



Labovitz School
OF BUSINESS AND ECONOMICS

Bureau of Business and
Economic Research

Research Report

The Economic Impact of the Duluth School District's
Long Range Facilities Plan (Red Plan) on the
Duluth-Superior, MN-WI Metropolitan Statistical Area

June 2009

For

Duluth Area
Chamber of Commerce

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Table of Contents

Research Team.....	i
Executive Summary.....	iv
I. Project Description.....	1
Scope of Work.....	1
The Study Area.....	2
II. Impact Procedures and Input Assumptions.....	2
IMPLAN Models.....	2
Data.....	3
Definitions Used in This Report.....	3
Model Assumptions.....	4
Project Time Lines.....	4
III. Construction Impacts.....	5
IV. Real Estate Impacts.....	7
V. Closed Schools: Future Development Alternatives.....	9
Irving School.....	9
Chester Park School.....	9
Washington School.....	9
VI. Conclusions.....	11
References.....	12
Appendix: Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008.....	13

Table of Tables

Table 1. Construction Impacts 2008–2012	5
Table 2. Peak Year Construction Impacts 2010	6
Table 3. Top Ten Additional Indirect and Induced Jobs Dependent on Construction	6
Table 4. Top Ten Local Suppliers to Construction by Percent of Total Regional Input.....	7
Table 5. Real Estate Impact Model Inputs	7
Table 6. Real Estate Impact Model Inputs: Expenditures	8
Table 7. Real Estate Impact Model Inputs: Expenditures in 2007 \$ by IMPLAN Sector	8
Table 8. Real Estate Impacts in 2007 \$	8
Table 9. Proposed Development Opportunities	10
Table 10. Total Construction Impacts by Year 2008–2012	11
Table 11. Real Estate Impacts in 2007 \$	11

Table of Figures

Figure 1. Duluth MN-WI Metropolitan Statistical Area (St. Louis, Carlton, and Douglas Counties)	2
Figure 2. BBER’s Assumptions for Construction Project Time Lines	4
Figure 3. Construction Projects Proposed by Year.....	4

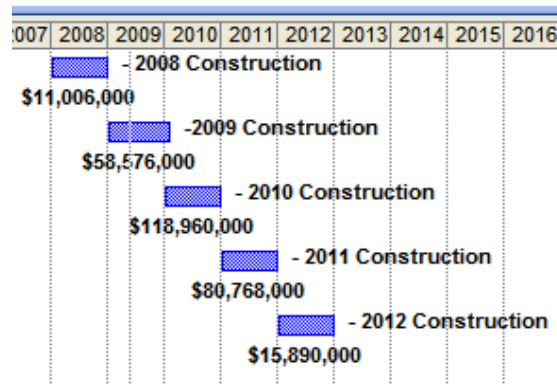
The Economic Impact of the Duluth School District's Long Range Facilities Plan (Red Plan) on the Duluth-Superior, MN-WI Metropolitan Statistical Area

Executive Summary

The Bureau of Business and Economic Research (BBER) was asked to estimate the economic impact of the Red Plan on the Duluth-Superior Metropolitan Statistical Area (MSA). The research objectives of the study included construction impacts, property acquisition impacts, and future development. The study area was defined as Wisconsin's Douglas County, and Minnesota's Carlton and St. Louis Counties.

Construction Impacts: Project Time Lines for this impact were estimated from 2008 to 2012 and totaled \$285,200,000.

Construction Project Time Lines Estimates



Construction Impacts 2008–2012

<i>Source: IMPLAN; Johnson Controls, Inc.; BBER</i>		<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
2008					
Value Added		\$4,722,336	\$1,604,117	\$1,681,588	\$8,008,041
Output		\$10,867,848	\$3,517,850	\$3,102,733	\$17,488,431
Employment		96	25	31	152
2009					
Value Added		\$24,821,586	\$8,431,573	\$8,838,777	\$42,091,936
Output		\$57,123,688	\$18,490,555	\$16,308,617	\$91,922,860
Employment		503	131	163	797
2010					
Value Added		\$49,792,048	\$16,913,717	\$17,730,567	\$84,436,332
Output		\$114,589,992	\$37,092,012	\$32,715,049	\$184,397,053
Employment		1,009	263	327	1,599
2011					
Value Added		\$33,397,404	\$11,344,668	\$11,892,561	\$56,634,633
Output		\$76,859,832	\$24,879,012	\$21,943,218	\$123,682,062
Employment		677	176	219	1,072
2012					
Value Added		\$6,491,951	\$2,205,232	\$2,311,734	\$11,008,916
Output		\$14,940,389	\$4,836,104	\$4,265,430	\$24,041,923
Employment		132	34	43	209

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Note: Definitions of economic impact measures (Value Added—earnings, Output—sales, and Employment—jobs), as well as direct and secondary impact effects (Direct, Indirect, and induced) are provided in the body of following report.

In the peak year of proposed construction activity, projected to be the year 2010, the impact on the MSA economy is expected to show earnings from Red Plan construction projects totaling more than \$84 million, sales of more than \$184 million, and an estimated 1,599 jobs created.

A secondary impact of Red Plan construction will be felt by MSA industries dependent on construction. The most important additional jobs are estimated to be the following:

Top Ten Additional Indirect and Induced Jobs Dependent on Construction

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Construct other new nonresidential structures	96	0	0	96
Architectural- engineering- and related services	0	8	0	8
Food services and drinking places	0	1	4	5
Wholesale trade businesses	0	1	1	2
Private hospitals	0	0	2	2
Retail Stores - General merchandise	0	1	1	2
Retail Stores - Food and beverage	0	1	1	2
Offices of physicians- dentists- and other health	0	0	2	2
Retail Nonstores - Direct and electronic sales	0	0	1	2
Automotive repair and maintenance- except car wash	0	1	0	1
<i>And 30 more jobs in 24 other sectors of the MSA economy</i>				
Total	96	25	31	152

Local suppliers to the construction industry will also be affected. The top industries affected include the following.

Top Ten Local Suppliers to Construction by Percent of Total Regional Input

Architectural- engineering- and related services	28.9%
Petroleum refineries	15.9%
Wholesale trade businesses	6.3%
Transport by truck	4.0%
Automotive repair and maintenance- except car wash	3.3%
Commercial and industrial machinery and equipment	2.6%
Monetary authorities and depository credit	2.5%
Commercial and industrial machinery and equipment	2.2%
Other commercial and service industry machinery mfg	2.0%
Wood windows and doors and millwork mfg	1.9%

And another 18.6% of inputs from various other local suppliers

Property Acquisition Impacts: Expenditures related to proposed property acquisition were estimated and provide assumptions for modeling this impact.

