300,000 to $499,999	0	0%
$500,000 to $999,999	0	0%
$1,000,000 or more	2	0.1%
Median (dollars)	52,100	(x)

Table A-65: Walsh County Data
Mortgage Status and Selected Monthly Owner Costs[167]

	Number	Percentage
With a mortgage	1,138	40.2%
Less than $300	18	0.6%
$300 to $499	223	7.9%
$500 to $699	429	15.2%
$700 to $999	315	11.1%
$1,000 to $1,499	113	4%
$1,500 to $1,999	23	0.8%
$2,000 or more	17	0.6%
Median (dollars)	657	(x)
Not mortgaged	1,690	59.8%
Median (dollars)	263	(x)

[166] Census 2000.
[167] Census 2000.

Table A-66: Walsh County Data
Selected Monthly Owner Costs as a Percentage of Household Income in 1999[168]

	Number	Percentage
Less than 15 percent	1,512	53.5%
15 to 19 percent	457	16.2%
20 to 24 percent	293	10.4%
25 to 29 percent	134	4.7%
30 to 34 percent	127	4.5%
35 percent or more	283	10%
Not computed	22	0.8%

Table A-67: Walsh County Data
Gross Rent[169]

	Number	Percentage
Specified renter-occupied units	**1,105**	**100**
Less than $200	148	13.4%
$200 to $299	135	12.2%
$300 to $499	477	43.2%
$500 to $749	166	15%
$750 to $999	36	3.3%
$1,000 to $1,499	0	0%
$1,500 or more	0	0%
No cash rent	143	12.9%
Median (dollars)	361	(x)

[168] Census 2000.
[169] Census 2000.

Table A-68: Walsh County Data
Gross Rent as a Percentage of Household Income in 1999[170]

	Number	Percentage
Less than 15 percent	283	25.6%
15 to 19 percent	184	16.7%
20 to 24 percent	136	12.3%
25 to 29 percent	118	10.7%
30 to 34 percent	73	6.6%
35 percent or more	159	14.4%
Not computed	152	13.8%

The following information was obtained from the Walsh County Director of Tax Equalization. It includes the market value of residential properties and commercial properties between 2000 and 2005. Between 2000 and 2005, the value of residential properties in Walsh County increased from $136,061,401 to $153,121,854, a 12.5 percent increase. Over the same time period, the value of commercial properties decreased from $66,222,472 to $63,563,829, a 4.0 percent decrease.

Table A-69: Walsh County Data
Assessed Value of Residential Properties by Year[171]

Year	Value
2005	$153,121,854
2004	$150,482,338
2003	$147,909,916
2002	$145,601,045
2001	$142,995,738
2000	$136,061,401

[170] Census 2000.
[171] Wild, Mary. Director of Tax Equalization, Walsh County.

Table A-70: Walsh County Data
Assessed Value of Commercial Properties by Year[172]

Year	Value
2005	$63,563,829
2004	$64,253,329
2003	$65,055,129
2002	$64,112,436
2001	$63,560,942
2000	$66,222,472

Polk County, Minnesota

As of 2000, the population of Polk County, Minnesota was 31,369. The county seat is Crookston. The county is a part of the Greater Grand Forks metropolitan area. The median income for a household in the county was $35,105, and the median income for a family was $44,310. Males had a median income of $31,472 versus $21,535 for females. The per capita income for the county was $17,279. About 7.30 percent of families and 10.90 percent of the population were below the poverty line, including 13.30 percent of those under age 18 and 10.90 percent of those age 65 or over.[173]

Table A-71: Polk County, MN Cities

Cities
Beltrami
Climax
Crookston
East Grand Forks
Erskine
Fertile
Fisher
Fosston
Gully
Lengby
McIntosh
Mentor
Nielsville
Trail
Winger

[172] Wild, Mary. Director of Tax Equalization, Walsh County.
[173] http://en.wikipedia.org/wiki/Polk_County%2C_MN.

Select data on the Polk County Real Estate Market are presented below. The following data are from the 2000 Census and includes information on Polk County Housing.

Table A-72: Polk County, MN Data
Housing Occupancy[174]

	Number	Percentage
Total housing units	**14,008**	**100%**
Occupied housing units	12,070	86.2%
Vacant housing units	1,938	13.8%
For seasonal, recreational, or occasional use	926	6.6%
Homeowner vacancy rate (percent)	2.5	(x)
Rental vacancy rate (percent)	9.1	(x)

Table A-73: Polk County, MN
Data Housing Tenure[175]

	Number	Percentage
Occupied housing units	**12,070**	**100%**
Owner-occupied housing units	8,949	74.1%
Renter-occupied housing units	3,121	25.9%
Average household size of owner-occupied unit	2.64	(x)
Average household size of renter-occupied unit	1.99	(x)

Table A-74: Polk County, MN Data
Units in Structure[176]

	Number	Percentage
1-unit, detached	10,232	73%
1-unit, attached	354	2.5%
2 units	253	1.8%
3 or 4 units	341	2.4%
5 to 9 units	342	2.4%
10 to 19 units	670	4.8%
20 or more units	720	5.1%
Mobile home	1,063	7.6%
Boat, RV, van, etc.	33	0.2%

[174] Census 2000.
[175] Census 2000.
[176] Census 2000.

Table A-75: Polk County, MN
Data Year Structure Built[177]

	Number	Percentage
1999 to March 2000	325	2.3%
1995 to 1998	727	5.2%
1990 to 1994	523	3.7%
1980 to 1989	1,231	8.8%
1970 to 1979	2,844	20.3%
1960 to 1969	1,482	10.6%
1940 to 1959	2,878	20.5%
1939 or earlier	3,998	28.5%

Table A-76: Polk County, MN Data
Selected Characteristics[178]

	Number	Percentage
Lacking complete plumbing facilities	87	0.7%
Lacking complete kitchen facilities	85	0.7%
No telephone service	218	1.8%

Table A-77: Polk County, MN Data
Occupants per Room[179]

	Number	Percentage
Occupied housing units	**12,070**	**100%**
1.00 or less	11,816	97.9%
1.01 to 1.50	156	1.3%
1.51 or more	98	0.8%

[177] Census 2000.
[178] Census 2000.
[179] Census 2000.

Table A-78: Polk County, MN Data
Specified Owner-Occupied Units[180]

Value	Number	Percentage
Total	**6,347**	**100%**
Less than $50,000	1,839	29%
$50,000 to $99,999	2,846	44.8%
$100,000 to $149,999	1,123	17.7%
$150,000 to $199,999	367	5.8%
$200,000 to $299,999	136	2.1%
$300,000 to $499,999	19	0.3%
$500,000 to $999,999	17	0.3%
$1,000,000 or more	0	0%
Median (dollars)	75,000	(x)

Table A-79: Polk County, MN Data
Mortgage Status and Selected Monthly Owner Costs[181]

	Number	Percentage
With a mortgage	3,767	59.4%
Less than $300	30	0.5%
$300 to $499	580	9.1%
$500 to $699	987	15.6%
$700 to $999	1,168	18.4%
$1,000 to $1,499	814	12.8%
$1,500 to $1,999	139	2.2%
$2,000 or more	49	0.8%
Median (dollars)	760	(x)
Not mortgaged	2,580	40.6%
Median (dollars)	251	(x)

[180] Census 2000.
[181] Census 2000.

Table A-80: Polk County, MN Data
Selected Monthly Owner Costs as a Percentage of Household Income in 1999[182]

	Number	Percentage
Less than 15 percent	2,927	46.1%
15 to 19 percent	1,273	20.1%
20 to 24 percent	753	11.9%
25 to 29 percent	469	7.4%
30 to 34 percent	288	4.5%
35 percent or more	608	9.6%
Not computed	29	0.5%
Specified renter-occupied units	2,983	100%

Table A-81: Polk County, MN Data
Specified Renter-Occupied Units[183]

Gross Rent	Number	Percentage
Less than $200	398	13.3%
$200 to $299	339	11.4%
$300 to $499	1,164	39%
$500 to $749	719	24.1%
$750 to $999	117	3.9%
$1,000 to $1,499	19	0.6%
$1,500 or more	2	0.1%
No cash rent	225	7.5%
Median (dollars)	396	(x)

Table A-82: Polk County, MN Data
Gross Rent as a Percentage of Household Income in 1999[184]

	Number	Percentage
Less than 15 percent	554	18.6%
15 to 19 percent	398	13.3%
20 to 24 percent	367	12.3%
25 to 29 percent	290	9.7%
30 to 34 percent	234	7.8%
35 percent or more	913	30.6%
Not computed	227	7.6%

[182] Census 2000.
[183] Census 2000.
[184] Census 2000.

