Schedule for: Management, Organizational, and Business Improvement Services (MOBIS)

Federal Supply Group: 874, **Class**: R499

Contract Number: GS-10F-0198N

CAMBRIDGE SYSTEMATICS

General Services Administration

Federal Supply Service

Authorized Federal Supply Schedule Price List

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order is available through GSA *Advantage*!™, a menu-driven database system. The Internet address for GSA *Advantage*!™ is: **http://www.GSA.Advantage.gov.**

For more information on ordering from Federal Supply Schedules click on the FSS Schedules button at http://www.fss.gsa.gov.

Contract Period: January 15, 2003 through January 14, 2018

Contractor: Cambridge Systematics, Inc.
100 CambridgePark Drive, Suite 400
Cambridge, MA 02140

Telephone: (617) 354-0167
Fax: (617) 354-1542
Web Site: www.camsys.com
E-mail: afowle@camsys.com
Contract Administration: Albert W. Fowle

Business Size: Large Business

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General Services Administration

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Customer Information

1a. Table of Awarded Special Item Number(s) with appropriate cross-reference to page numbers: 874-1 and 874-7.

Special Item Number (SIN)	Description	Page Number
874-1	Integrated Consulting Services	3
874-7	Integrated Business Program Support Services	7

1b. Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract. This price is the Government price based on a unit of one, exclusive of any quantity/dollar volume, prompt payment, or any other concession affecting price. Those contracts that have unit prices based on the geographic location of the customer, should show the range of the lowest price, and cite the areas to which the prices apply.

1c. If the Contractor is proposing hourly rates a description of all corresponding commercial job titles, experience, functional responsibility, and education for those types of employees or subcontractors who will perform services shall be provided. If hourly rates are not applicable, indicate "Not applicable" for this item. Reference Price Information Section (page 8).

2. Maximum Order: $1,000,00.00.

3. Minimum Order: $100.00.

4. Geographic Coverage (delivery area): Domestic and Overseas.

5. Point(s) of production (city, county, and state or foreign country): Same as company address.

6. Discount from list prices or statement of net price: Government net prices (discounts already deducted). Reference Price Information Section (page 8).

7. Quantity discounts: None Offered.

8. Prompt payment terms: Net 30 days.

9a. Notification that Government purchase cards are accepted at or below the micro-purchase threshold: Yes.

9b. Notification whether government purchase cards are accepted or not accepted above the micro-purchase threshold: will Accept Over $2,500.

10. Foreign items (list items by country of origin): None.

11a. Time of Delivery (Contractor insert number of days): Specified on the Task Order.

11b. Expedited Delivery. The Contractor will insert the sentence "Items available for expedited delivery are noted in this price list." Under this heading, the Contractor may use a symbol of its choosing to highlight items in its price list that have expedited delivery: Contact Contractor.

11c. Overnight and second-day delivery. The Contractor will indicate whether overnight and second-day delivery are available. Also, the Contractor will indicate that the schedule customer may contact the Contractor for rates for overnight and second-day delivery: Contact Contractor.

11d. Urgent Requirements. The Contractor will note in its price list the "Urgent Requirements" clause of its contract and advise agencies that they can also contact the Contractor's representative to effect a faster delivery: Contact Contractor.

12. F.O.B. Point(s): Destination.

13a. Ordering Address(es): Same as company address.

13b. Ordering procedures: For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA), and a sample BPA can be found at the GSA/FSS Schedule homepage (fss.gsa.gov/schedules).

14. Payment address(es): Same as company address.

15. Warranty provision: Contractor's standard commercial warranty.

16. Export Packing Charges (if applicable): N/A.

17. Terms and conditions of Government purchase and acceptable (any thresholds above the micro-purchase level): Contact Contractor.

18. Terms and conditions of rental, maintenance, and repair (if applicable): N/A.

19. Terms and conditions of installation (if applicable): N/A.

20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable): N/A.

20a. Terms and conditions for any other services (if applicable): N/A.

21. List of service and distribution points (if applicable): N/A.

22. List of participating dealers (if applicable): N/A.

23. Preventive maintenance (if applicable): N/A.

24a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants):

24b. If applicable, indicate that Section 508 compliance information is available on Electronic and Information Technology (EIT) supplies and services and show where full details can be found (e.g., contractor's web site or other location). The EIT standards can be found at: www.Section508.gov/.

