



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

**State of West Virginia
Solicitation Response**

Proc Folder: 1070971
Solicitation Description: Seat Belt Survey Sites Selection
Proc Type: Agency Contract - Fixed Amt

Solicitation Closes	Solicitation Response	Version
2022-08-09 14:30	SR 0802 ESR08082200000000592	1

VENDOR
000000100775
CAMBRIDGE SYSTEMATICS INC

Solicitation Number: ARFQ 0802 DMV2300000001
Total Bid: 48551
Response Date: 2022-08-09
Response Time: 13:04:15
Comments:

FOR INFORMATION CONTACT THE BUYER
Dusty J Smith
304-414-6859
dusty.j.smith@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Observational Seat Belt Survey Sites Selection	1.00000	EA	48551.000000	48551.00

Comm Code	Manufacturer	Specification	Model #
80141512			

Commodity Line Comments: Unite Price is our total price for services rendered. A breakdown of the bid proposal is included in our attachment on section 2.0 Cost proposal.

Extended Description:

Observational Seat Belt Survey Sites Selection.

Seatbelt Service Sites Selection

ARFQ-0802-DMV2300000001-2

technical proposal

submitted to

State of West Virginia

submitted by

Cambridge Systematics, Inc.

technical proposal

Seatbelt Service Sites Selection

ARFQ-0802-DMV2300000001-2

submitted to

State of West Virginia

submitted by

Cambridge Systematics, Inc.
3 Bethesda Metro Center, Suite 1200
Bethesda, MD 20814

date

August 09, 2022

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Executive Summary



Cambridge Systematics (CS) has over 9 years experience working directly with the WV Governors Highway Safety Program (GHSP) on various projects, including the preparation of the annual Highway Safety Plan (HSP) and the analysis of the annual observational Seat Belt Survey as required by the National Highway Traffic Safety Administration (NHTSA). CS has a thorough understanding of the WV GHSP

observational seat belt survey and how it helps to inform the development, implementation, and evaluation of its occupant program from our experience working with GHSP to develop their annual HSP. Cambridge Systematics works with other state Highway Safety Offices across the country to assist them in a variety of similar tasks. Cambridge Systematics has extensive knowledge of NHTSAs grant compliance requirements, expertise in the development of Traffic Records Safety Strategic Plans and Traffic Records program management. Additionally, two members of the Cambridge Systematics team are former administrators of highway safety offices and come with the unique understanding of the federal requirements. To complete a NHTSA approved revised seat belt survey within the required timeline for GHSP, we believe our experience and proven expertise is essential.

As aforementioned, CS is currently under contract to conduct the analysis based on our collection of the observational seat belt surveys that has to occur each Federal Fiscal Year (FFY). We believe this is important as this analysis goes hand in hand with the selection of where the survey site locations occur. By having CS involved in the selection of the survey sites as well as the analysis of the data GHSP staff collect at the survey sites it creates a seamless and efficient process. Furthermore, CS has proven their ability to successfully abide by the complex Federal requirements and helped the WV GHSP achieve approval from NHTSA in 2018, the last time survey site-reselection needed to occur. An important part of Federal § 1340.8 is that “the re-selection will be reviewed and approved by a survey statistician, i.e., a person with knowledge of the design of probability-based multi-stage samples, statistical estimators from such designs, and variance estimation of such estimators.” As part of the Federal review process, NHTSA reviews the qualifications of the statistician submitting the survey site re-selection, of which CS proposed personnel were approved in 2018 and would utilize this same personnel again.

Cambridge Systematics, Inc. kindly requests the State of West Virginia review and consider the exceptions our team has outlined below:

Exceptions

1. Section 6 of the Specifications includes a statement reading, “Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within twenty working days after receiving a purchase order or notice to proceed.” This 20-working day timeline is inconsistent with the timeline in the scope of work contained in Section 3 of the Specifications. Please confirm that the above quoted statement from Section 6 is an error. We will instead follow the timeline contained in Section 3 of the Specifications.
2. Please remove the warranty clause in Section 27 of the General Terms and Conditions. Such warranty clause is more appropriate for a procurement of goods/products rather than professional services. It is not possible to warrant or guarantee a seat belt survey site selection.