The following information was obtained from the Polk County Assessor. It includes the market value of residential properties and commercial properties between 2000 and 2006. Between 2000 and 2006, the value of residential properties in Polk County increased from $475,889,875 to $688,479,000, a 44.7 percent increase. Over the same time period, the value of commercial properties increased from $82,568,433 to $97,222,600, a 27.9 percent increase.

Table A-83: Polk County, MN Data
Assessed Value of Residential Properties by Year[185]

Year	Value
2006	$688,479,000
2005	$687,613,300
2004	$600,003,200
2003	$536,443,000
2002	$553,133,320
2001	$511,147,611
2000	$475,889,875

Table A-84: Polk County, MN Data
Assessed Value of Commercial Properties by Year[186]

Year	Value
2006	$97,222,600
2005	$97,613,900
2004	$88,848,900
2003	$83,576,000
2002	$83,434,800
2001	$82,568,433
2000	$76,013,000

Additionally, the table below presents historical data on residential building permits in Polk County as provided by the Polk County Environmental Services.

[185] Johnson, Beverly. Polk County Assessors Office.
[186] Johnson, Beverly. Polk County Assessors Office.

Table A-85: Polk County, MN Data
Residential Building Permits[187]

Year	Number of Units	Value
2005	47	$6,275,000
2004	49	$7,464,000
2003	59	$5,785,000
2002	45	$4,673,000
2001	N/A	N/A
2000	38	$2,837,000

[187] Erdmann, Shelly. Polk County Environmental Services.

APPENDIX 7
AFFORDABLE HOUSING ISSUES IN NORTH DAKOTA AND THE GRAND FORKS REGION

This Appendix provides information about affordable housing issues in North Dakota and the Grand Forks Region. Early in this study, the Grand Forks Region Base Realignment Impact Committee (BRIC) asked that project staff to look into homeless issues in the region. Subsequently, BRIC eliminated this requirement because, unlike bases that are closing under the BRAC legislation, no housing on Grand Forks Air Force Base would be available for the homeless.

However, in the course of our study, the project team obtained information about affordable housing in the area and are providing it in this appendix.

Affordable Housing - North Dakota

Like many states, North Dakota lacks sufficient affordable housing. The shortage of affordable housing is particularly evident for those in the low-income and extremely low-income brackets. On the state level, 43 percent of current owner-occupied or renter-occupied homes in North Dakota are considered affordable to those earning less than 30 percent of Median Family Income (MFI).[188] The affordable housing crisis is not as pronounced for those with incomes less than the MFI but greater than 30 percent of MFI, as a full 69 percent of owner-occupied homes are affordable to those with income between 31 percent and 50 percent of MFI.[189] And for renters, a full 83 percent of renter-occupied units are affordable to those with income between 31 percent and 50 percent of MFI.[190]

While the statistics above show limited supply of affordable housing, particularly on the lower end of the economic spectrum, on a relative basis, the affordability crisis in North Dakota is more moderate than in many other states. The Out of Reach report published in 2005 by the National Low Income Housing Coalition indicates that North Dakota, ranked by "Two-Bedroom Housing Wage" (defined later in this report) is relatively affordable. On a ranking scale of 1-52 (with 1 being the most affordable and 52 the least affordable), North Dakota was ranked 4th. By comparison, South Dakota was ranked 9th, Wisconsin was ranked 24th, and California was ranked 50th.[191] Nonetheless, in the 2004 Community Assessment Needs survey completed by the United Way, 91 percent of respondents cited lack of affordable housing as an "issue of major / moderate importance."[192]

Housing affordability in the Grand Forks, ND-MN MSA tracks very closely with the State.

[188] North Dakota Statewide Housing Needs Assessment: 2004 – Final Report.
[189] North Dakota Statewide Housing Needs Assessment: 2004 – Final Report.
[190] North Dakota Statewide Housing Needs Assessment: 2004 – Final Report.
[191] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[192] City of Grand Forks Consolidated Plan, page 3-1.

The North Dakota Statewide Housing Needs Assessment, 2004 – Final Report indicates that the general housing conditions in North Dakota are very good based on the following criteria: plumbing and kitchen facilities and number of occupants per room.

Table A-86: General Housing Conditions in North Dakota

Owner Occupied	Renter occupied
Less than one-half percent of owner-occupied units lack complete plumbing or kitchen facilities.	One-half percent of renter-occupied units lack complete plumbing facilities and 1 percent lack complete kitchen facilities.
Approximately 1 percent of owner-occupied units are overcrowded, having more than one occupant per room.	Nearly 4 percent of renter-occupied units are overcrowded, having more than one occupant per room.

Source: North Dakota Statewide Housing Needs Assessment, 2004 – Final Report

Affordable Housing – Grand Forks Region

To assess the affordable housing market in Grand Forks and its surrounding counties, The Concourse Group has reviewed data from several sources including the National Low Income Housing Coalition (NLIHC)'s Out of Reach 2005 Report and the Five Year Consolidated Plan (program years 2005-2009) created by the Office of Urban Development.

The NLIHC is a Washington D.C. based non-profit advocacy group with a mission to end the affordable housing crisis in the United States. NLIHC concentrates on four areas to achieve its mission: public education, organization, research, and policy advocacy. NLIHC reports annually on the status of affordable housing in every state and many MSAs.

The Consolidated Plan (Con Plan) is a plan created by the Urban Development Department to serve as a planning document for the City of Grand Forks outlining its strategy to implement certain Housing and Urban Development (HUD) programs. The City of Grand Forks receives Community Development Block Grants (CDGB) from HUD to benefit low and moderate income families. The Con Plan is the City's planning document for the CDBG funds. Only upon approval of the Con Plan by HUD, may Grand Forks obtain CDBG funds or other HUD grants including HOME, ESG, or Section 811.[193]

National Low Income Housing Coalition (NLIHC)

NLIHC's Out of Reach report is a side-by-side comparison of wages and rents. The report does not analyze for sale housing; however, because renters comprise 33 percent of all households in North Dakota and 46 percent of all households in the Grand Forks, ND-MN MSA, the findings in the report provide a strong gauge of affordability.[194] The report determines affordability,

[193] City of Grand Forks Consolidated Plan, page 1-1.
[194] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.

based on housing costs as they relate to wages. A unit is considered affordable provided it does not cost more than 30 percent of the renter's income, including any monthly Supplemental Security Income (SSI).

Highlights from the Out of Reach Report are summarized below followed with key statistical data:

Highlights

Grand Forks, ND-MN MSA

- The 1995 Fair Market Rent (FMR) as determined by HUD on October 1, 2005, of a two bedroom rental unit is $559.
- The Area Median Family Income (AMI) is $55,800 annually. Families earning 30 percent of AMI, or $16,740 per annum, do not make enough income to afford a two bedroom unit at FMR.
- To afford a two bedroom unit, at FMR, annual income of $22,360, which is 40 percent of the Family AMI is needed. The hourly wage needed to earn $22,360 needed in order to afford a two bedroom unit at FMR is $10.75 assuming a 40 hour work week.
- The estimated Renter Median Household Income is $29,218 which translates into $730 per month available for affordable rent, $171 dollars above the two bedroom FMR however, 37 percent of renter households have incomes less than the Median Household Income and therefore are unable to afford a two bedroom rental unit at the FMR.
- The Estimated Mean (average) Renter Hourly Wage is $8.49. To earn enough to afford a two bedroom unit, at FMR, annual income of $22,360 is required. This translates into 51 hours of work required per week at the Mean Renter Hourly Wage of $8.49.
- The North Dakota Minimum Wage is $5.15. To earn enough to afford a two bedroom unit, at FMR, annual income of $22,360 is required. This translates into 83 hours of work required per week at the Minimum Wage of $5.15.

Below are supporting statistics for the Grand Forks ND-MN MSA and the State of North Dakota.

The Fair Market Rent (FMR) as determined by HUD as of October 1, 2005 for a two bedroom unit was $559 in the Grand Forks, ND-MN MSA. The FMR based on bedroom count for both North Dakota and the Grand Forks, ND-MN MSA is as follows:

Table A-87: Fair Market Rents by Number of Bedrooms[195]

Location	Zero Bedrooms	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	$364	$420	$521	$722	$846
Grand Forks ND-MN MSA	$363	$456	$559	$708	$963

The Family Income (2005) as determined by HUD for North Dakota and the Grand Forks, ND-MN MSA is as follows:

Table A-88: Family Income[196]

Location	Area Median Income (AMI)*			Maximum Affordable Monthly Housing Costs by % of Family AMI**			
	Annual	Monthly	30% of AMI	30%	50%	80%	100%
North Dakota	$54,321	$4,527	$16,296	$407	$679	$1,086	$1,358
Grand Forks ND-MN MSA	$55,800	$4,650	$16,740	$419	$698	$1,116	$1,395

* As determined by HUD.
** NLIHC considers a unit affordable provided it costs no more than 30 percent of family income.