25. Data Universal Numbering System (DUNS) number: 07-6596774.

26. Notification regarding registration in Central Contractor Registration (CCR) database: Registered.

Cambridge Systematics Experience

SIN 874-1 – Integrated Consulting Services

Cambridge Systematics has been a leader in providing management consulting services to transportation and public works organizations in the United States and abroad for 30 years. Our clients include Federal agencies, such as the U.S. Department of Transportation (DOT), U.S. Environmental Protection Agency, National Park Service, Bureau of Transportation Statistics, and the Volpe National Transportation Systems Center; state and local governments, such as state DOTs, state police, Colorado Department of Revenue, New York State Thruway Authority, and the Pennsylvania Turnpike Commission; regional and municipal agencies, such as metropolitan planning organizations across the country, port authorities, Ohio-Kentucky-Indiana Regional Planning Council, Metropolitan Transit Development Board in San Diego, and the Minneapolis-St. Paul Metropolitan Council; overseas transportation authorities in Canada, Finland, Switzerland, Sweden, Buenos Aires, Mexico, the Netherlands; international lending institutions, such as the World Bank; and private sector firms in the transportation, telecommunications, and financial services arenas.

As an independent, employee-owned firm, Cambridge Systematics delivers solutions that balance state-of-the-art technique with practical approaches to successful implementation. We help our clients think critically and creatively:

- To improve their business processes and decision-making capabilities;
- To manage their infrastructure systems more cost-effectively;
- To focus on system performance and outcomes;
- To provide higher quality service to their customers; and
- To instill clarity and accountability for their decisions.

The management consulting services offered by Cambridge Systematics span a number of project areas:

- **Policy and Funding Strategies –** Cambridge Systematics is a national leader in assisting agencies to formulate policy options through, for example, preparation of white papers, market research studies, and investigation of different scenarios in transportation and public works investment, economic development, and environmental protection. For example, Cambridge Systematics has worked closely with the U.S. DOT to develop innovative financing mechanisms, and with the American Association of State Highway and Transportation Officials (AASHTO) to formulate positions for the upcoming reauthorization of Federal transportation legislation.

- **Improvement of Business Process, Organizational Decision-Making, and Performance Measurement –** Cambridge Systematics has assisted many agencies in strategic planning, business process renewal, infrastructure management, and development of performance-based approaches to planning, programming, and system monitoring of

infrastructure investments. This work has encompassed capital construction, maintenance, and operations; and has addressed transportation facilities and public building inventories such as courthouses. Certain of these projects have also included redefinition of organizational responsibilities for decision-making, and consultation in drafting enabling legislation. This work has been performed for state DOTs, state capital facilities agencies, and airport and toll authorities. Cambridge Systematics is now preparing a Transportation Infrastructure Management Guide for state DOTs, and developing a companion training course sponsored by the National Highway Institute.

- **Program Reviews and Audits –** Cambridge Systematics has conducted performance reviews or audits of agency programs, including a performance audit of an agency's highways and rail programs according to the General Accounting Office's (GAO) Yellow Book standards. This work has included analysis of current performance, comparison to benchmarks, and recommendation for improvement. The work has also included testimony before legislative committees and executive commissions. Cambridge Systematics has performed these assignments for state DOTs, joint legislative audit and budget committees, and an overseas road authority.

- **Decision Support Tools –** Improvements in organizational and management performance often benefit from stronger capabilities in information processing and decision support systems. Cambridge Systematics designs, develops, implements, and maintains products that help clients perform their jobs better. We also help agencies align their management systems with their policy objectives and business processes. Infrastructure management systems developed by Cambridge Systematics have been adopted by more than 40 state DOTs and several international clients. Cambridge Systematics has successfully designed and implemented several analytic tools for the Federal Highway Administration (FHWA) in the areas of intelligent transportation systems (the ITS Deployment Analysis System known as IDAS), multimodal investment analysis (Surface Transportation Efficiency Analysis System known as STEAM), and economics-based highway needs analysis (the Highway Economics Requirements System known as HERS). Specialized analytic tools (e.g., for travel demand forecasting, benefit/cost analysis, and economic impact analysis) have also been developed for several states and regions.

- **Quality Assurance –** Cambridge Systematics has provided quality assurance services to the Michigan DOT in support of a major information technology effort. Recently we have performed highway maintenance quality assurance projects for the Colorado DOT and the Idaho Transportation Department.

Cambridge Systematics provides expert assistance to its clients based on a clear understanding of the client's mission, leading-edge technical expertise and practical field experience, and proven management experience.

Cambridge Systematics has more than 20 years of experience in addressing the survey needs of organizations in changing competitive environments. To fulfill the needs of various studies, Cambridge Systematics uses a variety of quantitative and qualitative research

techniques. We provide planning survey design, sampling design, defining and refining the agenda, data collection and management, sampling, survey development, pretests and pilot surveys, data analysis services, and production of reports to detail our findings.

Survey Development and Design – Cambridge Systematics is a recognized leader in the development and design of transportation surveys. Cambridge Systematics is the author of the 1997 Travel Survey Manual, prepared for the FHWA. This manual is the definitive reference on the conduct of all types of transportation planning-related surveys, including household travel, vehicle intercept, transit on-board, establishment, and commercial vehicle surveys.