**Real Estate Impact Model Inputs: Expenditures
(as of 5/21/2009)**

<i>Expenditure</i>	<i>Totals</i>
Number of Properties	50
Appraisals	\$52,375
New Home Purchases	\$4,249,100
Demolition	\$725,000
Commission on New Purchases	\$191,803
Relocation PPD	\$232,406
Title/Closing Work	\$108,956
Cost avoidance Incentive	\$135,000
Moving Expenses	\$110,376
Incidentals	\$25,032
Mortgage Interest	\$93,381
Taxes Paid	\$7,942
Total Expenditure	\$5,931,371

Three sector categories of impact were modeled: 1) combined impacts of expenditures less new home purchases, 2) demolition expenses, and 3) moving expenses. Given these inputs to the model, total real estate impacts were estimated as follows:

Real Estate Impacts in 2007 \$

Combined impacts of expenditures less new home purchases, and the impact of demolition expenses, and the impact of moving expenses.

	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Value Added	\$1,088,181	\$182,010	\$133,192	\$1,403,383
Output	\$1,682,271	\$366,030	\$245,747	\$2,294,048
Employment	8	3	3	14

Future Development: Three recent developments were highlighted to show possibilities for converting school property to other community assets: Irving Elementary, Chester Park Elementary, and Washington Jr. High.

Irving Elementary. Built in 1891 and opened for classes in 1893, the Irving school closed in 1982. The Duluth School District sold the building to a private developer, who ran out of funds. The Alexander Company, Inc. acquired Irving in 1992. A \$4 million renovation project converted it into a 44-unit apartment complex. Upper Minnesota Properties, a subsidiary of Minnesota Power, assumed ownership on May 6, 1994.

Chester Park Elementary. The Duluth School Board voted to close Chester Park in 2008. The University of Minnesota purchased the Chester Park School and paid the school district \$1.2 million. UMD plans to use the building for academic and administrative purposes. An estimated

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completion date is Winter of 2009. The estimated investment: \$5.4 million.

Washington Jr. High School. This school was sold by the School District to the City of Duluth for \$1. This example shows how reuse of an existing building helped reduce costs for the developer, relieved the school district of the costs of an unused building. Goals were to create affordable apartment space with rental rates that were comparable to those in the neighborhood. Conversion investment: total costs of almost \$7.4 million.

Conclusion: Construction economic impacts from the Duluth School District's Long Range Facilities Plan have an output multiplier effect of 1.61. This means that for every dollar of expenditure created by construction activity on Red Plan projects, another \$0.61 is created as a secondary impact in the MSA economy. It is expected that the Red Plan construction spending of more than \$58 million in 2009 may help offset the current economic recession.

The impact of real estate activities related to the Red Plan has an output multiplier estimated at 1.36. This multiplier estimates that for every dollar of expenditure, another \$0.36 is generated in the MSA economy. Red Plan property acquisition is expected to result in as much as \$4.25 million in real estate purchases.

The total impact from construction and property acquisition is estimated from the IMPLAN model as follows: The direct construction output spending (2008–2012) of more than \$274 million (in 2007 dollars) could deliver an economic impact of almost \$442 million. The dollars expended on property services of more than \$1.6 million (in 2007 dollars) could deliver an economic impact of almost \$2.3 million to the metropolitan area.

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The Economic Impact of the Duluth School District's Long Range Facilities Plan (Red Plan) on the Duluth-Superior, MN-WI Metropolitan Statistical Area

I. Project Description

The Bureau of Business and Economic Research (BBER) at the University of Minnesota Duluth Labovitz School of Business and Economics (LSBE) was asked to estimate the economic impact of the Duluth School District's Long Range Facilities Plan (Red Plan) on the Duluth-Superior Metropolitan Statistical Area (MSA).

BBER modeled the economy of the MSA in order to assist the community to understand the economic impact of the proposed Red Plan. BBER was also asked to describe the Plan in terms of possible economic development. With this report, the Labovitz School's research bureau hopes to provide clarity about the proposed plan's economic impact. BBER also hopes to contribute to the community's understanding and expectations about changes related to the Duluth School District's facilities.

Scope of Work

The economic modeling data and software used was IMPLAN. The study used IMPLAN's economic multiplier analysis and input/output modeling, created in Minnesota by the Minnesota IMPLAN Group, Inc. The most recent county IMPLAN data is for year 2007. Based on the Duluth Public Schools Design and Construction Schedule, BBER estimated the project's economic impacts over the four-year construction period. BBER took into account the budget neutral effects of the funding of the Red Plan.

The research objectives of the study included the following:

- This project will measure the direct impact on the community of Duluth and the MSA, and include—from the directives of the Plan—the hiring of local design teams, construction workers, and others.
- Modeling the Plan's economic impact will take into account the fact that implementation started in 2008.

The deliverables for this project include the following:

- 1) BBER will model the economic impact of the Duluth District's Long Range Facilities Plan.
- 2) BBER will present its economic impact findings in a printed report.
- 3) BBER will present the findings of the report in a PowerPoint slide presentation, if so requested.

The BBER worked closely with Johnson Controls and the Duluth School District. County data for the impact models for Value added, Employment, and Output measures were supplied by IMPLAN for this impact. Employment assumptions were provided to the researchers to enable building of the impact model. All study definitions and impact model assumptions were agreed on before work with the models began.

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The Study Area

The geographic scope for this economic impact analysis was proposed to be the Duluth-Superior, MN-WI Metropolitan Statistical Area, which is comprised of St. Louis, Carlton, and Douglas Counties.

Figure 1. Duluth-Superior, MN-WI Metropolitan Statistical Area (St. Louis, Carlton, and Douglas Counties)



II. Impact Procedures and Input Assumptions

BBER used inputs from the Duluth School District and entities involved in school employment and construction, as well as estimates of construction projects start and end dates. From the District or its contractors, BBER was provided with estimates of percentage of local inputs for labor and supplies for construction. Models were created for the scenarios contingent on the District's Plan.

IMPLAN Models

There are two components to the IMPLAN system, the software and databases. The databases provide all information to create regional IMPLAN models. The software performs the calculations and provides an interface for the user to make final demand changes. IMPLAN software version 2 was used in this analysis.

Comprehensive and detailed data coverage of the IMPLAN study areas by county, and the ability to incorporate user-supplied data at each stage of the model building process, provides a high degree of flexibility both in terms of geographic coverage and model formulation (in this case definition of the Duluth-Superior MSA study area) and the definition of specific models for construction impacts.