The chart below shows the Income levels required to afford rental units of various bedroom sizes in both North Dakota and the Grand Forks, ND-MN MSA:

Table A-89: Income Needed to Afford[197]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	$14,558	$16,802	$20,848	$28,892	$33,829
Grand Forks ND-MN MSA	$14,520	$18,240	$22,360	$28,320	$38,520

The Income levels required to afford rental units of various bedroom sizes is below, shown as a percentage of area median income (AMI) for both North Dakota and the Grand Forks, ND-MN MSA:

[195] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[196] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[197] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.

Table A-90: Percent of Family AMI Needed to Afford[198]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	27%	31%	38%	53%	62%
Grand Forks ND-MN MSA	26%	33%	40%	51%	69%

The chart below shows the hourly wages required, for North Dakota and the Grand Forks, ND-MN MSA, to afford a unit assuming FMR and a 40 hour work week.

Table A-91: Hourly Wage Needed to Afford Housing[199]

Location	Zero Bedrooms FMR	One Bedrooms FMR	Two Bedrooms FMR	Three Bedrooms FMR	Four Bedrooms FMR
North Dakota	$7.00	$8.08	$10.02	$13.89	$16.26
Grand Forks ND-MN MSA	$6.98	$8.77	$10.75	$13.62	$18.52

The chart below shows the Housing Wages as a percent of minimum wage. For example, the Housing Wage required for a two bedroom unit at FMR in the Grand Forks ND-MN MSA is $10.75, an amount 209 percent of the Minimum Wage.

Table A-92: Housing Wage as a Percent of Minimum Wage[200]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	136%	157%	195%	270%	316%
Grand Forks ND-MN MSA	136%	170%	209%	264%	360%

The chart below shows the Housing Wages as a percent of Mean Renters Wage.

Table A-93: Housing Wage as a Percent of Mean Renters Wage[201]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	82%	94%	117%	162%	190%
Grand Forks ND-MN MSA	82%	103%	127%	160%	218%

[198] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[199] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[200] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[201] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.

The chart below shows the number of work hours required to afford a unit at FMR assuming Minimum Wage or Mean Renter Wage. A two bedroom unit in the Grand Forks ND-MN MSA requires 83 hours of work per week at Minimum Wage or 51 hours per week at the Mean Renter Wage.

Table A-94: Work Hours/Week Necessary at Minimum Wage to Afford[202]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	54	63	78	108	126
Grand Forks ND-MN MSA	54	68	83	106	144

Table A-98: Work Hours/Week Necessary at Mean Renter Wage to Afford[203]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	33	38	47	65	76
Grand Forks ND-MN MSA	33	41	51	64	87

The chart below shows the number of jobs required to afford a unit at FMR assuming Minimum Wage or Mean Renter Wage. A two bedroom unit in the Grand Forks ND-MN MSA requires 2.1 full times jobs at Minimum Wage or 1.3 full time jobs at the Mean Renter Wage.

Table A-95: Full Time Jobs Necessary at Minimum Wage to Afford [204]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	1.4	1.6	1.9	2.7	3.2
Grand Forks ND-MN MSA	1.4	1.7	2.1	2.6	3.6

Table 96: Full Time Jobs Necessary at Mean Renter Wage[205]

Location	Zero Bedrooms	One Bedrooms	Two Bedrooms	Three Bedrooms	Four Bedrooms
North Dakota	.8	.9	1.2	1.6	1.9
Grand Forks ND-MN MSA	.8	1.0	1.3	1.6	2.2

Renter income data for North Dakota and the Grand Forks, ND-MN MSA are in the table that follows:

[202] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[203] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[204] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[205] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.

Table A-97: Renter Income[206]

Location	Estimated Renter Median Household Income*	Monthly Rent Affordable at Rent Median	Income Needed to Afford Two-Bedroom FMR as Percent of Renter Median	Estimated Percentage of Renters Unable to Afford Two Bedroom FMR**	Estimated Mean Renter Hourly Wage***	Monthly Rent Affordable at Mean Renter Wage
North Dakota	$27,345	$684	76%	37%	$8.55	$445
Grand Forks ND-MN MSA	$29,218	$730	77%	37%	$8.49	$442

* Census 2000 median renter household income, adjusted to 2005 using HUD's income adjustment factor.

** Estimated by comparing the percent of renter median household income required to afford the two-bedroom FMR to the percent of renter household income as a percent of the median within the State of North Dakota, as measured using American Community Survey Public Use Mircosample data.

*** Estimated mean renter wage is based on BLS data and is adjusted using the ratio of renter to household income reported in Census 2000.

The Consolidated Plan (Con Plan)

The Con Plan is a document created by the Office of Urban Development to serve as a planning guide for the City of Grand Forks outlining its strategy to implement certain Housing and Urban Development (HUD) programs. Upon approval of the Con Plan by HUD, the City may obtain Community Development Block Grants (CDBG) funds or other HUD grants including HOME, ESG, or Section 811. The Grand Forks Office of Urban Development indicates that the City of Grand Forks received $565,000 of HOME Program funding and $5.9M in funding from the Section 8 Housing Assistance Program.[207] CDBG funding was reported to be $476,000 (2005 entitlement) and $1.451M Program Income.[208]

The Con Plan is developed in concert with the citizens of Grand Forks. The Con Plan was created with input from the local governmental and non-governmental entities and members of the community. In 2004, a survey was sent to 100 experts (governmental officials, housing providers, agencies working with the homeless, economic development organizations, health / medical offices, agencies for persons with disabilities) and to the Citizen Advisory Committee (CAC), a citizen-based group appointed by the City Council to represent the broader community.[209] The survey was used to measure community needs and obtain feedback regarding proposed projects. The Con Plan is implemented by various local organizations including the Grand Forks Regional Economic Development Corporation and the Grand Forks Housing Authority. The section that follows reviews pertinent statistics from the Con Plan as well as other supporting materials.

[206] National Low Income Housing Coalition (NLIHC), Out of Reach 2005.
[207] 2005 Annual Report, Office of Urban Development.
[208] 2005 Annual Report, Office of Urban Development.
[209] City of Grand Forks Consolidated Plan, page 1-2.

Value of Local Housing Stock

Grand Forks experienced a significant increase in housing values from 1990 to 2000. The chart below, based on Census data, illustrates that the median value of housing costs increased 50 percent in this ten year period. During this same period, the increase in the supply of total housing units was modest at a 6.3 percent increase.

Table A-98: Grand Forks Housing Characteristics, 1990 and 2000[210]

	1990	Percent	2000	Percent	% Change
Total Housing Units	19,589	100	20,830	100	6.3
Occupied Housing Units	18,531	94.6	19,674	94.5	6.2
Owner Occupied	9,026	48.7	9,940	50.5	10.1
Renter Occupied	9,505	51.3	9,734	49.5	2.4
Vacant Units	1,058	5.4	1,156	5.5	9.3
Median Value	$64,000		$96,300		
Median Contract Rent	$320		$427		

The value of the local housing stock has continued to increase. The national rate of home price appreciation during the year that ended in the first quarter of 2005 was 12.5 percent.[211] Grand Forks trended close to the national rate with an increase of 11.6 percent.[212]

Age of Local Housing Stock

15.6 percent of the housing stock was built in the ten year period from 1990 to 2000.[213] 14.2 percent of housing in Grand Forks was built prior to 1940 and is primarily in the north east quadrant of the city. [214] The 1997 flood damaged many older housing units in Grand Forks causing a change in the age of the housing stock.

[210] City of Grand Forks Consolidated Plan, page 2-9/ US Census.
[211] FDIC North Dakota State Profile - Summer 2005 Excerpt.
[212] FDIC North Dakota State Profile - Summer 2005 Excerpt.
[213] City of Grand Forks Consolidated Plan, page 2-9/ US Census.
[214] City of Grand Forks Consolidated Plan, page 2-9/ US Census.

Table A-99: Reported Age of Housing Stock[215]

Year structure built	Units	Percent
Pre-1940	2,968	14.2
1940-1949	953	4.6
1950-1959	2,560	12.3
1960-1969	2,746	13.2
1970-1979	5,354	25.7
1980-1989	3,001	14.4
1990-March 2000	3,248	15.6
Total	20,830	100.0

Combined with low interest rates, the 1997 flood caused an increase in new housing construction as illustrated in the Housing Starts chart below.