Cambridge Systematics has designed, and in many instances administered, numerous surveys for a variety of public and private organizations. This experience includes both qualitative and quantitative research for a broad range of transportation projects and services. We have experience with a broad range of survey methods, including mail, telephone, in-person, and computer-aided techniques. Cambridge Systematics often is asked to provide expert advice or assistance in survey efforts being administered by other parties for transportation-related purposes.

Cambridge Systematics also develops innovative and effective approaches to the sample, instrument, and experimental designs required for primary research efforts. In each of these areas, our approaches are carefully designed to minimize the degree of sampling error, nonresponse, and other biases that may be introduced into survey data. This careful design of sampling plans and surveys leads to reliable data. Through our experience in both survey research and statistical analysis, we can develop approaches that ensure that the data will be appropriate and sufficient for statistical and planning purposes.

Data Collection – Cambridge Systematics staff are well versed in all the phases of marketing research data collection, but in typical efforts we commonly engage the assistance of specialty firms for the most labor-intensive and specialized data collection tasks. For telephone survey projects, Cambridge Systematics usually is responsible for scripting questionnaires, reviewing pretest results, and monitoring the ongoing data collection. We generally work with a survey research contractor to provide the interviewing and coding services. Whenever possible, we try to locate survey research firms that have directly relevant subject area experience so that the interviewers are more knowledgeable and can communicate with respondents in a more effective manner.

In some instances, we conduct the fieldwork for mail surveys ourselves because these surveys often include complex questionnaires with stated-preference choice exercises and individualized forms. For large, straightforward mail survey efforts, we will usually enlist the support of a firm that specializes in this type of data collection.

For qualitative marketing research efforts, one or several of Cambridge Systematics' highly specialized staff is assigned to moderate focus group sessions or perform in-depth, subject-specific interviews. Since our professional staff are quite knowledgeable about issues surrounding the transportation industry, this expertise is a tremendous infrastructure in this type of data collection effort. Our qualitative research efforts are conducted with the

assistance of specialty firms that provide local recruiting functions and suitable research and viewing facilities.

Advanced Marketing Research and Analytical Techniques – To augment our basic survey services, Cambridge Systematics provides a wide range of analytical marketing research techniques to address the complex information needs of our clients. Through an extensive evaluation of clients' specific needs, our research establishes a framework for reducing the risk involved in making costly decisions. Our research services include: new product and service design; pricing strategies; market segmentation; database marketing; market structure and opportunities; customer loyalty and satisfaction; and brand value and equity.

A number of these research services are cited below in more detail:

- **Market Segmentation –** To help our clients successfully target the right products and services to the right customers, Cambridge Systematics performs customized, needs-based market segmentation studies. Employing our comprehensive Unified Segmentation System, we are able to incorporate variables such as attitudes, benefits, needs, product and service usage, and demographics in our system to partition customers into distinct segments based on their definable needs. With this approach, existing and new customers can be classified into unique segments with a very high degree of accuracy.

- **Customer Choice Modeling –** To describe the way in which customers make decisions in the marketplace, Cambridge Systematics simulates the decision-making process using discrete choice models. The methodology uses data collected on respondents' revealed- or stated-preferences and tradeoffs to predict the choices customers would make when presented with a set of competing products and services. Specific applications of our customer choice model include product and service design; packaging; strategic pricing; willingness to pay; and customer loyalty and retention.

- **Market Simulation and Forecasting –** To simulate market response of alternative product and service designs, Cambridge Systematics develops customized simulation tools. Demand estimates for products and services from discrete choice models are incorporated into a PC-based market simulation program that allows the user to test "what-if" scenarios of various product and service offerings. Specific applications of this tool include: optimal product and service design; optimal pricing and packaging strategies; target marketing; and market demand and revenue forecasts.

- **Database Marketing –** To increase the effectiveness of direct marketing activities, Cambridge Systematics helps clients extract as much information as possible from their customer and prospect databases. We develop and apply analytical marketing models to maximize the profitability of solicitations by reducing costs, improving response, and identifying new opportunities for cross-selling.

SIN 874-7 – Integrated Business Program Support Services

Cambridge Systematics has extensive experience in infrastructure management for public sector agencies such as the American Association of State Highway and Transportation Officials (AASHTO) and state DOTS. These initiatives require transportation agencies to implement projects in four separate but related areas: policy goals and objectives, planning and programming, program delivery, and information technology. Therefore, the success of these efforts is dependent on the agency's ability to integrate a set of projects that reaches across departments and across disciplines (e.g., planning, engineering, maintenance, accounting, systems management, etc.). Cambridge Systematics works with clients to develop comprehensive infrastructure management plans and ensure that various business improvement initiatives are complementary to each other and performed in a logical sequence. As a MOBIS vendor, Cambridge Systematics will be positioned to assist public sector agencies with their efforts to improve program integration and project management services.