Data

IMPLAN data files use federal government data sources including:

- US Bureau of Economic Analysis Benchmark I/O Accounts of the US
- US Bureau of Economic Analysis Output Estimates
- US Bureau of Economic Analysis REIS Program
- US Bureau of Labor Statistics County Employment and Wages (CEW) Program
- US Bureau of Labor Statistics Consumer Expenditure Survey
- US Census Bureau County Business Patterns
- US Census Bureau Decennial Census and Population Surveys
- US Census Bureau Economic Censuses and Surveys
- US Department of Agriculture Crop and Livestock Statistics

IMPLAN data files consist of the following components: employment, industry output, value added, institutional demands, national structural matrices and inter-institutional transfers.

Impacts for this model use the most recent IMPLAN data available, which is for the year 2007. The impacts are reported in 2007 dollars.

Economic impacts are made up of direct, indirect, and induced impacts. The following cautions are suggested assumptions for accepting the impact model:

- IMPLAN input-output is a production based model.
- Local or export based purchases that represent transfers from other potential local purchases are not counted.
- The numbers (from U.S. Department of Commerce secondary data) treat both full and part time individuals as being employed.
- Assumptions need to be made concerning the nature of the local economy before impacts can be interpreted.
- The IMPLAN model was constructed for the year 2007 (most recent data available).

Definitions Used in This Report

The IMPLAN models for both operations and construction use the following definitions for the three measures and three effects of the impact reports:

Measures:

Value Added—A measure of the impacting industry's contribution to the local community; it includes wages, rents, interest and profits.

Output—Represents the value of local production required to sustain activities.

Employment—Estimates are in terms of jobs, not in terms of full-time equivalent employees. Hence, these may be temporary, part time or short term jobs.

Effects:

Direct—Initial spending in the study area resulting from the project.

Indirect—The additional inter-industry spending from the direct impact.

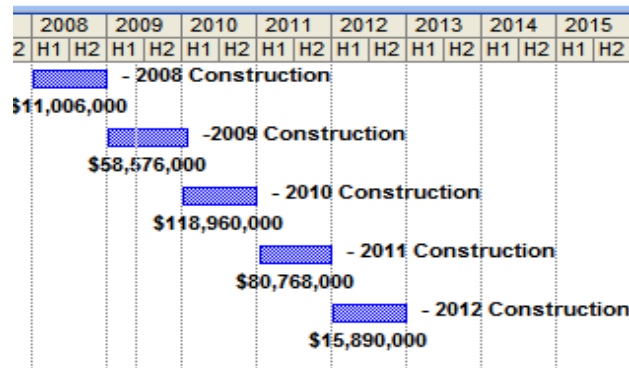
Induced—The impact of additional household expenditure resulting from the direct and indirect impact.

Model Assumptions

Project Time Lines for this impact were estimated from 2008 to 2012 and totaled \$285,200,000. Construction years for various projects are staggered between 2008 and 2012. All impacts are reported in 2007 dollars. The following time line shows estimated yearly expenditures.

Project Time Lines

Figure 2. BBER's Assumptions for Construction Project Time Lines



Source: Johnson Controls, Inc.

The following lists show the estimated deployment of construction activity by year and by school.

Figure 3. Construction Projects Proposed by Year

2008	2009	2010	2011	2012
- Lakewood Elementary	- Eastern High	- Eastern High	- Eastern High	- Denfeld High
- Stowe	- Western Middle	- Western Middle	- Western Middle	- Eastern Middle
	- Denfeld High	- Denfeld High	- Denfeld High	- Historic Old Central High School
	- Laura MacArthur Elementary	- Laura MacArthur Elementary	- Congdon Elementary	
	- Lester Park - Rockridge Elementary	- Lester Park - Rockridge Elementary	- Grant/Nettleton Elementary	
	- Eastern Middle	- Congdon Elementary	- Lincoln Piedmont Elementary	
	- Homecroft Elementary	- Grant/Nettleton Elementary	- Eastern Middle	
	- Lowell Elementary	- Lincoln Piedmont Elementary	- Secondary Technical Center	
		- Homecroft Elementary		

Source: Johnson Controls, Inc.

III. Construction Impacts

In the IMPLAN model, the construction sector of the Duluth-Superior MSA economy follows the North American Industry Classification (NAICS). As noted by the Census, “The Construction sector comprises establishments primarily engaged in the construction of buildings and other structures, heavy construction (except buildings), additions, alterations, reconstruction, installation, and maintenance and repairs. Establishments engaged in demolition or wrecking of buildings and other structures, clearing of building sites, and sale of materials from demolished structures are also included. This sector also includes those establishments engaged in blasting, test drilling, landfill, leveling, earthmoving, excavating, land drainage, and other land preparation. The industries within this sector have been defined on the basis of their unique production processes. As with all industries, the production processes are distinguished by their use of specialized human resources and specialized physical capital. Construction activities are generally administered or managed at a relatively fixed place of business, but the actual construction work is performed at one or more different project sites.” The economic impact of adding more construction activity to the Duluth-Superior MSA economy is presented in the following table, using the impact measures and effects defined on the previous pages.

When using these impact numbers, readers are cautioned to note that construction impacts for employment should not be summed over the span of years because jobs may be on-going rather than cumulative.

Table 1. Construction Impacts 2008–2012

<i>Source: IMPLAN</i>	Construction Impacts 2008–2012			
	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
2008				
Value Added	\$4,722,336	\$1,604,117	\$1,681,588	\$8,008,041
Output	\$10,867,848	\$3,517,850	\$3,102,733	\$17,488,431
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Value Added	\$49,792,048	\$16,913,717	\$17,730,567	\$84,436,332
Output	\$114,589,992	\$37,092,012	\$32,715,049	\$184,397,053
Employment	1,009	263	327	1,599
2011				
Value Added	\$33,397,404	\$11,344,668	\$11,892,561	\$56,634,633
Output	\$76,859,832	\$24,879,012	\$21,943,218	\$123,682,062
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2012				
Value Added	\$6,491,951	\$2,205,232	\$2,311,734	\$11,008,916
Output	\$14,940,389	\$4,836,104	\$4,265,430	\$24,041,923
Employment	132	34	43	209

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Note that the peak year for construction activity is projected to be the year 2010. In the peak year of proposed construction activity, projected to be the year 2010, the impact on the MSA economy is expected to show earnings from Red Plan construction projects totaling more than \$84 million, sales of more than \$184 million, and an estimated 1,599 jobs created.

Table 2. Peak Year Construction Impacts 2010

Peak Year Construction Impacts 2010				
<i>Source: IMPLAN</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Value Added	\$49,792,048	\$16,913,717	\$17,730,567	\$84,436,332
Output	\$114,589,992	\$37,092,012	\$32,715,049	\$184,397,053
Employment	1,009	263	327	1,599

A secondary impact of Red Plan construction will be felt by MSA industries dependent on construction. Indirect and induced jobs related to these impacts are presented in the following table. The most important additional jobs are estimated to be the following. (See the Appendix for the full table.)