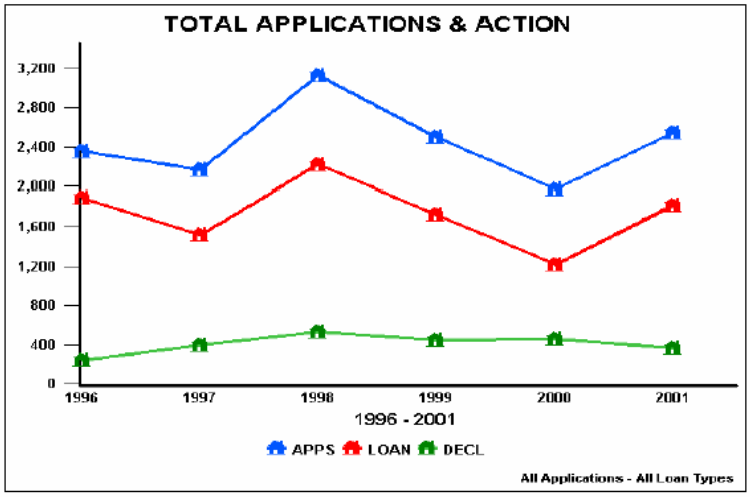
Table A-100: Housing Starts by Type[216]

Year	Single Family	Town Home	Multi-Family	TOTAL
1995	55	36	352	443
1996	54	50	55	159
1997	254	57	93	404
1998	99	89	35	223
1999	37	36	105	178
2000	44	6	0	50
2001	57	10	32	99
2002	73	49	118	240
2003	97	89	312	498
2004	109	115	227	451
2005	111	91	268	470

The low interest rates and the effects of the flood also caused mortgage applications to increase. "The impact of this devastating flood likely contributed to much of the mortgage activity between 1997 and 1999, especially mortgage, rehabilitation applications and declines."[217] The graph below tracks mortgage applications, mortgage loans, and mortgage applications that were declined from 1996 to 2001.

[215] City of Grand Forks Consolidated Plan, page 2-9/ US Census.
[216] Grand Forks Inspections Department / City of Grand Forks Consolidated Plan.
[217] Fair Housing Impediment Analysis 2003, by Donald B. Eager & Associates, page 34.

Figure A-1: Mortgage Applications and Loans 1996 to 2001



Blue (top line) = Applications, Red (middle line)= Loans, Green (bottom line) = Declined[218]

Table A-101: Vacancy Rates for Rental Units[219]

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Feb	1.4%	1.4%	2.2%	7.0%	5.5%	7.2%	7.9%	9.6%	8.0%	3.8%	3.6%
July	2.1%	1.6%	5.0%	.5%	N/A	9.2%	12.9%	13.0%	8.4%	11.7%	5.0%

Grand Forks is a University town and this is reflected in the rental apartment vacancy figures shown above. In all years noted above, the vacancy rate was higher in summer months reflecting the typical reduction in students (and correspondingly, student renters) during the summer. The increase in vacancy in 1999 and 2000 is a reflection of the loss of student renters following the 1997 flood. The University of North Dakota (UND) population, illustrated in the chart below supports this conclusion. The two years following the flood, enrollment was at its lowest as outlined below.

[218] Fair Housing Impediment Analysis 2003, by Donald B. Eager & Associates, page 34.
[219] City of Grand Forks Consolidated Plan 2-11 / Grand Forks Apartment Association.

Table A-102: UND Enrollment[220]

Year	Fall Semester
1993-1994	12,029
1994-1995	11,521
1995-1996	11,512
1996-1997	11,300
1997-1998	10,395
1998-1999	10,392
1999-2000	10,590
2000-2001	11.031
2001-2002	11,764
2002-2003	12,423
2003-2004	13,034
2004-2005	13,187

HUD Fair Market Rents

The 1997 flood is reflected in the Fair Market Rents (FMR) that are established by HUD on an annual basis. In 1998, HUD raised the FMR to assist low and moderate income households to obtain housing following the flood. The historic FMR is provided in the chart below:

Table A-103: Grand Forks Fair Market Rents (FMR)[221]

Apartment Size	1998	1998*	1999	2000	2004
Efficiency	$275	$355	$342	$355	$385
1 Bedroom	$334	$424	$408	$423	$458
2 Bedroom	$394	$557	$536	$557	$603
3 Bedroom	$491	$768	$739	$768	$832

* FMR raised temporarily after flood to help LMI households secure/retain housing

[220] City of Grand Forks Consolidated Plan 2-3 / UND.
[221] City of Grand Forks Consolidated Plan 2-11.

Opportunities for those with Low and Moderate Income

Low Income Housing Tax Credits

The Low Income Housing Tax Credits (LIHTC) program was created by Congress through the Tax Reform Act of 1986 as a means to increase the supply of housing for low-and moderate-income households through new construction, acquisition, or rehabilitation of multi-unit residential properties. LIHTC funded properties must be rent restricted for a 30 year period. The "tax credits" provide a vehicle for entities to offset tax obligations for a 10 year period. The credits are often "rolled-up" and syndicated to large corporate buyers by developers who then use the proceeds as equity for the development. Obtaining tax credits is a competitive process administered on the state level typically through the State Housing Finance Agency such as North Dakota Housing Finance Agency. Combined with numerous debt sources, LIHTCs allow developers to finance residential housing for low and moderate income residents with little or no equity of their own, which makes the program attractive to developers. The program allows developers to earn fees, including development fees, builder fees, and management fees, although the competitiveness in obtaining the LIHTC has, in some cases, driven developers to defer a portion of the developer fee until the property stabilizes.

Each state receives a federal tax credit of $1.75 per person that can be allocated towards funding housing that meets program guidelines.[222] The program does not require that all units be set aside for rent restriction. LIHTC guidelines require "that 20 percent or more of the residential units in the project are both rent restricted and occupied by individuals whose income is 50 percent or less of area median gross income or 40 percent or more of the residential units in the project are both rent restricted and occupied by individuals whose income is 60 percent or less of area median gross income."[223] There are 11 housing projects in Grand Forks that were financed in part through the use of Low Income Housing Tax Credits (LIHTC).[224] They contain 399 units, of which 305 units are rent restricted (the completion of Westgate Village increased the number of affordable units to 365).

Section 8 Vouchers

In addition to the LIHTC credit program, tenants in need of assistance can utilize Section 8 vouchers. The voucher program in grand Forks is administered by the Grand Forks Housing Authority (GFHA) and provided 1,220 Section 8 Housing Choice Vouchers in 2005.[225]

Local Public Housing Agencies for the surrounding counties are listed below:

[222] http://www.danter.com/taxcredit/about.htm.
[223] http://www.danter.com/taxcredit/about.htm.
[224] City of Grand Forks Consolidated Plan, page 2-12.
[225] 2005 Annual Report, Office of Urban Development.

Table A-104: Local Public Housing Agencies

Grand Forks Phone: (701)746-2545 Fax: (701)746-2548	1405 First Avenue North Grand Forks ND 58203
Traill County Phone: (701)436-5785 Fax: (701)436-5785	16 W Caledonia Avenue Hillsboro ND 58045
Nelson County Phone: (701)247-2293 Fax: (701)247-2691	210 Main Street Lakota ND 58344
Walsh County Phone: (701)352-3260 Fax:	600 E. 9th Street Grafton ND 58237
Polk County East Grand Forks EDHA Phone: (218)773-2371 Fax: (218)773-9331	610 2nd Avenue NE East Grand Forks MN 56721

The Voucher Choice is designed with a rental component and a purchase component. Regarding rental assistance, the Voucher Choice program allows for a housing subsidy to be "paid to the landlord directly by the PHA [Public Housing Agency] on behalf of the participating family. The family then pays the difference between the actual rent charged by the landlord and the amount subsidized by the program."[226] The Housing Choice Voucher Program requires that at "least 75% of applicants admitted to the Housing Choice Voucher Program and 40% of tenants admitted to project-based assisted apartments within the fiscal year must have gross annual income at or below 30% of the median income. The remaining applicants admitted … may have gross annual income up to 80% of the area median income. HUD sets these income limits as follows:"[227]

[226] http://www.hud.gov/offices/pih/programs/hcv/about/fact_sheet.cfm.
[227] http://www.grandforkshousingauthority.org.