Cambridge Systematics has also completed several project aimed specifically at improving program delivery and project management activities within transportation agencies. For example, for the Massachusetts Port Authority (Massport), Cambridge Systematics provided an analysis of Massport's approach to the delivery of the Logan 2000 Project, a $1.2 billion modernization of Logan Airport. The analysis looked at program management issues, including the organization structure, processes, contractual arrangements, and infrastructure and benchmarking the project to other similar mega projects. For NCHRP, Cambridge Systematics prepared a synthesis report on the current state-of-the-practice for capital budgeting and capital program management by transportation agencies. Approaches to meeting Intermodal Surface Transportation Efficiency Act (ISTEA) requirements, use of management systems and other quantitative tools, and cash flow management and financing techniques were addressed. For the New Jersey DOT, Cambridge Systematics worked to develop organizational, process, and management tool improvements in order to deliver capital projects more cost-effectively and expeditiously. As part of this project, a benchmarking analysis of other state DOTs and transportation agencies was conducted to measure New Jersey DOT's performance relative to like organizations. Cambridge Systematics designed a project management system within the Vermont Agency of Transportation (VTrans) that helped to fulfill the agency's objective of improved communication, cooperation, and teamwork. The system resulted in improvements to project development timetables and end product quality.

We currently are finishing a national study to synthesize current practice in infrastructure management, develop a conceptual infrastructure management approach, and recommend a prioritized research program. We are about to begin the final phase of this project, which entails the development of a first-generation Infrastructure Management Guide for United States transportation agencies. This guide will define the concepts and a methodology by which agencies can evaluate their current infrastructure management practice, identify areas for change, develop a comprehensive plan for improvement, and track progress toward defined targets.

We also have recently completed three infrastructure management plans. For the Pennsylvania DOT, Cambridge Systematics developed a vision and implementation plan for the integration of all infrastructure management activities within the agency. This project examined existing organizational, information technology, and process-related elements. For the Colorado DOT, Cambridge Systematics formulated a departmental plan to enhance the current infrastructure management process, identified additional elements needed, and laid out a more systematic, strategic approach to both infrastructure management and the Department's need to satisfy the infrastructure valuation and reporting requirements of GASB Statement 34. For VTrans, Cambridge Systematics performed an organizational review, defined a vision of infrastructure management at VTrans, and developed an implementation plan to achieve this vision. We also are currently conducting a project for the Arizona DOT to develop a transportation infrastructure management system. This project encompasses work in business process and organizational review, management system and data integration, and responses to GASB 34 standards.

In addition to this work on infrastructure management at the state level, Cambridge Systematics also has experience with infrastructure management strategies at the major facility level. Currently, we are helping the Utah DOT implement an infrastructure management program for 17 miles of the newly reconstructed I-15 corridor.

Price Information

Pricing Detail, Option Period 2

SIN(s)		Labor Category	Hourly Rate
874-1	874-7	Analyst – Senior III	$ 221.69
874-1	874-7	Analyst – Senior II	$ 195.53
874-1	874-7	Analyst – Senior I	$ 177.36
874-1	874-7	Analyst – Mid III	$ 157.74
874-1	874-7	Analyst – Mid II	$ 145.00
874-1	874-7	Analyst – Mid I	$ 144.64
874-1	874-7	Analyst – Junior II	$ 128.68
874-1	874-7	Analyst – Junior I	$ 111.72
874-1	874-7	Senior Technical Expert II	$ 423.64
874-1	874-7	Senior Technical Expert I	$ 283.40
874-1	874-7	Program Manager	$ 278.13
874-1	874-7	Economist – Senior	$ 150.47
874-1	874-7	Economist – Mid	$ 132.92
874-1	874-7	GIS Specialist II	$ 167.58
874-1	874-7	GIS Specialist I	$ 132.62
874-1	874-7	GIS Support	$ 99.75
874-1	874-7	Graphic Artist II	$ 113.72
874-1	874-7	Graphic Artist I	$ 93.53
874-1	874-7	Production Specialist	$ 103.74
874-1	874-7	Project Assistant II	$ 90.96
874-1	874-7	Project Assistant I	$ 71.18
874-1	874-7	QA/QC Engineer	$ 186.77
874-1	874-7	Software Engineer – Senior II	$ 197.50
874-1	874-7	Software Engineer – Senior I	$ 169.89
874-1	874-7	Software Engineer – Mid II	$ 158.57
874-1	874-7	Software Engineer – Mid I	$ 145.81
874-1	874-7	Software Engineer – Junior III	$ 157.61
874-1	874-7	Software Engineer – Junior II	$ 127.68
874-1	874-7	Software Support	$ 105.00