Table 3. Top Ten Additional Indirect and Induced Jobs Dependent on Construction

Top Ten Additional Indirect and Induced Jobs Dependent on Construction, 2008				
<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Construct other new nonresidential structures	96	0	0	96
Architectural- engineering- and related services	0	8	0	8
Food services and drinking places	0	1	4	5
Wholesale trade businesses	0	1	1	2
Private hospitals	0	0	2	2
Retail Stores - General merchandise	0	1	1	2
Retail Stores - Food and beverage	0	1	1	2
Offices of physicians- dentists- and other health	0	0	2	2
Retail Nonstores - Direct and electronic sales	0	0	1	2
Automotive repair and maintenance- except car wash	0	1	0	1
<i>And 30 more jobs in 24 other sectors of the MSA economy</i>				
Total	96	25	31	152

Source: IMPLAN

Local suppliers to the construction industry will also be affected. Industry requirements for construction activity are presented in the following table. The top industries impacted include the following:

Table 4. Top Ten Local Suppliers to Construction by Percent of Total Regional Input

Top Ten Local Suppliers to Construction by Percent of Total Regional Input	
Architectural- engineering- and related services	28.9%
Petroleum refineries	15.9%
Wholesale trade businesses	6.3%
Transport by truck	4.0%
Automotive repair and maintenance- except car wash	3.3%
Commercial and industrial machinery and equipment	2.6%
Monetary authorities and depository credit	2.5%
Commercial and industrial machinery and equipment	2.2%
Other commercial and service industry machinery mfg	2.0%
Wood windows and doors and millwork mfg	1.9%

And another 18.6% of inputs from various other local suppliers

Source: IMPLAN

IV. Real Estate Impacts

Of all these expenditures, BBER estimated the impact from real estate in three sectors. The major impact is estimated from expenditures itemized in the Red Plan less the price of the new home purchase. A secondary impact is estimated from the expenditure for demolition of the residence. A final impact was estimated using the separate expenditure of moving costs for the residents.

Table 5. Real Estate Impact Model Inputs

**Real Estate Impact Model Inputs: Expenditures
(as of 5/21/2009)**

<i>Expenditure</i>	<i>Totals</i>
Number of Properties	50
Appraisals	\$52,375
New Home Purchases	\$4,249,100
Demolition	\$725,000
Commission on New Purchases	\$191,803
Relocation PPD	\$232,406
Title/Closing Work	\$108,956
Cost avoidance Incentive	\$135,000
Moving Expenses	\$110,376
Incidentals	\$25,032
Mortgage Interest	\$93,381
Taxes Paid	\$7,942
Total Expenditure	\$5,931,371

Source: F. I Salter.

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The following table shows detail for the components of the real estate expenditures, as published in the Red Plan.

Table 6. Real Estate Impact Model Inputs: Expenditures

Real Estate Impact Model Inputs: Expenditures in 2007 \$							
<i>Expenditure</i>	<i>Denfeld</i>	<i>Laura MacArthur</i>	<i>Lester Park</i>	<i>Grant</i>	<i>Ordean</i>	<i>Congdon</i>	<i>Totals</i>
Number of Properties	13	15	8	4	8	2	50
Appraisals	\$11,275	\$16,375	\$8,200	\$4,900	\$8,775	\$2,850	\$52,375
New Home Purchases	\$1,310,300	\$1,163,800	\$1,277,000	\$175,000	\$323,000	\$0	\$4,249,100
Demolition	\$188,500	\$217,500	\$116,000	\$58,000	\$116,000	\$29,000	\$725,000
Commission on New Purchases	\$54,318	\$48,735	\$63,850	\$8,750	\$16,150	\$0	\$191,803
Relocation PPD	\$38,535	\$37,686	\$115,850	\$12,405	\$24,930	\$3,000	\$232,406
Title/Closing Work	\$34,747	\$27,562	\$24,545	\$9,806	\$7,594	\$4,702	\$108,956
Cost avoidance Incentive	\$33,000	\$42,000	\$24,000	\$12,000	\$18,000	\$6,000	\$135,000
Moving Expenses	\$26,706	\$37,686	\$28,184	\$8,050	\$5,300	\$4,450	\$110,376
Incidentals	\$13,247	\$8,551	\$1,524	\$710	\$500	\$500	\$25,032
Mortgage Interest	\$6,680	\$83,885	\$0	\$500	\$1,816	\$500	\$93,381
Taxes Paid	\$1,851	\$4,007	\$1,060	\$643	(\$1)	\$382	\$7,942
Total Expenditure	\$1,719,159	\$1,687,787	\$1,660,213	\$290,764	\$522,064	\$51,384	\$5,931,371

Source: Johnson Controls, Inc.

The model was constructed to estimate the combined economic impact of three impact events: the impact of expenditures less new home purchases, the impact of demolition expenses, and the impact of moving expenses, as shown in the following table.

Table 7. Real Estate Impact Model Inputs: Expenditures in 2007 \$ by IMPLAN Sector

Real Estate Impact Model Inputs: Expenditures in 2007 \$ By IMPLAN Sector	
<i>Expenditure by Impact Sector</i>	<i>Totals</i>
IMPLAN Sector 360 direct input (Expenditures Less New Home Purchase)	\$846,895
IMPLAN Sector 40 direct input (Demolition)	\$725,000
IMPLAN Sector 335 direct input (Moving Expenses)	\$110,376

These events combine in the following estimated economic impact for the Duluth-Superior MSA.

Table 8. Real Estate Impacts in 2007 \$

Real Estate Impacts in 2007 \$				
Combined impacts of expenditures less new home purchases, and the impact of demolition expenses, and the impact of moving expenses.				
<i>Source: IMPLAN</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Value Added	\$1,088,181	\$182,010	\$133,192	\$1,403,383
Output	\$1,682,271	\$366,030	\$245,747	\$2,294,048
Employment	8	3	3	14

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V. Closed Schools: Future Development Alternatives

Although a property-by-property study of possible impacts from the turn-over of school buildings into structures for other purposes, under other management, is beyond the scope of this report, three examples of recent turn-over may be of interest in hypothetically proposing what might happen to School District properties. The varied histories of school buildings shows how value can be retained for the community and conversion from school use to other uses can provide positive economic impact.

Irving School

Irving Elementary School began construction in 1891 and opened for classes in 1893. The building was designed in the Renaissance-Revival style by Duluth architects Emmet Palmer, Lucien Hall and William Hunt. Irving expanded in 1905 to include high school courses, serving as the predecessor to Denfeld High School. It was known for some years as Duluth Industrial High School. In 1915, Irving became a girls-only junior high school. In 1926, Irving was returned to an elementary school. The school closed in 1982.