Table A-105: 2006 Income Requirements[228]

Family Size	30% of Median Income	80% of Median Income
1	$12,200	$32,600
2	$13,950	$37,250
3	$15,700	$41,900
4	$17,450	$46,550
5	$18,850	$50,250
6	$20,250	$54,000

The Housing Choice Voucher Home Ownership Program provides assistance with obtaining homeownership by allowing "a family to convert their rental assistance into a homeownership assistance payment."[229] According to the Office of Urban Development, only six households have used the Housing Choice Voucher Home Ownership Program since it was introduced in 2003; however, in 2005 a grant was received which will allow more staff to dedicate time to the program, thus an increase is expected. [230]

Eligibility Requirements for the Housing Choice Voucher Home Ownership Program are as follows:[231]

- You are in good standing with your lease.
- You have met your obligations to the Housing Assistance Program.
- You have completed your first annual recertification.
- You are a first time homebuyer.
- You have a minimum gross annual income equal to minimum wage times 2000 hours.
- At least one adult in the household has worked an average of 30 hours per week during the past 12 months.

The Process required by GFHA is described in Table A-105:

228 http://www.grandforkshousingauthority.org.
229 http://www.grandforkshousingauthority.org.
230 2005 Annual Report, Office of Urban Development.
231 http://www.grandforkshousingauthority.org.

Table A-105: Housing Choice Voucher Home Ownership Program[232]

1. Orientation- Schedule and attend a homeowner orientation with a homeownership counselor.

2. Planning- Work with a counselor to establish a plan for homeownership that meets your specific goals. By the time your plan is complete, your credit will be on track and you'll have adequate savings for a down payment.

3. Workshops- Attend the Homebuyer Workshop and the Village Homebuyer Education Seminar. Topics include budgeting, credit history, down payment resources, preparing for a mortgage, home inspections, home repair, taxes, and lifelong money management.

4. Counseling- Attend one-on-one counseling sessions to apply the workshop information to your specific homeownership goals.

5. Mortgage- After completing your homeownership plan, we'll refer you to a participating financial institution and provide you with a certificate of eligibility indicating that you are in the Homeownership Program.

GFHA Managed Properties

In addition to the LIHTC projects, low and moderate income tenants in Grand Forks may apply for an assisted housing unit managed by GFHA. Below is a list of units (owned by GFHA or owned by a third party) and managed by the GFHA.[233]

Table A-106: Assisted Rental Housing Sites

Project	Address	Unit Type	Total Units	Assisted Unit	Bedrooms Per Unit
Care Co-op Centers	101 Chestnut St	Disabled	24	24	1
Cherry Heights Phase A	110 Cherry St	Elderly	76	59	1
Columbia Square East	2505 13th Ave S	Elderly	50	50	1 and 2
Columbia Square South	2517 14th Ave S	Family	75	72	2 and 3
Continental Homes	1800 Continental	Family	64	64	Eff, 1,2, and 3
Faith and Hope Homes	1211 10th Ave S	Disabled	24	24	Eff, 1,2
Harvest Home	675 N. 43rd St	Disabled	13	12	1
Harvest Lodge	5452 6th Ave N	Disabled	6	6	1
Homestead Place	1639 24th Ave S	Elderly	50	50	1
LaGrave Place	810 4th Ave S	Family	66	54	1,2,3,4
Oak Manor	710 4th Ave S	Elderly	48	48	1 and 2
Ryan House	23rd N 3rd St	Elderly	40	40	1 and 2

232 http://www.grandforkshousingauthority.org.
233 City of Grand Forks Consolidated Plan, page 2-12.

Project	Address	Unit Type	Total Units	Assisted Unit	Bedrooms Per Unit
St. Anne's Housing for the Elderly	524 N. 17th St	Elderly/Disabled	30	30	Eff
University Square	520 N. 48th St	Family	60	60	2 and 3

GFHA Development Activities

The GFHA is, in some cases, performing in the capacity of a developer in order to add affordable housing units to the Grand Forks' housing stock. In 2005, the GFHA expanded The Promenade, a 124-unit affordable development offering "for sale" housing to qualifying purchasers with starting prices of $88,900.[234] At the end of 2005, 17 homes were sold and 11 were being marketed or were still under construction.[235] The GFHA anticipates building 23 additional units in Phase I during 2006.[236] CDBG funds were used to finance the development's infrastructure costs.[237]

Other GFHA Administered Programs

American Dream Program

Using CDBG funding, The American Dream Program provides up to $8,500 per household, for low and moderate income families, through the following programs:

- The Down Payment and Closing Assistance Program,
- The Home Owner Assistance Program.
- The Home Buyer Incentive Program.

The Down Payment / Closing Assistance Program assists "with the up-front costs of buying a home. It provides grant funds of up to $3,500 to cover half of the lender-required down payment ($1,000 minimum buyer contribution) and all reasonable buyer closing costs."[238]

The Home Owner Assistance Program "helps reduce the monthly house payment. It provides funds of up to $5,000 or 5 percent, whichever is less, of the sales price of an eligible home as a no-interest, forgivable second mortgage." The home must be the primary residence and the purchase price may not exceed $140,000. Additionally, to be eligible families must meet the following requirements:[239]

- Meet normal credit underwriting standards (can get financing).

[234] 2005 Annual Report, Office of Urban Development.
[235] 2005 Annual Report, Office of Urban Development.
[236] 2005 Annual Report, Office of Urban Development.
[237] 2005 Annual Report, Office of Urban Development.
[238] http://www.grandforkshousingauthority.org.
[239] http://www.grandforkshousingauthority.org.

- Be a first time Grand Forks home buyer (have not owned property in Grand Forks for the last 3 years).
- Cash assets don't exceed 10 percent of the price of the home to be purchased (including IRAs, 401Ks, etc.).
- Meet the following income guidelines as shown in Table A-107.

Table A-107: Income Guidelines for the Homeowner Assistance Program

Household Size*	1	2	3	4	5	6	7	8
Income Limit	$32,600	$37,250	$41,900	$46,550	$50,250	$54,000	$57,700	$61,450

* "Household" is defined as everyone who is living with purchaser, whether related or not. To be considered eligible, gross income of all household members from all sources cannot exceed the above limits.

Home Buyer Incentive Program

This program provides the lesser of 10 percent of the purchase price of the home or $7,500 to low income families (defined as families with incomes of 80-120 percent of the area median income). The low interest loan can be used for down payment or closing costs. Eligibility requirements are as follows:[240]

Eligibility:

- Meet normal credit underwriting standards (can get financing).
- Be a first time Grand Forks home buyer (have not owned property in Grand Forks for the last 3 years).
- Cash assets don't exceed 10 percent of the price of the home to be purchased (including IRAs, 401Ks, etc.).
- Meet the income guidelines in Table A-108.

[240] http://www.grandforkshousingauthority.org.

Table A-108: Income Guidelines for the Home Buyer Incentive Program

Household Size	1	2	3	4	5	6	7	8
Income Range	$32,601 - $48,900	$37,251 - $55,875	$41,901 - $62,850	$46,551 - $69,825	$50,251 - $75,375	$54,001 - $81,000	$57,701 - $86,550	$61,451 - $92,175

- Single family homes, townhouses, and condos within the Grand Forks city limits.
- The home must be your primary residence.
- The purchase price cannot exceed $140,000.

The programs described above have been quite popular. In 2005, 102 first time buyers used one of the programs described above "leveraging the purchase of $9.7 million in real estate."[241]

[241] 2005 Annual Report, Office of Urban Development.

APPENDIX 8
LOCAL COLLEGES AND UNIVERSITIES

The Grand Forks Air Force Base Education Center offers classes and degrees through seven schools and colleges including The University of North Dakota (UND), Lake Region State College (LRSC), Central Michigan University (CMU), Embry-Riddle Aeronautical University (ERAU), and Park University (PU). Over 50 degree programs are available, including Vocational Certificates, Associates Degrees, Bachelors Degrees and Masters Degrees. Schools are fully accredited and approved for financial aid. These classes are open to military and civilians on and off Grand Forks Air Force Base. There were over 6,000 registrations last year.[242]

The following local colleges and universities represent valuable resources for personnel who may wish to train for other jobs. The base Education Office is at:

Grand Forks Air Force Base
Education Office[243]

344 Tuskegee Airmen Blvd
Bldg 252
Grand Forks AFB, ND 58205
Phone: (701) 747-3316
DSN: 362-3316
http://public.grandforks.amc.af.mil

University of North Dakota

University Avenue
Grand Forks, ND 58202
Phone: (701) 777-2011 or (800) 225-5863
http://www.und.edu

A reciprocal agreement exists which entitles military members and their family members resident tuition rates.

[242] http://benefits.military.com/misc/installations/Base_Content.jsp?select=done&scategory=EDUCDATA&stopic=COLLGUNIVER&stitle=Colleges+%26+Universities&id=3850&style=32 (accessed July 25, 2006 and earlier).
[243] Stallard, James (Jim). Grand Forks Air Force Base Education Office, Education & Training Specialist. (701) 747-3312, James.stallard@grandforks.af.mil, 344 Tuskegee Airmen Blvd., Bldg 252, Grand Forks AFB, ND 58205.

