

Transportation & Logistics

Industry Cluster Profile | Metropolitan Chicago Region

Overview

This report¹ provides key data for the Transportation and Logistics cluster which is significant to the metropolitan Chicago region's economy.² The Transportation and Logistics cluster represents similar industries that are closely connected through supply chains and shared labor pools within the region and is primarily comprised of organizations whose services include the transporting of goods/materials and people through various modes, planning and facilitating efficient distribution, and storing and warehousing products. A detailed listing of the industries included in the cluster, as defined at the 6-digit NAICS level, are provided as an addendum to this report.

This report was developed through a partnership between The Workforce Boards of Metropolitan Chicago (WBMC) and the Metro Economic Growth Alliance (MEGA) of Chicago. The WBMC is a regional consortium of six Workforce Boards that have collaborated for the past nine years on initiatives that address workforce and economic development issues. The Workforce Boards oversee development of a workforce system that provides individuals with education and training required for career opportunities in high demand occupations and provides employers with access to a skilled, competitive workforce. The MEGA is a partnership of lead economic organizations from throughout the metropolitan Chicago region that are committed to growing the regional economy through coordinated, effective business development. The metropolitan Chicago region includes the following counties: Cook, DeKalb, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, McHenry, and Will.

Significance of Cluster to Region

The Transportation and Logistics cluster encompasses 14,215 establishments and employs 256,227 (2012) people in the metropolitan Chicago region. During the period of 2011 to 2021, this industry cluster's jobs are expected to grow by 15.6%, which is comparable to national growth for this cluster of 15.1%. The region's average annual wages/salaries for these jobs are \$49,363, with total regional wages/salaries in excess of \$12.6 billion. With a 1.31 location quotient, this cluster has a higher than average concentration of economic activity in the region when compared to the nation's economic activity in this cluster overall.

A location quotient (LQ) measures how concentrated an industry cluster is in a given region as compared to the nation. An LQ greater than 1.0 means the cluster is an export industry. Industries with a high LQ are typically, but not always, export-oriented industries bringing money into the region rather than simply circulating money that is already in the region. An LQ of <1.0 means it typically has to import from outside to satisfy local demand.



¹ Industry cluster reports produced by the Fond du Lac County Economic Development Corporation served as a model for the reports developed by The Workforce Boards of Metropolitan Chicago (<http://www.fcdec.com/targetedindustries.html>). The Workforce Boards used these reports to guide both content and format for presenting information relative to the metropolitan Chicago region.

² The source of data utilized for this report was the Economic Modeling Specialists, Inc.'s (EMSI) 2012 2nd quarter complete employment data set. EMSI estimates are based on a methodology that combines employment information from the Illinois Department of Employment Security (IDES) with self-employment numbers and EMSI-derived estimates for unsuppressed data. More information related to EMSI data sources and methodologies for compiling projections can be found at http://www.workforceboardsmetrochicago.org/Portals/0/Uploads/Data_Sources_and_Calculations.pdf.



Cluster Definition

“An industry cluster is a group of interdependent firms and related institutions that draw a productive advantage from their geographic concentration and connections. Firms in a cluster share common resources and technologies, rely on a similar labor pool and institutions, and are linked through strong relationships and transactions in addition to co-location.”³

Based on employment and economic activity generated by each industry, the core strength of the Transportation and Logistics industry cluster comes from wholesale trade agents and brokers, scheduled passenger air transportation, long distance freight trucking, general warehousing and storage, and local freight trucking. These core industries not only have high employment numbers, representing 50.5% of the total cluster employment, but also drive employment and inputs from other industries supporting them.

Other significant industries in this cluster, based on both employment and in-region economic activity, include rail transportation, freight transportation arrangement, couriers and express delivery services, and general freight trucking, long distance (less than truckload).



Key Strengths

- Average annual wages/salaries of \$49,363 (2012) for this industry cluster are higher than the national average of \$47,489 and state average of \$46,763 for this cluster.
- The projected growth rate for this industry cluster through 2021 is 15.6%.
- The metropolitan Chicago region's access to highway, rail, water and airports positions it for being a hub for warehousing and storage services as well as the transporting of freight.

Value Chain

An essential component for an industry cluster is the local supply chain. Although not all inputs (goods or services) that an industry cluster needs can be produced in the local economy, it is desirable to meet as many of the cluster's needs locally as possible. Total requirements, meaning how much this cluster purchases from in- and out-of-region industries, are \$19.4 billion. Of these purchases, \$12.4 billion, or 64%, are in-region.