The Duluth School District sold the building to a private developer. The plan was for the building to house some small shops and apartments, but the developer ran out of funds. The Alexander Company Inc. acquired Irving in 1992. A \$4 million renovation project converted it into a 44-unit apartment complex. Upper Minnesota Properties, a subsidiary of Minnesota Power, assumed ownership on May 6, 1994. Currently, Irving School Apartments is listed in the Buildings in the National Register of Historic Places, Buildings of Local Significance.

Conversion investment: \$4 million.

Chester Park School

The Duluth School Board voted to close Chester Park in 2005. The boarded-up 79-year-old, 63,375-square-foot building at 31 W. College St. sat empty until the University of Minnesota Board of Regents facility committee voted unanimously to authorize purchasing the Chester Park School property from the Duluth school district. Under the deal, the university paid the school district \$1.2 million for the 4.5-acre property. The University of Minnesota Duluth is north of the Chester Park building and already owns the former school's parking lot. UMD plans to use the building for academic and administrative purposes. The estimated Completion Date is Winter of 2009.

Duluth Preservation Alliance 2009 awards recognized Chester Park School as "Work done: Exterior masonry cleaned, tuck-pointed and waterproofed, reroofed. Inside, plaster repaired and floors refinished. In addition, UMD is recognized for sensitively handling controversial features of the front entry and for saving the building and finding an adaptive reuse for it." (*Duluth News Tribune*, May 17, 2009)

Estimated conversion investment: \$5.4 million.

Washington School

The hundred-year-old Washington Jr. High School, sold by the Independent School District #709 to the City of Duluth, Minnesota, for a dollar, provides an affordable and well located place where artists can

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both live and work. Located in a downtown Duluth neighborhood, the residents have access to mass transit systems, local art galleries, businesses, and the downtown retail area. In addition, Washington Center & Studios' community center provides a gathering space for the neighborhood residents and has helped foster a stronger community spirit.

The reuse of an existing building and its site, versus developing a new site and creating a new building, helped reduce costs for the developer, relieved the school district of the costs of an unused building, and provided the city with a community center that had its own off-street parking to alleviate parking congestion.

Exterior renovation including a complete window replacement, masonry repair and roof replacement inhibited further deterioration of the building shell. These improvements also improved the energy efficiency of the building envelope.

The goals of this project included revitalizing the neighborhood and bringing new life to a community landmark. These goals were accomplished by creating affordable apartment space with rental rates that were comparable to those in the neighborhood. A community recreational facility, cultural centers, affordable housing, and parking were all incorporated into this single facility.

Conversion investment: total costs almost \$7.4 million.

Table 9 shows opportunities that were identified in the Red Plan. The actual disposition will be determined by market conditions.

Table 9. Proposed Development Opportunities

Development Opportunities			
The following properties have been listed for disposal in the LRFP:			
<i>PROPERTY</i>	<i>Bldg. Sq. Ft. Area</i>	<i>Land (acre)</i>	<i>Disposition Value</i>
Ball Field (old Chester site)		3.09	\$170,000
Central High School (& upper STC)	247,205	76.84	\$10,000,000
Facilities Management Bldg.	23,390	0.48	\$500,000
Garfield Avenue building	33,356	1.35	\$800,000
Hartley Field property (unused)		29.61	\$800,000
Kensington Place property, Arrowhead & Arlington		26.51	\$600,000
Lincoln Park Elementary School	170,596	2.75	\$610,000
Morgan Park Middle School	130,871	9.99	\$465,000
Undeveloped Site		2.23	\$35,000
Nettleton Elementary School	90,024	3.34	\$480,000
Piedmont Elementary School	47,910	4.38	\$280,000
Rockridge Elementary School	30,671	13.03	\$1,780,000
Excess Land		5.46	\$150,000
Woodland Middle School	120,207	17.72	\$6,700,000
	894,230	331.22	\$23,370,000

Source: LRFP Review and Comment Document

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VI. Conclusions

The IMPLAN model calculates a multiplier effect to describe the rounds of spending or employment associated with the direct activity of the projects. For activity in 2008, for which the output (sales) multiplier is 1.61, this means that for every dollar of direct expenditure by construction activity on Red Plan projects, another \$0.61 is generated as a secondary impact. In the same way, the employment (jobs) multiplier for construction on the Red Plan projects, is 1.58. This means for every construction job created, another .58 job is created. The 2008 value added (earnings) multiplier is 1.70. This means that for every dollar of earnings generated by the Red Plan projects, another \$0.70 is generated as a secondary impact.

The following table shows the total economic impact of all measures (Value Added, Output, and Employment) and effects (Direct, Indirect, and Induced) of the impact analysis. The table also provides the average multipliers used in modeling the impacts.

Table 10. Total Construction Impacts by Year 2008–2012

Year	Total Construction Impacts by Year 2008–2012					
	Total Value Added	Multiplier	Total Output	Multiplier	Total Employment	Multiplier
2008	\$8,008,041	1.70	\$17,488,431	1.61	152	1.58
2009	\$42,091,936	1.70	\$91,922,860	1.61	797	1.58
2010	\$84,436,332	1.70	\$184,397,053	1.61	1,599	1.58
2011	\$56,634,633	1.70	\$123,682,062	1.61	1,072	1.58
2012	\$11,008,916	1.70	\$24,041,923	1.61	209	1.58

The economic impact of real estate activities (expenditures less new home purchases, and the impact of demolition expenses, and the impact of moving expenses) is shown in the table below. The multipliers for these impacts are estimated at between 1.29 and 1.75 for the Value Added, Output, and Employment of these activities.

Table 11. Real Estate Impacts in 2007 \$

	Real Estate Impacts in 2007 \$				
	Direct	Indirect	Induced	Total	Multiplier
Combined impacts of expenditures less new home purchases, and the impact of demolition expenses, and the impact of moving expenses.					
Value Added	\$1,088,181	\$182,010	\$133,192	\$1,403,383	1.29
Output	\$1,682,271	\$366,030	\$245,747	\$2,294,048	1.36
Employment	8	3	3	14	1.75

The total impact from construction and property acquisition is estimated from the IMPLAN model as follows: The direct construction output spending (2008–2012) of more than \$274 million (in 2007 dollars) could deliver an economic impact of almost \$442 million. The dollars expended on property services of more than \$1.6 million (in 2007 dollars) could deliver an economic impact of almost \$2.3 million to the metropolitan area.