SIN(s)		Labor Category	Hourly Rate
874-1	874-7	System Architect	$ 225.00
874-1	874-7	Systems Analyst – Senior III	$ 282.57
874-1	874-7	Systems Analyst – Senior II	$ 252.11
874-1	874-7	Systems Analyst – Senior I	$ 233.67
874-1	874-7	Systems Analyst – Mid II	$ 154.71
874-1	874-7	Systems Analyst – Mid I	$ 135.04
874-1	874-7	Systems Analyst – Junior I	$ 114.69
874-1	874-7	Market Researcher – Senior II	$ 272.32
874-1	874-7	Market Researcher – Senior I	$ 247.39
874-1	874-7	Market Researcher – Mid III	$ 197.92
874-1	874-7	Market Researcher – Mid II	$ 136.67
874-1	874-7	Market Researcher – Mid I	$ 127.48
874-1	874-7	Market Researcher Junior	$ 112.48

Labor Category Descriptions and Requirements

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Analyst – Senior III	Capable of performing a variety of high-level transportation analytic tasks, independently. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; evaluating impacts of recommendations using applicable tools; and assisting in or leading project management, project administration, client support, public outreach/presentations, and project documentation. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 20 years Masters – 19 years Ph.D. – 18 years
Analyst – Senior II	Capable of performing a variety of transportation analytic tasks, independently. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; evaluating impacts of recommendations using applicable tools; and assisting in or leading project management, project administration, client support, public outreach/ presentations, and project documentation. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 15 years Masters – 14 years Ph.D. – 13 years
Analyst – Senior I	Capable of performing a variety of transportation analytic tasks, either independently or under supervision. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; evaluating impacts of recommendations using applicable tools; and assisting in or leading project management, project administration, client support, public outreach/presentations, and project documentation. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 13 years Masters – 12 years Ph.D. – 11 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Analyst – Mid III	Capable of performing a variety of transportation analytic tasks, either independently or under supervision. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; evaluating impacts of recommendations using applicable tools; and providing Tier 1 assistance in project management, project administration, client support, public outreach/ presentations, and project documentation. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 11 years Masters – 10 years Ph.D. – 9 years
Analyst – Mid II	Higher level analytical and technical skills. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; evaluating impacts of recommendations using applicable tools; and providing Tier 1 assistance in project management, project administration, client support, public outreach/ presentations, and project documentation. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 9 years Masters – 8 years Ph.D. – 7 years
Analyst – Mid I	Strong level analytical and technical skills. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; evaluating impacts of recommendations using applicable tools; and providing Tier 1 assistance in project management, project administration, client support, public outreach/presentations, and project documentation. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 7 years Masters – 6 years Ph.D. – 5 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Analyst – Junior II	Capable of providing Level 2 support and problem analysis. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; and evaluating impacts of recommendations using applicable tools. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 5 years Masters – 4 years Ph.D. – 3 years
Analyst – Junior I	Capable of providing Level 1 support and problem analysis. Responsibilities may include collecting quantitative and qualitative data from public industry sources; performing quantitative and qualitative analysis of data; developing recommendations for clients; and evaluating impacts of recommendations using applicable tools. Tasks may include using spreadsheets and database applications to develop models and other analyses; using statistical analysis software to perform complex statistical analyses; and using Internet search tools and resources to find data and information on transportation and other industry areas. Minimum Education: Bachelor's degree.	Bachelors – 0 year
Senior Technical Expert II	Provides senior-level management and oversight of consulting activities in his/her particular area of expertise. Oversees development, maintenance, and delivery of technologies and services to clients. Has strong analytical capabilities and possess demonstrated knowledge in designated field or discipline. Possesses significant experience providing solutions to an organization's challenges through the application of knowledge gained through similar prior engagements. May support complex analyses and technical modeling. Minimum Education: Master's degree.	Masters – 25 years Ph.D. – 24 years
Senior Technical Expert I	Provides senior-level management and oversight of consulting activities in his/her particular area of expertise. Oversees development, maintenance, and delivery of technologies and services to clients. Has strong analytical capabilities and is considered an expert in his/her particular area of expertise. May support complex analyses and technical modeling. Minimum Education: Bachelor's degree.	Bachelors – 20 years Masters – 19 years Ph.D. – 18 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Program Manager	May manage multiple consultants, task-order projects, and large, multidisciplinary projects. Responsibilities may include developing plans, guidelines, and performance specs; establishing project sequencing for financing/ completion; and overseeing development, maintenance, and delivery of technologies and services to clients. Works closely with client and consultant team. Is familiar with documentation and project quality control. Understands the business and how projects are sequenced. Tasks may include working with project management software to establish, track, and complete project schedules and deliverables; utilizing written and verbal communication protocols to keep clients and project teams informed on project status; and employing technical knowledge of industry content sufficient to manage large-scale projects. Minimum Education: Bachelor's degree.	Bachelors – 15 years Masters – 14 years Ph.D. – 13 years
Economist – Senior	Responsible for development and maintenance of regional economic and freight/commodity flow databases, and econometric and input/output models. Duties include managing projects, internal teamwork assignments, client contact, and contract administration. Has practical experience in applied economics and economic development, preferably as applied to transportation and logistics. Minimum Education: Bachelor's degree.	Bachelors – 15 years Masters – 14 years Ph.D. – 13 years
Economist – Mid	Responsible for development and maintenance of economic databases, and econometric and input/output models. Duties include managing projects, internal teamwork assignments, client contact, and contract administration. Has practical experience in applied economics and economic development. Minimum Education: Bachelor's degree.	Bachelors – 10 years Masters – 9 years Ph.D. – 8 years
GIS Specialist II	Responsible for providing GIS support for cartographic and other projects. Support can include map production, development and Q/A of transportation spatial databases, spatial queries, spatial analysis tasks, and application development. May develop GIS products for a variety of types of clients. May work with tools such as Arc/Info or PC Arc/Info, ArcView, UNIX, and Windows; also may operate MapInfo, Atlas*GIS, TransCAD, or similar tools. Minimum Education: Bachelor's degree.	Bachelors – 15 years Masters – 14 years Ph.D. – 13 years
GIS Specialist I	Responsible for providing GIS support for cartographic and other projects. Support can include map production, development and Q/A of transportation spatial databases, spatial queries, spatial analysis tasks, and application development. May develop GIS products for a variety of types of clients. May work with tools such as Arc/Info or PC Arc/Info, ArcView, UNIX, and Windows; also may operate MapInfo, Atlas*GIS, TransCAD, or similar tools. Minimum Education: Bachelor's degree.	Bachelors – 8 years Masters – 7 years Ph.D. – 6 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
GIS Support	Responsibilities include map production, development and Q/A of transportation spatial databases, spatial queries, spatial analysis tasks, and application development. Works with tools such as ArcView and Arc/Info; conducts programming with tools such as Avenue script; and works with relational databases, Windows NT/98, MS Office products, or similar tools. Minimum Education: Bachelor's degree.	Bachelors – 0 year
Graphic Artist II	Produces business graphics in Microsoft PowerPoint, Adobe Photoshop, Adobe Illustrator, QuarkXpress, or similar graphic design tools, including web design tools. Possesses superior page layout abilities and good keyboarding skills. Works with Macintosh and/or Windows operating systems. Minimum Education: High School Degree.	High school – 10 years Bachelors – 8 years
Graphic Artist I	Produces business graphics in Microsoft PowerPoint, Adobe Photoshop, Adobe Illustrator, QuarkXpress, or similar graphic design tools, including web design tools. Possesses superior page layout abilities and good keyboarding skills. Works with Macintosh and/or Windows operating systems. Minimum Education: High School Degree.	High school – 6 years Bachelors – 4 years
Production Specialist	Performs word processing duties, including overall production of reports and proposals and other company documents. Coordinates with graphic design staff to incorporate graphical items into reports and documents. Works with MS Office products, including Word, Excel, and PowerPoint. Minimum Education: High School Degree.	High school – 5 years Bachelors – 4 years
Project Assistant II	Responsibilities may include database maintenance, tracking and management of invoices, coordination and collection of staff hours and budgets, meeting and travel arrangements, and general project support. Duties require problem solving, communication, organizational, and decision-making skills, and handling multiple priorities. Minimum Education: Associates Degree.	Associate – 5 years Bachelors – 4 years
Project Assistant I	Responsibilities may include database maintenance, tracking and management of invoices, coordination and collection of staff hours and budgets, meeting and travel arrangements, and general project support. Duties require problem solving, communication, organizational, and decision-making skills, and handling multiple priorities. Minimum Education: Associates Degree.	Associate – 1 year Bachelors – 0 year