The economic activity associated with the Transportation and Logistics industry cluster supports 1,145,334 jobs. 256,227 of those jobs are in cluster industries and in-region. With a job multiplier of 3.47, the cluster generates 889,107 jobs in the larger economy.

The job multiplier provides some indication of the total number of jobs (direct and indirect) supported by economic activity of the cluster. To determine the cluster's impact on jobs, total jobs in the cluster are multiplied by the job multiplier. Direct jobs are in industries comprising the cluster within a specified area; indirect jobs are in industries outside of the cluster and in the larger economy.

³ Metropolitan Chicago's Freight Cluster: A Drill-Down Report on Infrastructure, Innovation, and Workforce, Chicago Metropolitan Agency for Planning, Summary Report, June 2012, page 8.



Core and Support Industries

Within each cluster, there are certain industries that contribute more to the economy of the region than others. These industries not only have high employment numbers, but also impact employment and inputs from other industries supporting them. The chart below provides relevant information for the core and support industries in the Transportation and Logistics industry cluster.



TRANSPORTATION AND LOGISTICS CLUSTER

NAICS Code	Description	2011 Jobs	2021 Jobs	Change	% Change	2012 Wages/ Salaries	2011 Establishments
481111	Scheduled Passenger Air Transportation	31,054	32,881	1,827	6%	\$75,179	51
484121	General Freight Trucking, Long-Distance, Truckload	28,722	36,992	8,270	29%	\$42,068	1,256
493110	General Warehousing and Storage	25,566	32,620	7,054	28%	\$38,707	314
425120	Wholesale Trade Agents and Brokers	21,939	25,881	3,942	18%	\$79,221	4,325
484110	General Freight Trucking, Local	19,508	22,387	2,879	15%	\$40,422	2,770
488510	Freight Transportation Arrangement	16,954	19,209	2,255	13%	\$57,181	952
492110	Couriers and Express Delivery Services	13,140	15,571	2,431	19%	\$33,206	196
482110	Rail Transportation	10,548	12,385	1,837	17%	\$81,572	3
484122	General Freight Trucking, Long-Distance, Less Than Truckload	8,064	10,040	1,976	25%	\$49,685	238



Occupational Opportunities

The Transportation and Logistics industry cluster employs 256,227 people in the metropolitan Chicago region. During the period of 2011 – 2021, this industry cluster is expected to grow 39,193 new jobs. Additionally, there will be job openings that represent employment opportunities. Job openings occur when individuals change jobs, retire, or leave the workforce.

The table provided below identifies the ten occupations projected to experience the largest job growth through 2021. In assessing the employment opportunities these occupations offer, it is anticipated that there will be 25,803 new jobs and an additional 21,873 positions available through job openings.

This industry cluster provides job opportunities to individuals who are not interested in pursuing higher education. While most of the high growth jobs require only on-the-job training, some jobs will require individuals to obtain special certifications such as a commercial driver's license. Median hourly earnings for high growth occupations range from a low of \$9.70 to a high of \$32.18.

SOC Code	Occupation	Jobs in Cluster 2011	Projected Jobs in Cluster 2021	New Jobs in Cluster 2011-2021	% Change	Estimated Openings in Cluster ⁴ (New & Replacement) 2011-2021	% of the Total Jobs in Cluster (2012)	Median Hourly Earnings	Education Level
53-3032	Truck Drivers, Heavy & Tractor-Trailer	45,380	57,457	12,077	27%	18,690	18.2%	\$19.55	Short-term on-the-job training
53-3041	Taxi Drivers & Chauffeurs	16,464	19,572	3,108	19%	6,042	6.6%	\$9.70	Short-term on-the-job training
53-7062	Laborers & Freight, Stock, & Material Movers, Hand	19,617	21,990	2,373	12%	7,473	7.7%	\$11.37	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	7,162	8,735	1,573	22%	2,114	2.9%	\$26.14	Work experience in a related occupation
11-9199	Managers, All Other	4,411	5,899	1,488	34%	1,752	1.8%	\$32.18	Work experience in a related occupation
43-5011	Cargo & Freight Agents	6,240	7,592	1,352	22%	2,808	2.5%	\$18.62	Moderate-term on-the-job training
53-3033	Truck Drivers, Light or Delivery Services	8,902	9,970	1,068	12%	2,419	3.5%	\$15.39	Short-term on-the-job training
43-4051	Customer Service Representatives	4,300	5,232	932	22%	1,984	1.7%	\$16.61	Moderate-term on-the-job training
53-7051	Industrial Truck & Tractor Operators	5,179	6,096	917	18%	2,079	2.0%	\$14.45	Short-term on-the-job training
53-3022	Bus Drivers, School	7,704	8,619	915	12%	2,315	1.7%	\$13.71	Short-term on-the-job training

⁴ Estimated openings for occupations in cluster were calculated by determining the proportion of regional jobs within the cluster and applying that rate to the projected regional openings for occupation.