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Appendix: Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008

Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008
Ranked by Total Impact

<i>IMPLAN Sector</i>	<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
36	Construct other new nonresidential structures	95.7	0.0	0.0	95.7
369	Architectural- engineering- and related services	0.0	7.5	0.1	7.6
413	Food services and drinking places	0.0	0.9	4.1	5.0
319	Wholesale trade businesses	0.0	1.4	0.9	2.3
397	Private hospitals	0.0	0.0	1.8	1.8
329	Retail Stores - General merchandise	0.0	0.5	1.3	1.8
324	Retail Stores - Food and beverage	0.0	0.5	1.2	1.7
394	Offices of physicians- dentists- and other health	0.0	0.0	1.6	1.6
331	Retail Nonstores - Direct and electronic sales	0.0	0.4	1.2	1.6
414	Automotive repair and maintenance- except car wash	0.0	1.0	0.3	1.4
398	Nursing and residential care facilities	0.0	0.0	1.3	1.3
320	Retail Stores - Motor vehicle and parts	0.0	0.4	0.9	1.3
335	Transport by truck	0.0	0.9	0.2	1.1
425	Civic- social- professional- and similar org	0.0	0.5	0.6	1.0
330	Retail Stores - Miscellaneous	0.0	0.3	0.7	0.9
400	Individual and family services	0.0	0.0	0.8	0.8
367	Legal services	0.0	0.5	0.2	0.8
354	Monetary authorities and depository credit intermed.	0.0	0.4	0.4	0.8
323	Retail Stores - Building material and garden suppl.	0.0	0.2	0.6	0.8
426	Private household operations	0.0	0.0	0.7	0.7
411	Hotels and motels- including casino hotels	0.0	0.3	0.4	0.7
388	Services to buildings and dwellings	0.0	0.5	0.2	0.7
360	Real estate establishments	0.0	0.2	0.4	0.7
327	Retail Stores - Clothing and clothing accessories	0.0	0.2	0.5	0.7
325	Retail Stores - Health and personal care	0.0	0.2	0.5	0.7
20	Extraction of oil and natural gas	0.0	0.6	0.1	0.7
382	Employment services	0.0	0.4	0.1	0.6
328	Retail Stores - Sporting goods- hobby- book and mu	0.0	0.2	0.4	0.6
326	Retail Stores - Gasoline stations	0.0	0.1	0.5	0.6
39	Maint & repair construct of nonresident structures	0.0	0.4	0.2	0.6
417	Commercial and industrial machinery and equipment	0.0	0.5	0.0	0.5
386	Business support services	0.0	0.3	0.1	0.5
368	Accounting- tax preparation- bookkeeping- and payroll	0.0	0.4	0.1	0.5
357	Insurance carriers	0.0	0.1	0.4	0.5
419	Personal care services	0.0	0.0	0.4	0.4
399	Child day care services	0.0	0.0	0.4	0.4
395	Home health care services	0.0	0.0	0.4	0.4
381	Management of companies and enterprises	0.0	0.3	0.1	0.4
356	Securities- commodity contracts- investments- and	0.0	0.1	0.3	0.4
351	Telecommunications	0.0	0.2	0.2	0.4
321	Retail Stores - Furniture and home furnishings	0.0	0.2	0.2	0.4
427	US Postal Service	0.0	0.1	0.2	0.3
409	Amusement parks- arcades- and gambling industries	0.0	0.0	0.3	0.3
396	Medical and diagnostic labs and outpatient and other	0.0	0.0	0.3	0.3
392	Private junior colleges- colleges- universities- a	0.0	0.0	0.3	0.3
322	Retail Stores - Electronics and appliances	0.0	0.1	0.2	0.3
99	Wood windows and doors and millwork manufacturing	0.0	0.3	0.0	0.3
432	Other state and local government enterprises	0.0	0.1	0.2	0.2

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Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008
Ranked by Total Impact

<i>IMPLAN Sector</i>	<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
424	Grantmaking- giving- and social advocacy org	0.0	0.0	0.2	0.2
421	Dry-cleaning and laundry services	0.0	0.0	0.1	0.2
418	Personal and household goods repair and maintenance	0.0	0.1	0.0	0.2
415	Car washes	0.0	0.1	0.1	0.2
410	Other amusement and recreation industries	0.0	0.0	0.2	0.2
401	Community food- housing- and other relief services	0.0	0.0	0.2	0.2
393	Other private educational services	0.0	0.0	0.2	0.2
391	Private elementary and secondary schools	0.0	0.0	0.2	0.2
387	Investigation and security services	0.0	0.1	0.0	0.2
377	Advertising and related services	0.0	0.1	0.1	0.2
365	Commercial and industrial machinery and equipment	0.0	0.2	0.0	0.2
358	Insurance agencies- brokerages- and related activi	0.0	0.0	0.1	0.2
339	Couriers and messengers	0.0	0.1	0.1	0.2
338	Scenic and sightseeing transportation and support	0.0	0.1	0.1	0.2
336	Transit and ground passenger transportation	0.0	0.1	0.2	0.2
31	Electric power generation- transmission- and distribution	0.0	0.1	0.1	0.2
430	* Not unique commod (S&LG passenger transit)	0.0	0.0	0.0	0.1
423	Religious organizations	0.0	0.0	0.1	0.1
422	Other personal services	0.0	0.0	0.1	0.1
420	Death care services	0.0	0.0	0.1	0.1
412	Other accommodations	0.0	0.0	0.1	0.1
407	Fitness and recreational sports centers	0.0	0.0	0.1	0.1
404	Promoters of performing arts and sports and agents	0.0	0.0	0.0	0.1
403	Spectator sports companies	0.0	0.0	0.1	0.1
402	Performing arts companies	0.0	0.0	0.1	0.1
390	Waste management and remediation services	0.0	0.1	0.0	0.1
389	Other support services	0.0	0.0	0.0	0.1
384	Office administrative services	0.0	0.1	0.0	0.1
380	All other miscellaneous professional- scientific-	0.0	0.1	0.0	0.1
379	Veterinary services	0.0	0.0	0.1	0.1
375	Environmental and other technical consulting ser.	0.0	0.0	0.0	0.1
374	Management- scientific- and technical consulting s	0.0	0.1	0.0	0.1
372	Computer systems design services	0.0	0.1	0.0	0.1
371	Custom computer programming services	0.0	0.1	0.0	0.1
364	Video tape and disc rental	0.0	0.0	0.1	0.1
363	General and consumer goods rental except video tap	0.0	0.0	0.1	0.1
362	Automotive equipment rental and leasing	0.0	0.0	0.0	0.1
359	Funds- trusts- and other financial vehicles	0.0	0.0	0.1	0.1
355	Nondepository credit intermediation and related ac	0.0	0.0	0.1	0.1
348	Radio and television broadcasting	0.0	0.1	0.1	0.1
346	Motion picture and video industries	0.0	0.0	0.1	0.1
342	Periodical publishers	0.0	0.0	0.0	0.1
341	Newspaper publishers	0.0	0.1	0.1	0.1
340	Warehousing and storage	0.0	0.0	0.0	0.1
333	Transport by rail	0.0	0.1	0.0	0.1
228	Material handling equipment manufacturing	0.0	0.1	0.0	0.1
213	Other commercial and service industry machinery ma	0.0	0.1	0.0	0.1
149	Other plastics product manufacturing	0.0	0.1	0.0	0.1
116	Asphalt paving mixture and block manufacturing	0.0	0.1	0.0	0.1
115	Petroleum refineries	0.0	0.1	0.0	0.1
98	Reconstituted wood product manufacturing	0.0	0.0	0.0	0.1
97	Engineered wood member and truss manufacturing	0.0	0.1	0.0	0.1