I am authorized to negotiate and execute a contract on CS' behalf. If you have any questions about our proposal or require any additional information about CS, please contact our proposed Project Manager, Ryan Klitzsch, at rklitzsch@camsys.com. You also can contact me at bwright@camsys.com. During these times of hybrid work, we can both be reached through the Medford Office at (781) 539-6700.

Sincerely,

CAMBRIDGE SYSTEMATICS, INC.

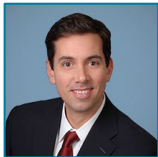
A handwritten signature in black ink, appearing to read "Brad W. Wright".

Brad W. Wright
President & CEO

1.0 Key Personnel

CS understands that the success of the State of West Virginia's Seat Belt Survey Sites Selection project depends on the skill and commitment of the people working together, including the State of West Virginia's Division of Motor Vehicles, state partners, and our team's staff.

Informed by State of West Virginia's Seat Belt Survey Sites Selection's particular needs as outlined in the request for proposals (ARFQ), we have selected a team based on technical expertise, state knowledge, and an understanding of stakeholder relationships. This team will follow the project from the earliest stages of the bidding process through recommendations and final project delivery.



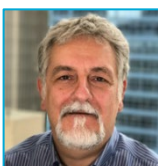
Ryan V. Klitzsch has more than 15 years of experience in transportation safety planning, including eight years serving as the Director of Traffic Safety at the Indiana Highway Safety Office. As a Senior Associate at CS, he has leveraged his practical highway safety office expertise to serve as a Project Manager for a number of complex projects in data and performance management with states to develop and implement Strategic Highway Safety Plans, Highway Safety Plans, Traffic Records Strategic Plans, seat belt surveys analysis, seat belt survey site reselection, bicycle and pedestrian plans for nearly a dozen states, and metropolitan planning organizations.



Cory Hopwood, P.E., RSP21 is a Traffic Safety Engineer at Cambridge Systematics (CS) with over 10 years of experience in transportation safety and planning. He is experienced in managing a variety of teams and projects on transportation safety plans, including Strategic Highway Safety Plans (SHSP) and Local Road Safety Plans (LRSP), supported by the Safe System approach. Cory is adept at utilizing safety data and predictive analysis to guide these planning efforts towards outcomes with quantifiable benefits that support safety investments and decisions. These outcomes are supported by strategies and implementation plans he developed for Vision Zero and Toward Zero Deaths initiatives, as well as Highway Safety Improvement Program (HSIP) Implementation Plans, Highway Safety Plans (HSP), Long Range Transportation Plans, and Highway-Rail Grade Crossing Safety Action Plans.



Moggan 'Megan' Motamed, Ph.D. is an Associate at Cambridge Systematics, Inc. (CS) with five years of consulting experience in data-driven transportation planning for freight, safety, operations, and transit clients. She has experience in research design, applied statistical modeling, machine learning, decision-making tool/dashboard development, and financial analysis. Megan is proficient in an array of analytical tools, and has developed ArcPy toolboxes, Geographic Information System (GIS) and data visualization products, spreadsheet tools, and interactive analytic tools based on the Microsoft Power Business Intelligence (BI) and Python platforms for clients across the U.S. Megan assisted in the analysis of West Virginia's 2021 seat belt survey analysis.



Kimon Proussaloglou, PhD is leading the firm's activities in travel demand modeling and market research and serves as Director of the Chicago Office. He has over 25 years of experience working with FHWA, State DOTs, regional planning agencies, public transit agencies and private sector transportation companies. He has designed customized surveys, integrated, and analyzed sources of data, and applied multivariate statistical techniques to understand traveler patterns and develop econometric models of traveler choice. For West Virginia's 2018 seat belt survey site reselection Kimon was approved and served in the role of the approved survey statistician per Federal § 1340.8 requirements.



