APPENDIX Q

ECONOMIC IMPACT STATEMENT

IOWA DEPARTMENT OF TRANSPORTATION

CHICAGO TO COUNCIL BLUFFS - OMAHA

HIGH-SPEED INTERCITY PASSENGER RAIL (HSIPR) PROGRAM

ECONOMIC IMPACT ANALYSIS FOR THE CHICAGO TO COUNCIL BLUFFS-OMAHA HIGH-SPEED INTERCITY PASSENGER RAIL PROGRAM

APRIL 16, 2013

TABLE OF CONTENTS

255 Adelaide Street West, Toronto, Ontario M5H 1X9 CANADA
Telephone: (647) 777-4943 • Fax: (416) 597-3127 • www.hdrinc.com

1 Passenger Rail Project – Economic Impact Results

1.1 General Approach

Economic impacts of a project can be divided into two broad categories of impacts:

1) Jobs, income and related impacts of the project in question that are attributable to the project either directly, or indirectly through supplier-purchasing relationships and re-spending of employee wages and salaries, and
2) Economic development and other benefits and impacts of the project.

The first category of impacts represents the traditional metrics evaluated in economic impact studies that quantify the effects of the various rounds of expenditures and economic activities that are initiated throughout the economy as a result of an initial expenditure or business activity. These metrics are commonly referred to as "direct impacts," "indirect impacts," and "induced impacts" and can be defined as follows:

- Direct impacts are impacts directly attributable to the initial investment required for the project, or the expenditures required to start and complete the project. These are the immediate economic outcomes occurring as the result of activity related to the construction/ development and subsequently operations of project being evaluated.
- Indirect impacts are the results of the spillover effects in the markets for intermediate goods, or economic activities that result from purchases of production inputs, goods and services throughout the production and distribution chain. These purchases allow for production activities and employment at the supplier firms generating further rounds of economic activity down the production chain.
- Induced impacts result from the spending and re-spending of dollars earned by individuals who become employed as a result of the direct and indirect impacts. Re-spending of employment wages and salaries on consumer goods and services results in further economic impacts throughout the economy.

The total economic impact is the sum of the direct, indirect and induced effects of the institution or the project being evaluated.

The above impacts are different from "user" impacts and benefits of a particular proposed facility or project typically included in a cost-benefit analysis, and treated separately as another aspect of the various impacts of the proposed project.

The second category of effects captures various other effects on local economies where the project will operate, frequently specific to the project and frequently difficult to quantify and

convert into employment and business revenue terms. These benefits may include broader social impacts, quality of life improvements, or productivity improvements in the regional economy that are possible through the projects.

This assessment focuses and estimates only the first category of impacts, i.e. the direct, indirect, and induced effects of the proposed project – all in terms of business revenues, jobs, value added and employment income that would be generated as a result of the proposed project. Both the impacts of construction expenditures as well as the ongoing operation and maintenance expenditures once the project is completed are taken into account.

1.2 Implementation

Table 1 shows the estimated total cumulative construction cost of the proposed project as well as operation and maintenance costs at full project build-out broken down by the state in which they occur (Illinois and Iowa). Note that Phase 1 of the project (Chicago to Moline) has been excluded from this assessment as it is assumed to proceed regardless of whether the full Chicago to Council Bluffs-Omaha build-out is completed. All costs have been classified by a broad type of costs.[1] As the table shows, the total costs including construction as well as engineering and other related construction costs are estimated at over $931 million, and the operation and maintenance costs of the proposed facility are estimated at $44.2 million.

Direct impacts (number of jobs, employment income, and GDP) were estimated from industry economic activity data such as industry gross output, employment, value added, and salaries. This data, at the state or national level and for the industry that best matches the project expenditures, we used to derive ratios such as direct employment in the industry per $1 million of output, or GDP as a share of grow industry output.

Indirect and induced impacts were estimated with input-output multipliers from Bureau of Economic Analysis (BEA). The multipliers are available for a range of industries or industry groupings as Type 1 multipliers and Type II multipliers. The former give the total of direct and indirect impacts and the latter give direct, indirect and induced impacts. For each type, there are two sets of multipliers for each industry: final demand multipliers and direct effect multipliers. Final demand multipliers give total impact (in terms of output, jobs, GDP, and employment income) for each $1 million of final demand change in the industry in question. Direct effects multipliers give total job effects for 1 direct job and total employment impact effects for $1 in direct salaries. For all multipliers, the total estimated effects include the original industry impact.

Direct jobs and direct employment income were also estimated using the multipliers and the implied relationships between final and direct multipliers for jobs and employment income.

[1] All cost estimates include contingencies. Contingencies specific to a cost category were included in the total cost estimate. The general unallocated contingency was distributed proportionately across all cost categories.

Direct GDP was estimated from economic activity data for the industry that best matches the project expenditures and the share of GDP in gross industry revenue.

Table 1 also shows the classification of the project cost categories into best matching BEA input-output industrial sectors. It can be seen that the majority of costs fall into the electrical equipment manufacturing industry and the construction industry. A relatively smaller fraction of the costs is related to planning and engineering and was classified into the Professional, Technical, and Scientific Services Industry. The project costs also include costs related to the purchase or lease of real estate and vehicles (rolling stock). The cost of purchase of real estate was excluded from the analysis as these costs are in its essence a transfer of wealth and do not re-circulate in the economy in the same manner as other project expenditures. Vehicles costs were excluded as vehicles would likely to be purchased in one of the states on the East Coast, or overseas. For the purpose of this analysis, it assumed that all other expenditures take place in each of the states where they were attributed.