Market Opportunities

Uncovering Gaps

A gap analysis shows how much an entire industry cluster purchases from various other industries (its “requirements”), along with how much is satisfied by those industries inside and outside the region. A gap occurs when industries that produce inputs (goods or services) needed by the cluster’s core industries are not available locally or are underdeveloped. Although not all inputs that an industry cluster needs can be produced in the local economy, identifying and closing gaps benefits the region and the competitiveness of the cluster overall. Development or expansion of businesses that can fulfill the cluster’s needs for goods and services will create jobs and keep more money in the region.

Gap=Market Opportunity

Total in-region requirements, meaning how much the Transportation and Logistics cluster purchases locally, are \$12.4 billion. This cluster satisfies 64% of its requirements in-region.

Further analysis indicates that the cluster purchases \$7 billion outside of the region. Based on a review of these out-of-region purchases, potential market opportunities associated with the Transportation and Logistics cluster have been identified and are reflected on the chart below. Gaps identified, not all inclusive, provide opportunities in the specific cluster but also across all industries in the region. This gap provides an opportunity to assist current employers in expanding or attracting new employers to fill the unmet need.

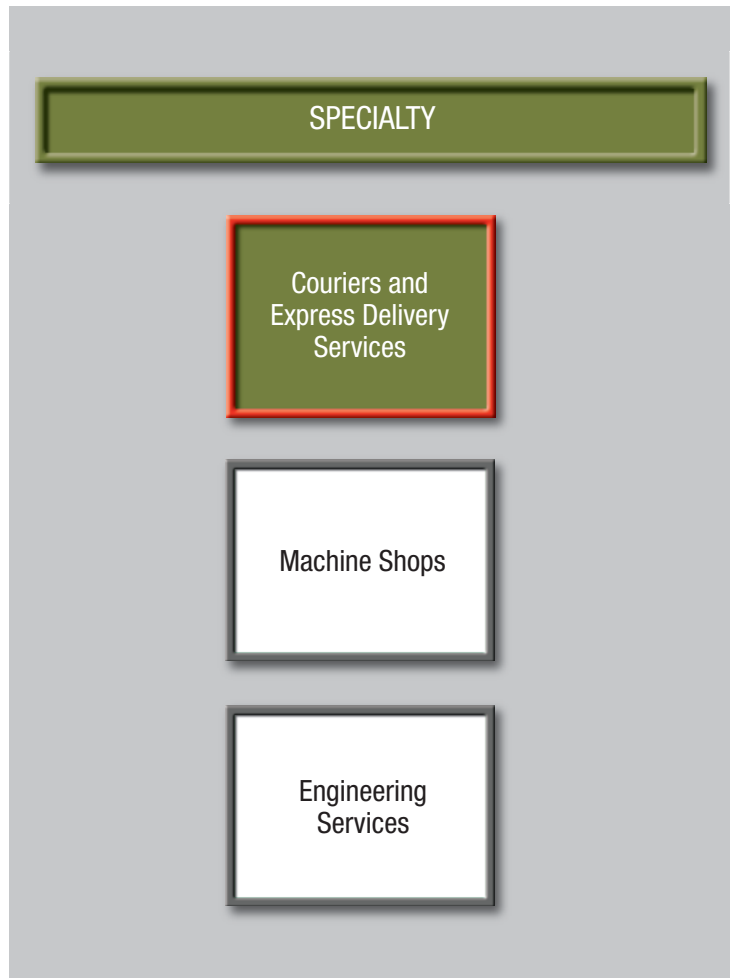
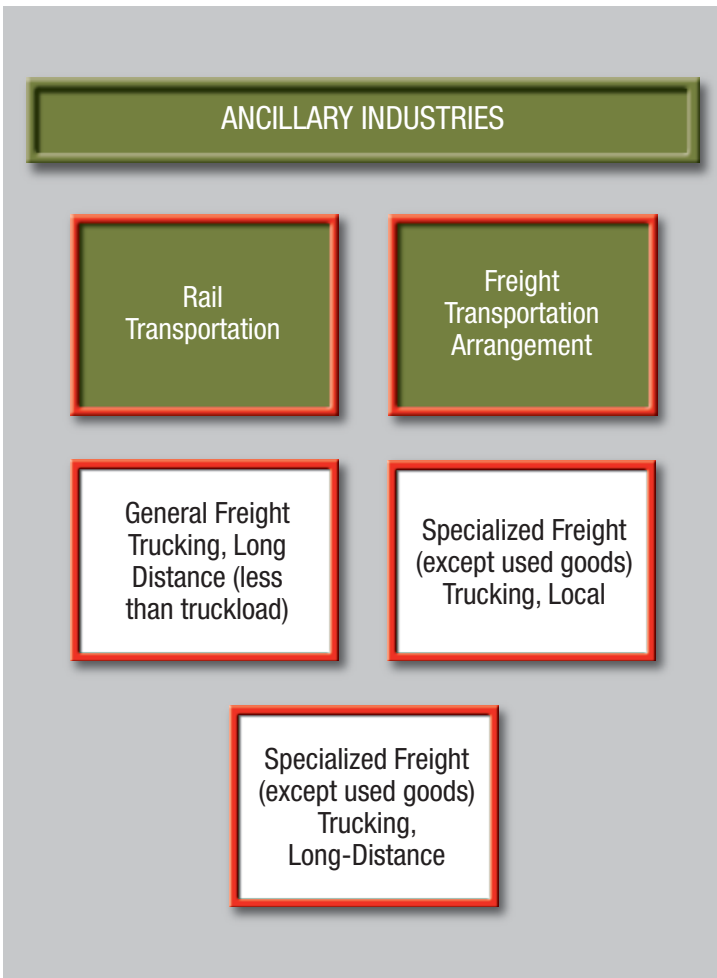
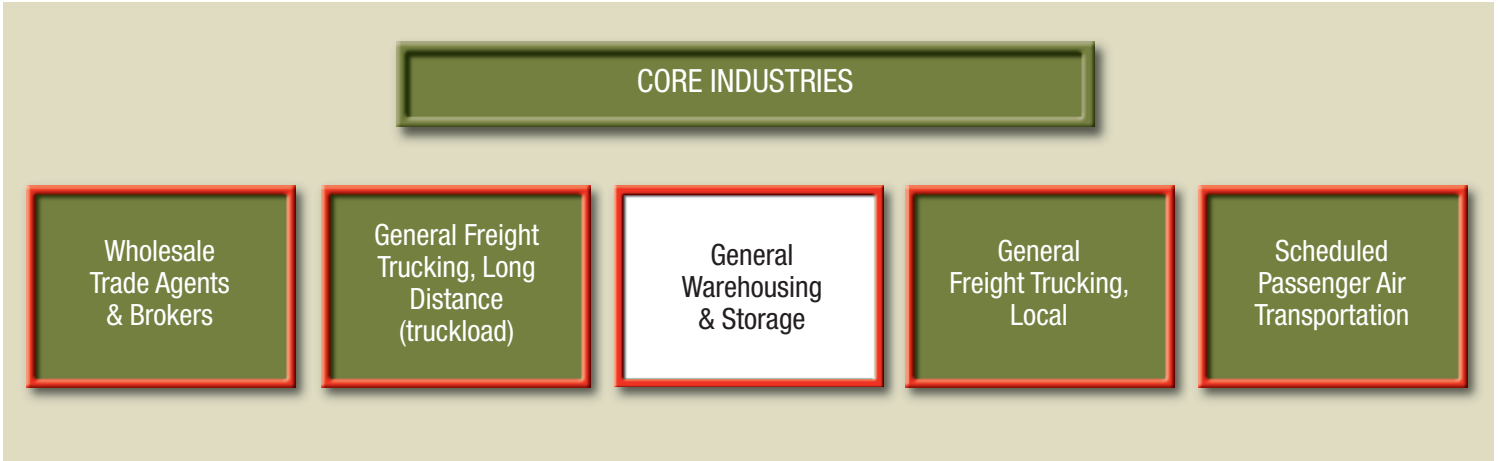
MARKET OPPORTUNITIES

Industry/Gap	Unmet Need in Cluster	2012 Annual Average Wage/Salary	# of Establishments (2011) # of Employees in Cluster (2011) ⁵
General Warehousing and Storage	\$63,862,075	\$38,707	314 establishments 25,566 employees
Machine Shops	\$49,612,123	\$52,865	718 establishments 10,110 employees
Specialized Freight (except used goods) Trucking, Local	\$29,995,743	\$48,965	707 establishments 4,170 employees
Engineering Services	\$28,583,013	\$81,251	1,488 establishments 19,954 employees
General Freight Trucking, Long Distance, Less than Truckload	\$27,739,099	\$49,685	238 establishments 8,064 employees
Specialized Freight (except used goods) Trucking, Long-Distance	\$26,535,871	\$48,195	156 establishments 1,601 employees

⁵ Number of establishments and employees are specific to cluster unless industry/gap is not in the cluster, in which case number of industry establishments and employees in region.