Jingjing (JJ) Zang brings expertise in statistical analysis, data transportation engineering analytics, data visualization, and travel demand model estimation, calibration, and validation. She has been involved in multiple projects using Big Data to generate cutting-edge and practical solutions to support transit market analysis and travel demand modeling. She also has served as the designated technical assistance for the Census Transportation Planning Products (CTPP) program, and has experience in statistical analysis and application of CTPP, National Household Travel Survey, and Census data products. JJ assisted in the analysis and selection of West Virginia's 2018 seat belt survey site reselection.

2.0 Cost Proposal

The following documents are attached to this section:

1. Exhibit A—Cost Sheet.
2. Table 1—Individual Cost Breakdown for: 3.1.1 Observational Seat Belt Survey Sites Selection.

2.1 Project Schedule

Our team is committed to meet the timeline established in the ARFQ assuming a start date of October 1st, 2022 and a Submission date of Final Compliance to NHTSA on February 10th, 2023, with a scheduled training to the Current Seatbelt Data Collectors by May 1st, 2023.

Figure 2.1 Project Schedule

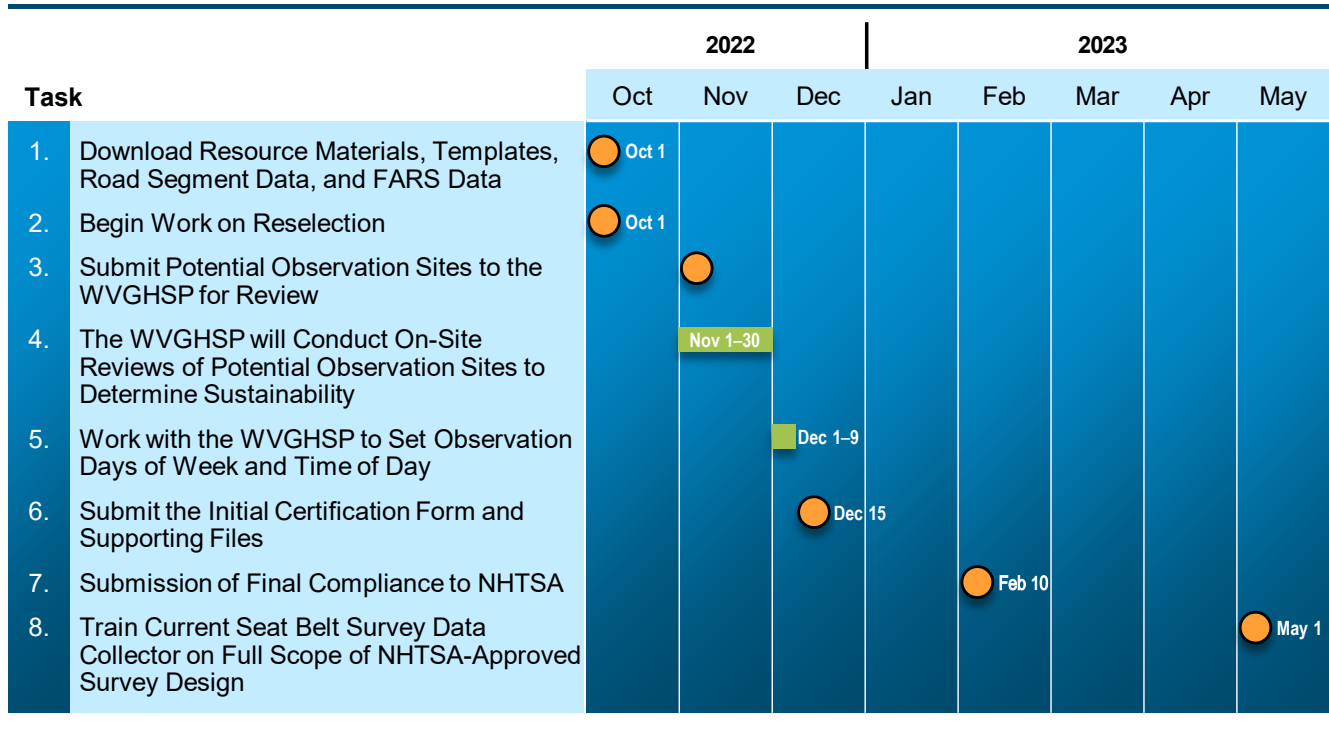


Exhibit A - Cost Sheet

Cost information below as detailed in the Request for Quotation.