Central Michigan University

344 Tuskegee Airmen Blvd
Building 252
Grand Forks AFB, ND 58205
Phone: (701) 594-5715
http://www.cmich.edu

2 year masters program. 4 degrees offered: Master of Science in Administration/General Administration; Master of Science in Administration/Human Resources Administration; Master of Science in Administration/Health Services Administration; Master of Science in Administration/Information Resource Management.

Community College of the Air Force (CCAF)

344 Tusgkegee Airman Blvd.
Building 252
Grand Forks AFB, ND 58205
Phone: (701) 747-3316
http://www.au.af.mil/au/ccaf

Associate of Applied Science degree directly related to his/her Air Force Specialty Codes (AFSC).

Embry-Riddle Aeronautical University

344 Tuskegee Airmen Blvd
Building 252
Grand Forks AFB, ND 58203
Phone: (701) 594-5324
http://www.erau.edu/

Graduate degrees: Master of Aeronautical Science; Master of Business Administration/Aviation. Undergraduate degrees: Airframe and Power Plant Certificate, Associate of Science in Professional Aeronautics or Technical Management, Safety Certificate, Bachelor of Science in Professional Aeronautics or Technical Management.

Lake Region State College

344 Tuskegee Airmen Blvd.
Bldg. 252
Grand Forks AFB, ND 58205
Phone: (701) 747-3316
Phone: (701) 747-3317
http://www.lrsc.nodak.edu

A two year comprehensive college located in Devils Lake, North Dakota, with classes offered at Grand Forks AFB, Fargo and Cavalier. Offers Associates of Arts degree, Associate of Applied Science degree, one year Vocational Certificates and two year Vocational/Technical diplomas.

Northland Community and Technical College

344 Tuskegee Airman Blvd.
Building 252
2002 Central Ave NE (off base address)
East Grand Forks, MN 56721
Phone: (218) 773-3441 or (800) 451-3441
http://www.northlandcollege.edu

Classes are offered on base for this external diploma program. Technical subjects such as Banking, Firefighting, Automobile Mechanics, and Carpentry can be obtained.

Park University

344 Tuskegee Airmen Blvd.
Building 252
Grand Forks AFB, ND 58205
Phone: (701) 594-2977
http://www.park.edu

Offers degrees at the associate and baccalaureate levels. Associates of Science degrees in Office Management, Social Psychology, and Management. Bachelor of Science degree programs in Social Psychology, Criminal Justice, Management, Management/Human Resources, Management/ Computer Info Systems, Management/Health Care, Management/Accounting.

APPENDIX 9
SOCIAL SERVICE PROVIDERS LOCATED ON BASE AND OFF

Appendix 9 supplements information provided in Section 6, Impact on Social Services. The lists of providers shown here are not complete, but do show the spectrum of activities available both on base and locally and provide contact information.

SOCIAL SERVICE PROVIDERS LOCATED ON GRAND FORKS AIR FORCE BASE

Many on-base social services and referral activities are offered through the Family Support Center (FSC). It provides assistance to all active duty service members, retirees, civilian employees, their families and other eligible users. The FSC is the link between military families and civilian support agencies and serves as an advocate for family needs and concerns. The center also acts as a consultation resource for commanders and supervisors on family matters.

The following table provides more detail about some of these social services available on Grand Forks Air Force Base. Unless otherwise noted, these services are available at:

Family Support Center

575 Holzapple St
Bldg 207
Grand Forks AFB, ND 58205
Phone: (701) 747-3241
Fax: (701) 747-4171

Table A-109: Social Services Available on Grand Forks Air Force Base[244]

Family Advocacy-Family Life Skills Support Center	1599 J Street Bldg. 109 Medical Treatment Facility Grand Forks AFB, ND 58205 Phone: (701) 747-4344 Phone: (701) 747-6806 URL: http://public.grandforks.amc.af.mil The mission of the Family Advocacy Program (FAP) is to build a healthy Air Force community by developing, implementing, and evaluating policies and programs designed to prevent, intervene in, and treat spouse and child maltreatment. FAP offers four principal services: A home based clinical prevention service, The New Parent Support Program managed by a nurse; an outreach program managed by a social worker, who raises awareness of maltreatment issues and provides psycho-social skill development to the base community; a treatment program managed by three credentialed clinical social workers, who assess and treat families with allegations of maltreatment; and the Special Needs Identification and Coordination which ensures medical and educational services are available family members. Overseas clearances are also managed by FAP. The FAP enhances Air Force readiness by ensuring that family problems do not hinder the performance of military personnel.

Family Life Education	Personal/Family Life Education provides a wide range of prevention and enrichment services to enhance individual knowledge, skills and ability to anticipate and meet challenges throughout various stages of the military life cycle (a predictable pattern of development and change as one matures and evolves in the military community over time). It includes services designed to help single and married members and their families adapt to AF culture.

[244] Military.com. http://benefits.military.com/misc/installations/Base_Content.jsp?select=done&scategory=COMMDATA&stopic=FMLYCNTR&stitle=Family+Center&id=3850&style=52 (accessed May 15, 2006).

Family Readiness/Personal Preparedness	Separation from family and friends is a big part of the military life. Military units carry out their missions more effectively and successfully when the service member and their family are well prepared for them. A Personal Preparedness Plan is for the military individual and family during a member's absence.
Financial Management Programs	Financial matters can often be a major concern for everyone....families, single individuals, and single parents. With the higher standards of financial management required by the Air Force for their members and the additional financial stresses due to the Air Force mission, difficulty with personal finances may often be an issue. The Family Support Center will assist with these issues so our members and their families are ready and able to meet the unique demands of the military. Your Community Readiness consultant can assist individuals and families with managing their finances and assist in identifying options to personal financial issues through information, educational courses, individual consultations, and a variety of resources.
Special Needs Identification and Assignment Coordinator	Medical Treatment Facility (MTF) 1599 "J" St Building109 Grand Forks AFB, ND 58205 Phone: (701) 747-6806 Phone: (701) 747-4344 Fax: (701) 747-7340 Special Needs Identification and Assignment Coordinator (SNIAC) replaced the Exceptional Family Member Program (EFMP). This Air Force program is designed to assist military families find special medical, educational, or mental health resources for special needs spouses and/or children.
Spouse Employment	URL: http://public.grandforks.amc.af.mil URL: http://www.usajobs.opm.gov URL: http://www.afpc.randolfh.af.mil/afjobs

	Deciding on a career takes time and information. We can assist you with career information, computerized software assessment tools for areas of interest, and job search information and skills. Your Family Support Center can assist you with your job search. Assistance is available through a variety of courses offered or on an individual basis through your Community Readiness Consultant. Assistance is available for: Resume Writing, Interviewing, Applying for Federal Jobs, Discovering Your "Hidden Talents," Starting Your Own Business and Home-Based Business. Military spouses may be eligible for hiring preference for jobs within the Department of Defense(DoD). Military Spouse Preference provides priority in the employment selection for military spouses who are relocating as a result of their military spouse's permanent change of station. Spouses must be found to be best qualified for the position for which they are applying and may exercise preference one time per permanent relocation of the sponsor. Preference does not mean that positions will be created or made available or spouses will be given special appointing authority. Preference does not provide any guarantee of employment and does not apply to separation or retirement moves.
Transition Assistance Program	Phone: (701) 747-6436 Fax: (701) 747-4171 URL: http://www.helmetstohardhats.org URL: http://www.bluetogray.com URL: http://public.grandforks.amc.af.mil The goal of the transition program is to equip separating and retiring military and civilian personnel, and their families with the skills and knowledge for re-entry into the private sector.

Two Organizations Located on Base Receive Funding from the Local United Way

Two organizations on Grand Forks Air Force Base are United Way Partner Agencies.[245] Both the Child Development Center and Youth Program receive funds from United Way.

[245] http://www.unitedwaygfegf.com/Partner%20Agencies/partner_agencies.htm (accessed July 28, 2006).