INDUSTRY CLUSTER MAP

The following cluster map illustrates the primary or core industries as well as ancillary industries of this cluster. Industries represented in rectangles with no shading/fill reveal substantial unmet needs or gaps in the region. Boxes in red signify jobs within direct/defined cluster.



Conclusion

This report provides key data about the Transportation and Logistics industry cluster, one of the primary clusters in the metropolitan Chicago region's economy. The workforce development community can use this report to support decisions related to the investment of resources in addressing future workforce needs in the region. Entities responsible for economic development in the region can utilize the industry level data and market opportunity analysis to inform their efforts in working with employers interested in locating to or expanding in the region.

For additional data related to the Transportation and Logistics cluster or assistance with other labor market information needs, visit www.workforceboardsmetrochicago.com for information on contacting the Workforce Investment Board in your area.

TRANSPORTATION AND LOGISTICS CLUSTER⁶

NAICS Codes	Description
425120	Wholesale Trade Agents and Brokers
481111	Scheduled Passenger Air Transportation
481112	Scheduled Freight Air Transportation
481211	Nonscheduled Chartered Passenger Air Transportation
481212	Nonscheduled Chartered Freight Air Transportation
481219	Other Nonscheduled Air Transportation
482110	Rail Transportation
483111	Deep Sea Freight Transportation
483112	Deep Sea Passenger Transportation
483113	Coastal and Great Lakes Freight Transportation
483114	Coastal and Great Lakes Passenger Transportation
483211	Inland Water Freight Transportation
483212	Inland Water Passenger Transportation
484110	General Freight Trucking, Local
484121	General Freight Trucking, Long-Distance, Truckload
484122	General Freight Trucking, Long-Distance, Less Than Truckload
484210	Used Household and Office Goods Moving
484220	Specialized Freight (except Used Goods) Trucking, Local
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance
485111	Mixed Mode Transit Systems
485112	Commuter Rail Systems
485113	Bus and Other Motor Vehicle Transit Systems
485210	Interurban and Rural Bus Transportation
485310	Taxi Service
485320	Limousine Service
485410	School and Employee Bus Transportation

⁶ The Transportation and Logistics cluster, as defined by the Purdue Center for Regional Development, the Indiana Business Research Center at Indiana University's Kelly School of Business and the Strategic Development Group has been customized for the metropolitan Chicago region. Specifically, NAICS codes 425120, 485111, 485113, 485210, 485310, 485320, 485410, 485991, 487110, 487210, 487990, and 491110 were added.

TRANSPORTATION AND LOGISTICS CLUSTER

NAICS Codes	Description
485510	Charter Bus Industry
485991	Special Needs Transportation
485999	All Other Transit and Ground Passenger Transportation
486110	Pipeline Transportation of Crude Oil
486210	Pipeline Transportation of Natural Gas
486910	Pipeline Transportation of Refined Petroleum Products
486990	All Other Pipeline Transportation
487110	Scenic and Sightseeing Transportation, Land
487210	Scenic and Sightseeing Transportation, Water
487990	Scenic and Sightseeing Transportation, Other
488111	Air Traffic Control
488119	Other Airport Operations
488190	Other Support Activities for Air Transportation
488210	Support Activities for Rail Transportation
488310	Port and Harbor Operations
488320	Marine Cargo Handling
488330	Navigational Services to Shipping
488390	Other Support Activities for Water Transportation
488410	Motor Vehicle Towing
488490	Other Support Activities for Road Transportation
488510	Freight Transportation Arrangement
488991	Packing and Crating
488999	All Other Support Activities for Transportation
491110	Postal Service (Private Sector)
492110	Couriers and Express Delivery Services
492210	Local Messengers and Local Delivery

TRANSPORTATION AND LOGISTICS CLUSTER

NAICS Codes	Description
493110	General Warehousing and Storage
493120	Refrigerated Warehousing and Storage
493130	Farm Product Warehousing and Storage
493190	Other Warehousing and Storage
532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing
541614	Process, Physical Distribution, and Logistics Consulting Services
561910	Packaging and Labeling Services

NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) DEFINITIONS⁷**CORE INDUSTRIES****425120 Wholesale Trade Agents and Brokers**

This industry comprises wholesale trade agents and brokers acting on behalf of buyers or sellers in the wholesale distribution of goods. Agents and brokers do not take title to the goods being sold but rather receive a commission or fee for their service. Agents and brokers for all durable and nondurable goods are included in this industry.