GRAND TOTAL BREAKDOWN:

Vendor must provide the individual cost breakdown for the components listed below.

	Unit Cost	Unit of Measure	Estimated Quantity	Extended Cost
3.1.1 Observational Seat Belt Survey Sites Selection	\$48,551	Each	1	\$48,551

Total Bid Amount

\$48,551

**The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Table 1 Individual Cost Breakdown for: 3.1.1 Observational Seat Belt Survey Sites Selection

Name	Labor Category	Rate	Project Management and Reporting		Re-selection of Observational SB		Revised Survey or Training		Revised Survey App		Total	
			Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
Labor												
Ryan Klitzsch	Transportation Analyst	\$238.56	25	\$5,964	-	-	20	\$4,771	30	\$7,157	75	\$17,892
JingJing Zang	Transportation Analyst	\$224.59	-	-	25	\$5,615	-	-	-	-	25	\$5,615
Cory Hopwood	Transportation Analyst	\$199.24	-	-	8	\$1,594	-	-	-	-	8	\$1,594
Megan Motamed	Transportation Analyst	\$167.55	-	-	80	\$13,404	-	-	-	-	80	\$13,404
Kimon Proussaloglou	Transportation Analyst	\$436.41	-	-	15	\$6,546	-	-	-	-	15	\$6,546
Labor Total			25	\$5,964	128	\$27,159	20	\$4,771	30	\$7,157	203	\$45,051
Subcontractors												
IN3			-	-	-	-	-	-	35	\$3,500	35	\$3,500
Total Subcontractors			-	-	-	-	-	-	35	\$3,500	35	\$3,500
TOTAL PRICE			25	\$5,964	128	\$27,159	20	\$4,771	65	\$10,657	238	\$48,551

3.0 Copy of Insurance and Proposal Forms

The following documents are attached in the following pages:

1. Cambridge Systematics, Inc. Copy of Insurance.
2. Proposal Addendum Acknowledgment Form.
3. Proposal Designated Contact Form.

CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

<p>PRODUCER Starkweather & Shepley (WW) Insurance Corp. of MA PO Box 549 Providence, RI 02901-0549</p>	<p>CONTACT NAME: Annette Cho PHONE (A/C, No, Ext): 401-435-3600 FAX (A/C, No): 774-487-3165 E-MAIL ADDRESS: acho@starshep.com</p>
INSURER(S) AFFORDING COVERAGE NAIC #	
<p>INSURED Cambridge Systematics, Inc. 115 S. LaSalle St, Suite 2200 Chicago, IL 60603</p>	<p>INSURER A : Federal Insurance Company 20281 INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :</p>

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	COMMERCIAL GENERAL LIABILITY		Y	36019289	09/11/2021	09/11/2022	EACH OCCURRENCE \$1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR	DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000					
	GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	MED EXP (Any one person) \$10,000					
	OTHER:	PERSONAL & ADV INJURY \$1,000,000					
	AUTOMOBILE LIABILITY	COMBINED SINGLE LIMIT (Ea accident) \$					
	<input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						BODILY INJURY (Per person) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR						BODILY INJURY (Per accident) \$
	EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						PROPERTY DAMAGE (Per accident) \$
	DED <input type="checkbox"/> RETENTION \$						\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						E.L. EACH ACCIDENT \$
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N / A						E.L. DISEASE - EA EMPLOYEE \$
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: WV Seat Belt Survey Sites Selection Cost Proposal, Due on 8/9/22 at 2:30pm.
State of West Virginia (WV) is Additional Insured with respects to General Liability policy per written contract or agreement.