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Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008
Ranked by Total Impact

<i>IMPLAN Sector</i>	<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
95	Sawmills and wood preservation	0.0	0.1	0.0	0.1
16	Commercial logging	0.0	0.1	0.0	0.1
14	Animal production- except cattle and poultry and e	0.0	0.0	0.1	0.1
12	Dairy cattle and milk production	0.0	0.0	0.1	0.1
10	All other crop farming	0.0	0.1	0.0	0.1
431	* Not unique commod (S&LG electricity)	0.0	0.0	0.0	0.0
429	Other Federal Government enterprises	0.0	0.0	0.0	0.0
416	Electronic and precision equipment repair and main	0.0	0.0	0.0	0.0
408	Bowling centers	0.0	0.0	0.0	0.0
406	Museums- historical sites- zoos- and parks	0.0	0.0	0.0	0.0
405	Independent artists- writers- and performers	0.0	0.0	0.0	0.0
385	Facilities support services	0.0	0.0	0.0	0.0
383	Travel arrangement and reservation services	0.0	0.0	0.0	0.0
378	Photographic services	0.0	0.0	0.0	0.0
376	Scientific research and development services	0.0	0.0	0.0	0.0
373	Other computer related services- including facilit	0.0	0.0	0.0	0.0
370	Specialized design services	0.0	0.0	0.0	0.0
366	Lessors of nonfinancial intangible assets	0.0	0.0	0.0	0.0
353	Other information services	0.0	0.0	0.0	0.0
352	Data processing- hosting- ISP- web search portals	0.0	0.0	0.0	0.0
350	Internet publishing and broadcasting	0.0	0.0	0.0	0.0
349	Cable and other subscription programming	0.0	0.0	0.0	0.0
347	Sound recording industries	0.0	0.0	0.0	0.0
345	Software publishers	0.0	0.0	0.0	0.0
344	Directory- mailing list- and other publishers	0.0	0.0	0.0	0.0
343	Book publishers	0.0	0.0	0.0	0.0
337	Transport by pipeline	0.0	0.0	0.0	0.0
334	Transport by water	0.0	0.0	0.0	0.0
332	Transport by air	0.0	0.0	0.0	0.0
317	All other miscellaneous manufacturing	0.0	0.0	0.0	0.0
316	Musical instrument manufacturing	0.0	0.0	0.0	0.0
315	Gasket- packing- and sealing device manufacturing	0.0	0.0	0.0	0.0
314	Sign manufacturing	0.0	0.0	0.0	0.0
313	Office supplies (except paper) manufacturing	0.0	0.0	0.0	0.0
311	Sporting and athletic goods manufacturing	0.0	0.0	0.0	0.0
310	Jewelry and silverware manufacturing	0.0	0.0	0.0	0.0
309	Dental laboratories manufacturing	0.0	0.0	0.0	0.0
308	Ophthalmic goods manufacturing	0.0	0.0	0.0	0.0
306	Surgical appliance and supplies manufacturing	0.0	0.0	0.0	0.0
302	Showcase- partition- shelving- and locker mfg	0.0	0.0	0.0	0.0
301	Office furniture and custom architectural woodwork	0.0	0.0	0.0	0.0
297	Nonupholstered wood household furniture mfg	0.0	0.0	0.0	0.0
295	Wood kitchen cabinet and countertop manufacturing	0.0	0.0	0.0	0.0
290	Ship building and repairing	0.0	0.0	0.0	0.0
286	Other aircraft parts and auxiliary equipment mfg	0.0	0.0	0.0	0.0
284	Aircraft manufacturing	0.0	0.0	0.0	0.0
283	Motor vehicle parts manufacturing	0.0	0.0	0.0	0.0
280	Truck trailer manufacturing	0.0	0.0	0.0	0.0
278	Heavy duty truck manufacturing	0.0	0.0	0.0	0.0
275	All other miscellaneous electrical equipment and c	0.0	0.0	0.0	0.0
271	Primary battery manufacturing	0.0	0.0	0.0	0.0
267	Motor and generator manufacturing	0.0	0.0	0.0	0.0

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Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008
Ranked by Total Impact