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
QA/QC Engineer	Takes the lead in designing and implementing QA/QC procedures for a diverse set of software development projects. Responsibilities include requirements management; development of test plans, cases, and scripts; oversight of software testing, defect tracking, and resolution; and management of customer acceptance testing. Maintains a solid understanding of the software development life cycle. Has experience with a multitude of languages and platforms. Can work with tools such as Rational Requisite Pro and Team Test. Minimum Education: Bachelor's degree.	Bachelors – 15 years Masters – 14 years Ph.D. – 13 years
Software Engineer – Senior II	Capable of performing a variety of software tasks independently. Develops client/server decision-support applications using state-of-the-art tools; reengineers and automates management processes. Key components of projects conducted can include user interfaces, relational databases, operations research techniques, geographic referencing systems, and process development. Possesses considerable software development experience. Capable of and comfortable with developing applications using multiple languages/platforms. Minimum Education: Bachelor's degree.	Bachelors – 20 years Masters – 19 years Ph.D. – 18 years
Software Engineer – Senior I	Capable of performing a variety of software tasks independently. Develops client/server decision-support applications using state-of-the-art tools; reengineers and automates management processes. Key components of projects conducted can include user interfaces, relational databases, operations research techniques, geographic referencing systems, and process development. Possesses considerable software development experience. Capable of and comfortable with developing applications using multiple languages/platforms. Minimum Education: Bachelor's degree.	Bachelors – 13 years Masters – 12 years Ph.D. – 11 years
Software Engineer – Mid II	Capable of performing a variety of software tasks, either independently or under supervision. Develops client/server decision-support applications using state-of-the-art tools; reengineers and automates management processes. Key components of projects conducted can include user interfaces, relational databases, operations research techniques, geographic referencing systems, and process development. Possesses considerable software development experience. Capable of and comfortable with developing applications using multiple languages/ platforms. Minimum Education: Bachelor's degree.	Bachelors – 10 years Masters – 9 years Ph.D. – 8 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Software Engineer – Mid I	Capable of performing a variety of software tasks, either independently or under supervision. Develops client/ server decision-support applications using state-of-the-art tools; reengineers and automates management processes. Key components of projects conducted can include user interfaces, relational databases, operations research techniques, geographic referencing systems, and process development. Possesses considerable software development experience. Capable of and comfortable with developing applications using multiple languages/ platforms. Minimum Education: Bachelor's degree.	Bachelors – 8 years Masters – 7 years Ph.D. – 6 years
Software Engineer – Junior III	Maintains in depth knowledge and understanding of current and new software applications. Provides on call support for software applications, including performing system upgrades and maintenance. May provide end-user training and support. Works with product developers to design appropriate training materials and methods for end users. Provides first-level support to application use questions. May interface with staff and/or clients to determine needs and work out solutions. Is familiar with commercial software packages; a variety of operating systems; and other similar commercial packages. Minimum Education: Bachelor's degree.	Bachelors – 4 years Masters – 3 years Ph.D. – 2 years
Software Engineer – Junior II	Maintains an understanding of current and new software applications. Provides on-call support for software applications, including performing system upgrades and maintenance. May provide support to end-user training. Works with product developers to design appropriate training materials and methods for end users. Provides first-level support to application use questions. May interface with staff and/or clients to determine needs and work out solutions. Is familiar with commercial software packages; a variety of operating systems; and other similar commercial packages. Minimum Education: Bachelor's degree.	Bachelors – 0 year
Software Support	Provides on call support for software applications, including performing system upgrades and maintenance. Provides support to application use questions. May interface with staff and/or clients to determine needs and work out solutions. Is familiar with commercial software packages; a variety of operating systems; and other similar commercial packages. Minimum Education: Bachelor's degree.	Bachelors – 0 year