Grand Forks AFB Child Development Center 1683 J St., Bldg. 168 Grand Forks AFB, ND 58205-6334 Monica Morrissey P: (701) 747-3042 F: (701) 741-4941 monica.morrissey@grandforks.af.mil http://public.grandforks.amc.af.mil/youthsvs.asp#CDC	Provides full and part day care for active duty military personnel and their family members, retired military, and DoD civilian employees. Programs encourage learning and foster a child's creativity. **Programs:** Childcare - for children from 6 weeks through 6 years of age; Part-Day Enrichment Kiddie Campus Program - 2-3 and 5 day per week classes for 2 1/2 hours per day; "Panda Pac" Reading Program - children bring a new book home from the Center each day and parents read it to their children; Family Child Care Program and Lending Program - licensed family child care providers provide care to children in their homes. The providers may check out cribs, toys, etc. to create a stimulating and safe environment for the children.
Grand Forks AFB Youth Program 1707 J St., Bldg. 121 Grand Forks AFB, ND 58205 Dawn Thompson P: (701) 747-3151 F: (701) 747-3221 dawn.thompson@grandforks.af.mil http://public.grandforks.amc.af.mil/youthsvs.asp	Recreational, instructional, sporting, and school age programs for military dependent, youth ages 5-18 years.

Social Service Providers Located off Base

Following is a partial list, in alphabetical order by category of service, of social service providers located in the communities surrounding Grand Forks Air Force Base. This list shows the Partner Agencies of the United Way of Grand Forks, East Grand Forks and Area.[246]

Table A-110: Social Service Providers Located Off Base

Agency Address, Executive Director & Contact Info.	Description of Services & Programs
Strengthening & Supporting Families	
Catholic Charities ND 5201 Bishops Blvd. Suite B Fargo, ND 58104-7605 Briston Fernandes P: (701) 235-4457 F: (701) 356-7993 fargo@catholiccharities.com Catholic Charities ND 311 S. 4th St. #105 Grand Forks, ND 58201 Heather Kippen P: (701) 775-4196 F: (701) 775-0129	Programs: Guardianship - for developmentally disabled requiring legal protection; Adoption of All Children - service to adoptive parents, biological parents and children in planning for adoption; Pregnancy Service - assistance with all problems related to a pregnancy, i.e. housing, education, counseling, selection of options for child, etc.; and Family Life Education - resource available and training in marriage preparation, congregation social service, training in peer counseling for the married.
Community Violence Intervention Center 211 S. 4th St. Grand Forks, ND 58201 Kristi Hall-Jiran P: (701) 746-0405 ext. 12 F: (701) 746-5918	24-hour crisis line; individual and group counseling to victims of domestic violence and sexual abuse; group counseling for batterers and child witnesses of domestic violence; emergency shelter; information; advocacy with justice system and other agencies; community education; supervised visitation and exchange services. Programs:

[246] Grand Forks, East Grand Forks and Area United Way. http://www.unitedwaygfegf.com/Partner%20Agencies/focus_area_list.htm (accessed July 28, 2006).

khalljiran@corpcomm.net www.cviconline.org	Crime Victim Witness Program - advocacy and assistance in accessing the justice system, information referral, emotional support, and public education; Abuse and Rape Crisis Program - offers crisis intervention counseling and referral to victims of domestic violence and sexual assault; Domestic Violence Offender Treatment Program - offers counseling groups for men who batter; and Wishing Well Child Visitation Program - provides supervised visitation and exchange services.
Healthy Families 412 DeMers Ave. Grand Forks, ND 58201 Barb Kramer P: (701) 746-2064 F: (701) 746-2081 bmkramer@lssnd.org www.healthyfamiliesamerica.org	A program of Lutheran Social Services that provides support for at risk families, newborn to five year olds.
Lutheran Social Services 412 DeMers Ave. Grand Forks, ND 58201 Janell Regimbal P: (701) 772-7577 F: (701) 772-5001 jregimbal@lssnd.org www.lssnd.org	Programs: Counseling - offered to individuals, couples, families, and children; Gambling Counseling - services include evaluation, information counseling, and prevention/education programs; Tracking - supervision and advocacy of youth at risk of being placed outside their homes; Attendant Care - an alternative to jailing juveniles; DIVERT - a family based program employing early intervention strategies to those showing signs of risk, status and first time offending youth and their families; Independent Living - provides services to youth, 16 and older, who are in foster care and will soon be living independently; Family Based Services - offers in-home counseling for families in crisis where one or more children are at risk of out-of-home placement;

	Adoption - pre-adoption counseling, traditional and open adoption of ND infants, as well as international and identified adoptions, and post placement services are also provided; Pregnancy Counseling - assists in identifying needs and making realistic plans based on available options; Special Needs Adoption/Adults Adopting Special Kids - a cooperative public/private venture providing services to referred special needs children for adoptive placement; Senior Companions - volunteers provide companionship and assist with hobbies and simple household tasks; Multicultural Children's Services - resettlement program for children and adolescents whose parents send them out on their own countries to make a better life for themselves; Restorative Justice - work with juvenile offenders who have admitted to delinquent offense and the victims of those crimes; Lutheran Rural Response - works to help individuals and communities impacted by the "Rural Crisis;" Great Plains Food Bank - obtains surplus and /or donated food products and distributes them to non-profit agencies serving the needy; and Refuge Resettlement - assists and empowers refugee families, individuals and unaccompanied children through reception, case management and employment services.
Migrant Health Services PO Box 364 Crookston, MN 56716 Leticia Sanchez P: (218) 281-3552 F: (218) 281-2525 letys@rrv.net www.ndsu.edu/hcwb/partners/migrant health_files/migranthealth.html	Primary health care, services for battered women and children, and chemical dependency.

Village Family Service Center PO Box 9859 Fargo, ND 58106-9859 Gary Wolsky P: (701) 235-6433 F: (701) 451-5057 gwolsky@thevillagefamily.org Village Family Service Center 215 N. 3rd St. #104 Grand Forks, ND 58203 Luke Klefstad P: (701) 746-4584 F: (701) 746-1239 lklefstad@thevillagefamily.org www.thevillagefamily.org	Counseling for individuals, couples, and families, and financial counseling. Programs: Consumer Credit Counseling - budgeting, debt management and education programs; Speakers Bureau - on various topics; Family Services - individual, couples, family counseling, and group therapy; Intensive In-Home Family Preservation Program - family therapy for referrals from county social service; and Unplanned Pregnancy Counseling - and Adoption Services are available through "The Adoption Option" a collaboration with Lutheran Social Services of ND.
Supporting Vulnerable & Aging Populations	
Courage Center 3915 Golden Valley Rd. Minneapolis, MN 55422 Jennifer Woodford P: (763) 520-0546 F: (701) 520-0577 jenw@courage.org	Comprehensive rehabilitation services for children and adults with physical and sensory impairments. Programs and services include camping, sports and recreation, medical rehabilitation, transitional living, Handi-Hams, driver education, and stroke support services. Programs: Grand Forks Area Day Camp - held yearly for two weeks in August. Camp serves children ages 5-14, helping achieve greater independence through local activities.
Development Homes 3880 S. Columbia Rd. Grand Forks, ND 58201 Tracy Walker P: (701) 335-4000 F: (701) 335-4004 twalker@developmenthomes.org	Programs: Group Living Facilities - supported living and training in personal independence; Programs - ICFMR, Children and Adults, Physically Handicapped, Elderly, Transitional Living; Family Support Services - respite care, in-home supportive home care, out of home placement in a family home setting;

www.developmenthomes.org	Individual Supported Living Arrangements - training and support provided in individual apartment settings; Summer Special Needs Recreation Program for Children with Disabilities - training and consultation for child care workers; and Supported Employee Program.
GGF Senior Citizens Association 620 4th Ave. S. Grand Forks, ND 58201 Colette Iseminger P: (701) 772-7245 F: (701) 772-0213 director.gfscc@midconetwork.com	Provides congregate meals at four Grand Forks sites and bus transportation within city limits of Grand Forks/East Grand Forks. Health nurse provides screening for blood pressure, vision, hearing, diabetes, cholesterol, and many other health problems. Outreach provides information about activities programs and services available to senior citizens.
Home Delivered Meals PO Box 6002 Grand Forks, ND 58206-6002 Wendy Wood P: (701) 780-5169 wwood@wiktel.com	Delivers hot, nutritious noon meals, Monday through Friday, to those who are unable to cook for themselves, such as the ill, home-bound, disabled, and elderly.
L.I.S.T.E.N., Inc. 1407 24th Ave. S. Suite 100 Grand Forks, ND 58201 Charlie Bremseth P: (701) 746-7840 F: (701) 795-1900 listen@wiktel.com	Senior Services - an adult day care program which provides specific skills training and community orientation for participants over the age of 54. Day Services - an adult day care program aimed at overcoming barriers which keep people from becoming employable. Drop-In - social, education, recreation, and training programs which are integrative in nature. Allows for more than 1,100 activities, opportunities, and choices for its participants throughout the year.
Mountainbrooke 112 - 114 N. 3rd St. Grand Forks, ND 58203 Charlotte Gregerson P: (701) 746-4530 F: (701) 775-8645 mountainbrooke@yahoo.com	Provides psychosocial rehabilitation services for adults who have mental illnesses, self help and advocacy. Programs: Programs/Activities - social and recreational activities, outings, community events; Rehab/Training - psychological rehabilitations and pre-vocational training, transitional employment program, work activity program;