<i>IMPLAN Sector</i>	<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
266	Power- distribution- and specialty transformer man	0.0	0.0	0.0	0.0
257	Software- audio- and video media for reproduction	0.0	0.0	0.0	0.0
256	Watch- clock- and other measuring and controlling	0.0	0.0	0.0	0.0
253	Electricity and signal testing instruments mfg	0.0	0.0	0.0	0.0
247	Other electronic component manufacturing	0.0	0.0	0.0	0.0
246	Printed circuit assembly (electronic assembly) man	0.0	0.0	0.0	0.0
240	Audio and video equipment manufacturing	0.0	0.0	0.0	0.0
238	Broadcast and wireless communications equipment ma	0.0	0.0	0.0	0.0
234	Electronic computer manufacturing	0.0	0.0	0.0	0.0
230	Other general purpose machinery manufacturing	0.0	0.0	0.0	0.0
226	Pump and pumping equipment manufacturing	0.0	0.0	0.0	0.0
222	Turbine and turbine generator set units mfg	0.0	0.0	0.0	0.0
220	Cutting tool and machine tool accessory mfg	0.0	0.0	0.0	0.0
218	Metal cutting and forming machine tool mfg	0.0	0.0	0.0	0.0
215	Heating equipment (except warm air furnaces mfg	0.0	0.0	0.0	0.0
214	Air purification and ventilation equipment mfg	0.0	0.0	0.0	0.0
207	Other industrial machinery manufacturing	0.0	0.0	0.0	0.0
206	Mining and oil and gas field machinery mfg	0.0	0.0	0.0	0.0
205	Construction machinery manufacturing	0.0	0.0	0.0	0.0
202	Other fabricated metal manufacturing	0.0	0.0	0.0	0.0
201	Fabricated pipe and pipe fitting manufacturing	0.0	0.0	0.0	0.0
198	Valve and fittings other than plumbing mfg	0.0	0.0	0.0	0.0
197	Coating- engraving- heat treating and allied active.	0.0	0.0	0.0	0.0
195	Machine shops	0.0	0.0	0.0	0.0
194	Spring and wire product manufacturing	0.0	0.0	0.0	0.0
193	Hardware manufacturing	0.0	0.0	0.0	0.0
187	Ornamental and architectural metal products mfg	0.0	0.0	0.0	0.0
186	Plate work and fabricated structural product mfg	0.0	0.0	0.0	0.0
185	Handtool manufacturing	0.0	0.0	0.0	0.0
182	Custom roll forming	0.0	0.0	0.0	0.0
180	Nonferrous metal foundries	0.0	0.0	0.0	0.0
179	Ferrous metal foundries	0.0	0.0	0.0	0.0
178	Nonferrous metal (except copper and aluminum) roll	0.0	0.0	0.0	0.0
171	Steel product manufacturing from purchased steel	0.0	0.0	0.0	0.0
170	Iron and steel mills and ferroalloy manufacturing	0.0	0.0	0.0	0.0
168	Mineral wool manufacturing	0.0	0.0	0.0	0.0
166	Cut stone and stone product manufacturing	0.0	0.0	0.0	0.0
164	Lime and gypsum product manufacturing	0.0	0.0	0.0	0.0
163	Other concrete product manufacturing	0.0	0.0	0.0	0.0
162	Concrete pipe- brick- and block manufacturing	0.0	0.0	0.0	0.0
161	Ready-mix concrete manufacturing	0.0	0.0	0.0	0.0
152	Other rubber product manufacturing	0.0	0.0	0.0	0.0
150	Tire manufacturing	0.0	0.0	0.0	0.0
147	Urethane and other foam product (except polystyrene)	0.0	0.0	0.0	0.0
142	Plastics packaging materials and unlaminated film	0.0	0.0	0.0	0.0
141	All other chemical product and preparation mfg	0.0	0.0	0.0	0.0
138	Soap and cleaning compound manufacturing	0.0	0.0	0.0	0.0
136	Paint and coating manufacturing	0.0	0.0	0.0	0.0
126	Other basic organic chemical manufacturing	0.0	0.0	0.0	0.0
122	Synthetic dye and pigment manufacturing	0.0	0.0	0.0	0.0
121	Industrial gas manufacturing	0.0	0.0	0.0	0.0
114	Support activities for printing	0.0	0.0	0.0	0.0

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Secondary Employment Impacts of Red Plan Construction on the Duluth-Superior MSA, 2008
Ranked by Total Impact

<i>IMPLAN Sector</i>	<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
113	Printing	0.0	0.0	0.0	0.0
107	Paperboard container manufacturing	0.0	0.0	0.0	0.0
105	Paper mills	0.0	0.0	0.0	0.0
103	All other miscellaneous wood product manufacturing	0.0	0.0	0.0	0.0
102	Prefabricated wood building manufacturing	0.0	0.0	0.0	0.0
100	Wood container and pallet manufacturing	0.0	0.0	0.0	0.0
94	Other leather and allied product manufacturing	0.0	0.0	0.0	0.0
93	Footwear manufacturing	0.0	0.0	0.0	0.0
91	Apparel accessories and other apparel mfg	0.0	0.0	0.0	0.0
90	Other cut and sew apparel manufacturing	0.0	0.0	0.0	0.0
89	Womens and girls cut and sew apparel mfg	0.0	0.0	0.0	0.0
88	Mens and boys cut and sew apparel manufacturing	0.0	0.0	0.0	0.0
86	Apparel knitting mills	0.0	0.0	0.0	0.0
85	All other textile product mills	0.0	0.0	0.0	0.0
84	Textile bag and canvas mills	0.0	0.0	0.0	0.0
71	Breweries	0.0	0.0	0.0	0.0
70	Soft drink and ice manufacturing	0.0	0.0	0.0	0.0
69	All other food manufacturing	0.0	0.0	0.0	0.0
66	Coffee and tea manufacturing	0.0	0.0	0.0	0.0
63	Cookie- cracker- and pasta manufacturing	0.0	0.0	0.0	0.0
62	Bread and bakery product manufacturing	0.0	0.0	0.0	0.0
59	Animal (except poultry) slaughtering- rendering- a	0.0	0.0	0.0	0.0
56	Cheese manufacturing	0.0	0.0	0.0	0.0
55	Fluid milk and butter manufacturing	0.0	0.0	0.0	0.0
53	Frozen food manufacturing	0.0	0.0	0.0	0.0
51	Confectionery manufacturing from purchased chocolate	0.0	0.0	0.0	0.0
42	Other animal food manufacturing	0.0	0.0	0.0	0.0
40	Maint & repair construct of residential structures	0.0	0.0	0.0	0.0
38	Construct other new residential structures	0.0	0.0	0.0	0.0
33	Water- sewage and other treatment and delivery sys	0.0	0.0	0.0	0.0
32	Natural gas distribution	0.0	0.0	0.0	0.0
30	Support activities for other mining	0.0	0.0	0.0	0.0
29	Support activities for oil and gas operations	0.0	0.0	0.0	0.0
27	Mining and quarrying other nonmetallic minerals	0.0	0.0	0.0	0.0
26	Mining and quarrying sand- gravel- clay- and ceramic	0.0	0.0	0.0	0.0
25	Mining and quarrying stone	0.0	0.0	0.0	0.0
23	Mining copper- nickel- lead- and zinc	0.0	0.0	0.0	0.0
22	Mining iron ore	0.0	0.0	0.0	0.0
19	Support activities for agriculture and forestry	0.0	0.0	0.0	0.0
18	Commercial hunting and trapping	0.0	0.0	0.0	0.0
17	Commercial Fishing	0.0	0.0	0.0	0.0
15	Forestry- forest products- and timber tract production	0.0	0.0	0.0	0.0
13	Poultry and egg production	0.0	0.0	0.0	0.0
11	Cattle ranching and farming	0.0	0.0	0.0	0.0
6	Greenhouse- nursery- and floriculture production	0.0	0.0	0.0	0.0
4	Fruit farming	0.0	0.0	0.0	0.0
3	Vegetable and melon farming	0.0	0.0	0.0	0.0
2	Grain farming	0.0	0.0	0.0	0.0
1	Oilseed farming	0.0	0.0	0.0	0.0
	Total	95.7	24.9	31.0	151.6

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