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
System Architect	Defines and reviews requirements for systems and determines their impact on imagery tasking and collection management processes. Represents clients' interests in development forums. Integrates new deliveries into the operational environment, including coordinating changes among several operational organizations and training operational staff on the changes. Creates and presents technical briefings. Minimum Education: Master's degree.	Masters – 25 years Ph.D. – 24 years
Systems Analyst – Senior III	Performs modeling, simulation, and analysis for clients. Formulates and defines systems scope and objectives based on user needs. Devises or modifies procedures to solve complex problems, considering computer equipment capacity and limitations, operating time, and form of desired results. May prepare detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation as necessary. May use CASE tools. Responsible for task coordination and management and contributes recognized functional expertise to client deliverables. Minimum Education: Master's degree.	Masters – 22 years Ph.D. – 21 years
Systems Analyst – Senior II	Performs modeling, simulation, and analysis for clients. Formulates and defines systems scope and objectives based on user needs. Devises or modifies procedures to solve complex problems, considering computer equipment capacity and limitations, operating time, and form of desired results. May prepare detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation as necessary. May use CASE tools. Responsible for task coordination and management and contributes recognized functional expertise to client deliverables. Minimum Education: Master's degree.	Masters – 18 years Ph.D. – 17 years
Systems Analyst – Senior I	Performs modeling, simulation, and analysis for clients. Formulates and defines systems scope and objectives based on user needs. Devises or modifies procedures to solve complex problems, considering computer equipment capacity and limitations, operating time, and form of desired results. May prepare detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation as necessary. May use CASE tools. Responsible for task coordination and management and contributes recognized functional expertise to client deliverables. Minimum Education: Master's degree.	Masters – 15 years Ph.D. – 14 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Systems Analyst – Mid II	Performs modeling, simulation, and analysis for clients. Formulates and defines systems scope and objectives based on user needs. Devises or modifies procedures to solve complex problems, considering computer equipment capacity and limitations, operating time, and form of desired results. May prepare detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation as necessary. May use CASE tools. Minimum Education: Master's degree.	Masters – 9 years Ph.D. – 8 years
Systems Analyst – Mid I	Performs modeling, simulation, and analysis for clients. Formulates and defines systems scope and objectives based on user needs. Devises or modifies procedures to solve complex problems, considering computer equipment capacity and limitations, operating time, and form of desired results. May prepare detailed specifications from which programs will be written. Analyzes and revises existing system logic difficulties and documentation as necessary. May use CASE tools. Minimum Education: Bachelor's degree.	Bachelors – 5 years Masters – 4 years Ph.D. – 3 years
Systems Analyst – Junior I	Performs modeling, simulation, and analysis for clients. Formulates and defines systems scope and objectives based on user needs. Devises or modifies procedures to solve complex problems, considering computer equipment capacity and limitations, operating time, and form of desired results. Analyzes and revises existing system logic difficulties and documentation as necessary. Responsible for task coordination and management and contributes recognized functional expertise to client deliverables. Minimum Education: Bachelor's degree.	Bachelors – 0 year
Market Researcher – Senior II	Responsible for developing accurate and credible forecasts; development and design of surveys, including the design and use of stated- and revealed-preference surveys and the development of sampling plans; and analysis of transportation systems and facilities. May be involved in any stage of the estimation, calibration, and application of models. Duties may include the collection of data for travel studies; designing and conducting surveys; and using survey results and other data to develop, validate, and apply disaggregate travel demand models that capture travel patterns and traveler behavior. Has knowledge of transportation modeling techniques and familiarity with statistical analysis packages such as SAS, and travel forecasting software including EMME/2, TRANPLAN, or TransCAD. Minimum Education: Master's degree.	Masters – 25 years Ph.D. – 24 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Market Researcher – Senior I	Responsible for developing accurate and credible forecasts; development and design of surveys, including the design and use of stated- and revealed-preference surveys and the development of sampling plans; and analysis of transportation systems and facilities. May be involved in any stage of the estimation, calibration, and application of models. Duties may include the collection of data for travel studies; designing and conducting surveys; and using survey results and other data to develop, validate, and apply disaggregate travel demand models that capture travel patterns and traveler behavior. Has knowledge of transportation modeling techniques and familiarity with statistical analysis packages such as SAS, and travel forecasting software including EMME/2, TRANPLAN, or TransCAD. Minimum Education: Bachelor's degree.	Bachelors – 20 years Masters – 19 years Ph.D. – 18 years
Market Researcher – Mid III	Responsible for developing accurate and credible forecasts; development and design of surveys, including the design and use of stated- and revealed-preference surveys and the development of sampling plans; and analysis of transportation systems and facilities. May be involved in any stage of the estimation, calibration, and application of models. Duties may include the collection of data for travel studies; designing and conducting surveys; and using survey results and other data to develop, validate, and apply disaggregate travel demand models that capture travel patterns and traveler behavior. Has knowledge of transportation modeling techniques and familiarity with statistical analysis packages such as SAS, and travel forecasting software including EMME/2, TRANPLAN, or TransCAD. Minimum Education: Bachelor's degree.	Bachelors – 12 years Masters – 11 years Ph.D. – 10 years
Market Researcher – Mid II	Responsible for developing accurate and credible forecasts; development and design of surveys, including the design and use of stated- and revealed-preference surveys and the development of sampling plans; and analysis of transportation systems and facilities. May be involved in any stage of the estimation, calibration, and application of models. Duties may include the collection of data for travel studies; designing and conducting surveys; and using survey results and other data to develop, validate, and apply disaggregate travel demand models that capture travel patterns and traveler behavior. Has knowledge of transportation modeling techniques and familiarity with statistical analysis packages such as SAS, and travel forecasting software including EMME/2, TRANPLAN, or TransCAD. Minimum Education: Bachelor's degree.	Bachelors – 8 years Masters – 7 years Ph.D. – 6 years