The impacts of construction costs and annual operation and maintenance costs were estimated separately to generate separate assessments of impacts during the construction period and ongoing impact of the proposed project once it is competed and operational.

Table 1: Project Expenditures

Category of Costs	Illinois	Iowa	TOTAL COST	BEA Industry Classification
CONSTRUCTION				
Purchase or Lease of Real Estate	$0	$16,172,490	$16,172,490	Not Included in economic impact assessment
Communications and Signaling Equipment	$1,520,553	$234,081,158	$235,601,711	INDUSTRY 14. Electrical Equipment and Appliance Manufacturing
Vehicles	$0	$164,919,624	$164,919,624	Not Included in economic impact assessment
Professional Engineering and Technical Services	$1,561,805	$66,438,193	$67,999,997	INDUSTRY 47. Professional, Technical, and Scientific Services
Construction (civil works)	$12,240,038	$434,157,144	$446,397,182	INDUSTRY 7. Construction
Total Construction	**$15,322,396**	**$915,768,608**	**$931,091,003**	
OPERATIONS				
Operations and Maintenance Expenditures	$112,350	$44,135,807	$44,248,157	INDUSTRY: 30. Rail Transportation

1.3 Results

1.3.1 Construction Period

Table 2 shows the results of economic impact simulations quantified as business output, employment, value added, and employment income, and in terms of direct, indirect, induced, and total impacts. All impacts presented in the table are cumulative impacts over the entire construction period.

Table 2: Economic Impacts of Proposed Project Construction; Cumulative over Construction Period

Type of Impact	Illinois	Iowa	Total
DIRECT IMPACTS			
Output, $ millions	$15.32	$734.68	$750.00
Employment, number of jobs (FTE equivalents)	106.1	5,740.9	5,847.0
Earnings, $ millions	$5.91	$250.18	$256.08
Value Added, $ millions	$6.32	$265.37	$271.69
INDIRECT IMPACTS			
Output, $ millions	$8.43	$258.78	$267.21
Employment, number of jobs (FTE equivalents)	45.2	1,559.2	1,604.4
Earnings, $ millions	$2.33	$66.44	$68.77
Value Added, $ millions	$6.09	$182.57	$188.66
INDUCED IMPACTS			
Output, $ millions	$12.03	$284.62	$296.66
Employment, number of jobs (FTE equivalents)	85.1	2,383.1	2,468.2
Earnings, $ millions	$3.37	$76.43	$79.80
Value Added, $ millions	$6.61	$205.66	$212.27
TOTAL IMPACTS			
Output, $ millions	**$35.78**	**$1,278.08**	**$1,313.86**
Employment, number of jobs (FTE equivalents)	**236.5**	**9,683.2**	**9,919.6**
Earnings, $ millions	**$11.60**	**$393.05**	**$404.65**
Value Added, $ millions	**$19.02**	**$653.60**	**$672.62**

NOTE: All monetary impacts are in terms of 2013 dollars.

Specifically, Table 2 shows that during the construction period the total employment impact of the proposed project amounts to 9,919.6 job-years. This includes 5,847 direct jobs, 1,604.4 indirect jobs, and 2,468.2 induced jobs. The vast majority of employment and other impacts take place in Iowa (where also the vast majority of expenditures takes place).

1.3.2 Ongoing Operations

Table 3 shows the results of economic impact simulations resulting from the operation and maintenance of the passenger rail service in Illinois and Iowa, quantified as business output, employment, value added, and employment income, and in terms of direct, indirect, induced, and total impacts. All impacts presented in the table represent annual ongoing impacts once the project is fully operational.

Table 3: Economic Impacts of Proposed Project; Ongoing Annual Impacts after Project Completion

Type of Impact	Illinois	Iowa	Total
DIRECT IMPACTS			
Output, $ millions	$0.11	$44.14	$44.25
Employment, number of jobs (FTE equivalents)	0.2	86.3	86.6
Earnings, $ millions	$0.02	$6.81	$6.83
Value Added, $ millions	$0.05	$18.88	$18.93
INDIRECT IMPACTS			
Output, $ millions	$0.08	$16.29	$16.38
Employment, number of jobs (FTE equivalents)	0.4	106.2	106.6
Earnings, $ millions	$0.02	$4.43	$4.45
Value Added, $ millions	$0.05	$8.45	$8.51
INDUCED IMPACTS			
Output, $ millions	$0.15	$43.20	$43.35
Employment, number of jobs (FTE equivalents)	0.4	84.6	85.0
Earnings, $ millions	$0.02	$2.71	$2.73
Value Added, $ millions	$0.02	$6.04	$6.06
TOTAL IMPACTS			
Output, $ millions	**$0.35**	**$103.63**	**$103.98**
Employment, number of jobs (FTE equivalents)	**1.1**	**277.1**	**278.2**
Earnings, $ millions	**$0.06**	**$13.94**	**$14.00**
Value Added, $ millions	**$0.13**	**$33.37**	**$33.50**

Table 3 shows that ongoing impacts of the proposed project include 278.2 jobs, $103.98 million of business output, $33.5 million of value added, and $14 million of employment income. In the total of 278.2 jobs, there are 86.6 direct jobs, 106.6 indirect jobs, and 85 induced jobs. The majority of the impacts occur in Iowa where also the majority of incremental operating expenditures take place.