<p>CERTIFICATE HOLDER</p> <p style="text-align: center;">State of West Virginia (WV) 1900 Kanawha Blvd E, Bldg 5 Charleston, WV 25305</p>	<p>CANCELLATION</p> <p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</p> <p>AUTHORIZED REPRESENTATIVE</p> <p style="text-align: center;"></p>
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ADDENDUM ACKNOWLEDGEMENT FORM

SOLICITATION NO.:

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification. Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

- | | |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor’s representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Company


Authorized Signature

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Name, Title)

(Printed Name and Title)

(Address)

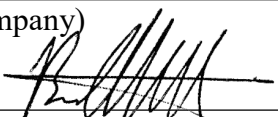
(Phone Number) / (Fax Number)

(E-mail address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

(Company)



(Authorized Signature) (Representative Name, Title)

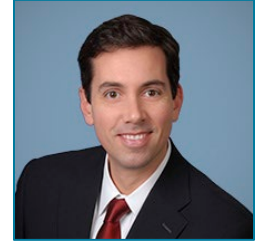
(Printed Name and Title of Authorized Representative)

(Date)

(Phone Number) (Fax Number)

Appendix A. Staff Résumés

Our proposed staff résumés with their qualifications and experience are attached to this appendix in the following pages.



Ryan V. Klitzsch

Senior Associate

Mr. Klitzsch has more than 15 years of experience in transportation safety planning, including eight years serving as the Director of Traffic Safety at the Indiana Highway Safety Office. As a Senior Associate of Cambridge Systematics, he has leveraged his practical highway safety office expertise to serve as a Project Manager for a number of complex projects in data and performance management with states to develop and implement Strategic Highway Safety Plans, Highway Safety Plans, Traffic Records Strategic Plans, seat belt surveys, bicycle and pedestrian plans for nearly a dozen states, and metropolitan planning organizations.

Relevant Experience

Behavioral Transportation Safety Planning. As Director of the Indiana Highway Safety Office, Mr. Klitzsch directed all phases of the State's Highway Safety Plan (HSP), and managed multidisciplinary teams that conducted problem identification and established performance measures to plan, implement, and evaluate various evidence-based behavioral traffic safety programs and initiatives. Mr. Klitzsch also was involved in the development, coordination, and revision of Indiana's seat belt survey design, Strategic Highway Safety Plan (SHSP) with State, local, metropolitan planning organizations (MPO), and Federal partners. During his tenure as Director of Indiana's Highway Safety Office, he Chaired the Traffic Records Coordinating Committee (TRCC), revised Indiana's crash reporting form to conform to the Model Minimum Uniform Crash Criteria (MMUCC) guidelines, and drove the state towards 100 percent electronic crash reporting.

West Virginia Seat Belt Survey. Mr. Klitzsch led a team that developed and designed the states seat belt survey site location for their annual observational surveys that complied with 23 CFR Section 1340. They survey site analysis was provided to NHTSA and approved which West Virginia has used the last five years to conduct their seat belt survey observations.

Occupant Protection Media Evaluation. Mr. Klitzsch developed an evaluation design to assess a new occupant protection campaign for the Kentucky Office of Highway Safety (KOHS), Local Heroes. The Local Heroes campaign is utilizing a community centered, multimedia campaign featuring local law enforcement in 10 counties with the lowest seat belt usage rate in the state.

Strategic Highway Safety Plans. Currently, Mr. Klitzsch is working with the Oregon and Indiana DOTs to establish partnerships across various stakeholders to address their needs and concerns in improving transportation safety. In this role, he analyzed crash records and performance measures across multiple plans to produce coordinated strategies, performance measures, outputs, outcomes, developed traffic data improvement strategies, and identified opportunities to enhance the communication of these strategies to local partners and citizens. Previously, Mr. Klitzsch has worked with the Louisiana Highway Safety Commission (LHSC) and the Louisiana Department of Transportation Development (DOTD) in the expansion and implementation of Louisiana's SHSP at the regional level. In this role, he has worked to coordinate the SHSP with the Highway Safety Plan. He also previously assisted in the development of Alaska's current SHSP.