481111 Scheduled Passenger Air Transportation

This U.S. industry comprises establishments primarily engaged in providing air transportation of passengers or passengers and freight over regular routes and on regular schedules. Establishments in this industry operate flights even if partially loaded. Scheduled air passenger carriers including commuter and helicopter carriers (except scenic and sightseeing) are included in this industry.

484110 General Freight Trucking, Local

This industry comprises establishments primarily engaged in providing local general freight trucking. General freight establishments handle a wide variety of commodities, generally palletized and transported in a container or van trailer. Local general freight trucking establishments usually provide trucking within a metropolitan area which may cross state lines. Generally the trips are same-day return.

484121 General Freight Trucking, Long Distance (Truckload)

This U.S. industry comprises establishments primarily engaged in providing long-distance general freight truckload (TL) trucking. These long-distance general freight truckload carrier establishments provide full truck movement of freight from origin to destination. The shipment of freight on a truck is characterized as a full single load not combined with other shipments.

493110 General Warehousing and Storage

This industry comprises establishments primarily engaged in operating merchandise warehousing and storage facilities. These establishments generally handle goods in containers, such as boxes, barrels, and/or drums, using equipment, such as forklifts, pallets, and racks. They are not specialized in handling bulk products of any particular type, size, or quantity of goods or products.

ANCILLARY AND SPECIALTY INDUSTRIES**332710 Machine Shops**

This industry comprises establishments known as machine shops primarily engaged in machining metal and plastic parts and parts of other composite materials on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

482110 Rail Transportation

This industry comprises establishments primarily engaged in operating railroads (except street railroads, commuter rail, urban rapid transit, and scenic and sightseeing trains). Line-haul railroads and short line railroads are included in this industry.

484122 General Freight Trucking, Long Distance (Less than Truckload)

This U.S. industry comprises establishments primarily engaged in providing long-distance, general freight, less than truckload (LTL) trucking. LTL carriage is characterized as multiple shipments combined onto a single truck for multiple deliveries within a network. These establishments are generally characterized by the following network activities: local pickup, local sorting and terminal operations, line-haul, destination sorting and terminal operations, and local delivery.

⁷ 2007 NAICS definitions found at <http://www.census.gov/eos/www/naics/>.

2007 NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) DEFINITIONS

ANCILLARY AND SPECIALTY INDUSTRIES (cont.)**484220 Specialized Freight (except Used Goods) Trucking, Local**

This industry comprises establishments primarily engaged in providing local, specialized trucking. Local trucking establishments provide trucking within a metropolitan area that may cross state lines. Generally the trips are same-day return.

484230 Specialized Freight (except Used Goods) Trucking, Long Distance

This industry comprises establishments primarily engaged in providing long-distance specialized trucking. These establishments provide trucking between metropolitan areas that may cross North American country borders.

488510 Freight Transportation Arrangement

This industry comprises establishments primarily engaged in arranging transportation of freight between shippers and carriers. These establishments are usually known as freight forwarders, marine shipping agents, or customs brokers and offer a combination of services spanning transportation modes.

492110 Couriers and Express Delivery Service

This industry comprises establishments primarily engaged in providing air, surface, or combined mode courier and express delivery services of parcels, but not operating under a universal service obligation. These parcels can include goods and documents, but the express delivery services are not part of the normal mail service. These services are generally between metropolitan areas or urban centers, but the establishments of this industry form a network that includes local pick-up and delivery to serve their customers' needs.

541330 Engineering Services

This industry comprises establishments primarily engaged in applying physical laws and principles of engineering in the design, development, and utilization of machines, materials, instruments, structures, processes, and systems. The assignments undertaken by these establishments may involve any of the following activities: provision of advice, preparation of feasibility studies, preparation of preliminary and final plans and designs, provision of technical services during the construction or installation phase, inspection and evaluation of engineering projects, and related services.