Labor Category	Position Description & Typical Education/Certification (Note: Master's degree adds 1 year's experience; Ph.D. adds 2 years of experience.)	Minimum Years of Experience
Market Researcher – Mid I	Responsible for developing accurate and credible forecasts; development and design of surveys, including the design and use of stated- and revealed-preference surveys and the development of sampling plans; and analysis of transportation systems and facilities. May be involved in any stage of the estimation, calibration, and application of models. Duties may include the collection of data for travel studies; designing and conducting surveys; and using survey results and other data to develop, validate, and apply disaggregate travel demand models that capture travel patterns and traveler behavior. Has knowledge of transportation modeling techniques and familiarity with statistical analysis packages such as SAS, and travel forecasting software including EMME/2, TRANPLAN, or TransCAD. Minimum Education: Bachelor's degree.	Bachelors – 5 years Masters – 4 years Ph.D. – 3 years
Market Researcher Junior	Responsible for developing accurate and credible forecasts; development and design of surveys, including the design and use of stated- and revealed-preference surveys and the development of sampling plans; and analysis of transportation systems and facilities. May be involved in any stage of the estimation, calibration, and application of models. Duties may include the collection of data for travel studies; designing and conducting surveys; and assisting in using survey results and other data to develop, validate, and apply disaggregate travel demand models that capture travel patterns and traveler behavior. Has knowledge of transportation modeling techniques and familiarity with statistical analysis packages such as SAS, and travel forecasting software. Minimum Education: Bachelor's degree.	Bachelors – 2 years