www.mhand.org	Help - self help and advocacy for adults who have mental illnesses, and Community Education - presentations, newsletter, public relations
Polk County DAC 515 5th Ave. S. Crookston, MN 56716-2525 Jo Bittner P: (218) 281-4181 bittner.dac@midconetwork.com	Programs: Day Training and Habilitation - for adults with developmental disabilities, mental retardation, or related conditions (as defined by MN statute); Occupation, Physical and Speech Therapy - consultation and assessment; Other Programs - supported employment, daily living skills, vocational skills, community mobility
Prairie Harvest Foundation 930 N. 3rd St. Grand Forks, ND 58203 Debra Johnson P: (701) 795-9143 F: (701) 772-5560 djohnsonphf@yahoo.com www.prairieharvest.net	Supportive services for vulnerable and at-risk persons. Current program provides daily living services for individuals who are experiencing severe and persistent mental illness. Helps locate apartments, furniture, and household items. Supported housing available: 24-hour supported 12-plex for individuals with severe mental illness, as well as a lodge choice (6-bedroom dwelling - peer support). Offers supported employment, as well as job opportunities.
Helping Children & Youth Succeed	
American Diabetes Association 921 11th St. W. West Fargo, ND 58078 Sheila Christenson P: (701) 491-2910 F: (701) 282-5744 schristensen@diabetes.org www.diabetes.org	Provides professional education/patient education, counseling, referrals, and community awareness. Programs: Camp Sioux - a summer camp for insulin dependent kids; Health Professional Symposium.
Child Care Resource & Referral 1424 Central Ave. NE	Assists parents in finding available child care options. Educates parents on selecting quality child care.

East Grand Forks, MN 56721-1605 Cynthia Pic P: (701) 772-7905 F: (701) 773-0708 cpic@tvoc.org www.naccrra.org	Provides technical assistance to early childhood professionals, along with information on training, workshops, and resources available. Presentations on child care. Programs: Technical Assistance - information on becoming a licensed child care provider; Computer Data Base - listing of all licensed child care programs from 7 counties in NW MN and 10 counties in NE ND; Resource Lending Library - resources available on early childhood/child care issues; Resources include - videos, books, curriculum guides, booklets, pamphlets, cards, audio tapes, records and training guides; and Periodic Funding - grants available for child care programs.
Grand Forks AFB Child Development Center 1683 J St., Bldg. 168 Grand Forks AFB, ND 58205-6334	Provides full and part day care for active duty military personnel and their family members, retired military, and DOD civilian employees. This provider is located on Grand Forks Air Force Base and is discussed above.
Grand Forks AFB Youth Program 1707 J St., Bldg. 121 Grand Forks AFB, ND 58205	Recreational, instructional, sporting, and school age programs for military dependents, youth ages 5-18 years.
North Dakota Caring Foundation 4510 13th Ave. S. Fargo, ND 58121-0001 Kim Randell P: (701) 282-1102 F: (701) 282-1549 kim.randell@noridian.com	Insurance program providing primary and preventative health and dental care for children in families who cannot afford health insurance or a trip to the doctor.

Northern Lights Boy Scout Council 301 S. 7th St. Fargo, ND 58102 Mark Holtz P: (701) 293-5011 F: (701) 293-8653 mholtz@nlcbsa.org Northern Lights Boy Scout Council 1701 Cherry St. Grand Forks, ND 58201 Myron Barnes P: (701) 775-3189 F: (701) 775-0862 mhbarnes@nlcbsa.org www.nlcbsa.org	Youth program that provides leadership training, building character and self esteem through a well-planned, fun-filled program, including camping, high adventure, and family programs. Programs: Tiger Cubs, grade 1; Cub Scouts, grades 2-3; Webelos, grades 4-5; Varsity, grades 6-12; Boy Scouts, grades 6-12; and Exploring, young men and women ages 14-20 for career exploration. Venture Program, young men and women ages 14-20 years old, emphasis is placed on outdoor High Adventure, experiences.
Pine to Prairie Girl Scout Council 2525 DeMers Ave. Grand Forks, ND 58201 Dianna Hatfield P: (701) 772-6679 diannah@girlscoutsptpc.org www.girlscoutsptp.org	Promotes the qualities of truth, loyalty, helpfulness, friendliness, courtesy, purity, kindness, obedience, cheerfulness, thriftiness, and kindred virtues among girls in preparation for services to community and responsibilities in the home.
United Day Nursery 324 Chestnut St. Grand Forks, ND 58201 P: (701) 772-3773 F: (701) 772-8001 udnkids@hotmail.com www.draves.com/udn/index.htm	Provides quality child care and pre-school that meets the need of the "total child," physically, emotionally, socially and educationally.
Y Family Center PO Box 13177 Grand Forks, ND 58208-3177	Programs: Child Care - drop-in, full and part-time care, before and after school care for children; Little Brother/Sister - matches adult volunteers with children in need of a positive role model and

Deb Thompson P: (701) 775-2586 F: (701) 775-9611 dthompson@gfymca.org www.gfymca.org	companion; Program and Membership Scholarships - free or reduced program or member opportunities available; Adult Fitness - weights, Nautilus center, track, aerobic workout area; Sports Leagues - for youth and adults; and Aquatic Programs - recreation, competition, swimming lessons, exercise.
Promoting Self Sufficiency	
American Red Cross 1708 River Rd. East Grand Forks, MN 56721 P: (218) 773-9565 F: (218) 773-9566 www.grandforksredcross.org	Disaster assistance; CPR and First Aid training; water safety training and other health and safety courses; HIV/AIDS information; military services (emergency communications and financial assistance); veterans counseling; international tracing; refugee reunification
East Grand Forks Food Shelf 1715 3rd Ave. NW East Grand Forks, MN 56721 Christina Campos P: (701) 773-8083 F: (701) 773-8083	Funds are used to purchase food that is distributed to East Grand Forks residents.
GGF Community Service 212 S. 4th St. Suite 302 Grand Forks, ND 58201 Deborah Schuler P: (701) 775-3403 F: (701) 795-3897 gfcom@wiktel.com	Provides alternatives to detention and incarceration for financially unstable clients to work in lieu of fees and fines.
North Country Food Bank 424 N. Broadway Crookston, MN 56716 Ron Graham P: (218) 281-7356 F: (218) 281-8653 ncfbankrg@rrv.net	Makes donated food from industry available to non-profit agencies. Delivery available to many agencies.

Northlands Rescue Mission 420 Division Ave. Grand Forks, ND 58201 Dave Sena P: (701) 772-6609 F: (701) 787-5603 dave@mynrm.org www.mynrm.org	Meals and shelter for adult homeless individuals.
Project Advancing Literacy 2110 Library Circle, GF Public Library Grand Forks, ND 58201 Barbara Knipe P: (701) 772-6344 barbara.knipe@sendit.nodak.edu	PAL is an all-volunteer organization dedicated to increasing literacy in the Great Grand Forks area. Tutor training is provided. PAL tutors also help as reading partners. Tutoring is based on learner goals.
Salvation Army 1600 University Ave. Grand Forks, ND 58203 Mike Fuqua P: (701) 775-2597 F: (701) 775-2598 mike-fuqua@usc.salvationarmy.org www.thesalarmy.com	Provides emergency assistance to area residents and transients through a variety of physical, social and spiritual groups. Programs: Travelers Aid - provides limited emergency transportation funds for the needy; Emergency - meals and lodging for families in need; Donations - clothing and household items provided for the needy, Christmas food baskets; Missing Persons Bureau; Counseling - spiritual, marital, and divorce; Meeting Rooms - space given to any worthwhile cause; Summer Camp - for children 6 to 17 years old and adults; and Thrift Store - 3401 S. 31st Street. Pick-ups of donations, clothing, furniture, household, and miscellaneous goods.

Some Additional Local Service Providers

Following are some additional social service providers and points of contact.

Grand Forks County Social Services—Social services. Keith Berger, (701) 787-8500.

Northeast Human Services Center—Social services. Gerri Anderson, (701) 795-3059.

Red River Valley Community Action—Transitional housing and social services. Karen Schilender, (701) 746-5431.

St. Vincent De Paul—Transitional housing and social services. Joanne Brundin, (701) 795-8614.

Urban Development—Low income housing. Craig Knudsvig, (701) 787-9433.