Safe System approach. For the Governors Highway Safety Association (GHSA), Mr. Klitzsch developed a report to provide guidance, tools, and a framework to align behavioral safety with the Safe System approach to support local Vision Zero programs. As part of the project, CS conducted a literature review of the Safe System approach and worked with the GHSA to convene an expert panel of State Highway Safety Offices (SHSO), including California's, and other safety highway partners to obtain their insights on behavioral countermeasures and their alignment with the Safe System approach.

Practitioner Guidance on Safety Target-Setting Coordination. Mr. Klitzsch worked with the FHWA to develop a report (FHWA-SA-16-101) which identified best practices regarding safety target-setting coordination between the common performance measures found in the Highway Safety Improvement Program (HSIP) and the HSP. He facilitated workshops with six States to bring together representatives from the Highway Safety Office, DOT, and metropolitan planning organizations to help guide them towards coordinating their targets throughout their planning process.

Traffic Records Coordinating Committees (TRCC). Mr. Klitzsch currently is serving in a support role to Florida, West Virginia, and Alaska's TRCC and supported Colorado's for the last five years. He is assisting TRCC executive and committee meetings, reviewing and advising on crash form revisions, developing strategies for improving electronic crash reporting, updating the TRCC action plan, modernizing their Traffic Records Strategic Plan, revising crash reporting forms following MMUCC standards, developing evaluation tools as well as advising on potential policy considerations. Recently, he facilitated and drafted new Traffic Records Strategic Plans for Alaska, Colorado, and Oregon TRCCs.

Traffic Safety Instruction and Outreach. Mr. Klitzsch has served as an NHTSA assessor for State Traffic Records Assessments. He also developed training curriculum and has served as an instructor for Traffic Safety Institute (TSI) courses in Program Development, Law Enforcement Liaison Training, and served as faculty for GHSA's Executive Management Seminar. After the passage of MAP-21 reauthorization, Mr. Klitzsch was selected by NHTSA to revise the Grants Management Manual used as funding guidance by SHSOs.

State Highway Safety Plans. In addition to his experience while with the Indiana Highway Safety Office, Mr. Klitzsch has assisted the States of Alaska, Arizona, Louisiana, Rhode Island, and West Virginia in the planning and development of their Highway Safety Plans (HSP) for the National Highway Traffic Safety Administration (NHTSA). These plans laid out the foundation for addressing traffic safety issues by establishing performance measures across a number of emphasis areas.

Education

M.P.A., Public Affairs, Indiana University, 2009
Graduate Certification, Public Policy, Indiana University, 2007
B.A., Criminal Justice, University of Wisconsin-Eau Claire, 2000

Professional Registrations

Road Safety Professional 1, Transportation Professional Certification Board
Association of Transportation Safety Information Professionals (ATSIP), Board Member
Governor's Highway Safety Association (GHSA), Emeritus Member

Jingjing (JJ) Zang
Travel Demand Modeler



Ms. Zang brings expertise in statistical analysis, data transportation engineering analytics, data visualization, and travel demand model estimation, calibration, and validation. She has been involved in multiple projects using Big Data to generate cutting-edge and practical solutions to support transit market analysis and travel demand modeling. She also has served as the designated technical assistance for the Census Transportation Planning Products (CTPP) program, and has experience in statistical analysis and application of CTPP, National Household Travel Survey, and Census data products.

Relevant Experience

LA Metro NextGen Bus Study. Cambridge Systematics, Inc. (CS) is assisting the Los Angeles County Metropolitan Transportation Authority (LA Metro) to address the transforming landscape of transportation and travel demand within the County by restructuring the bus network into a comprehensive and intuitive system of high-quality and integrated transit services that are relevant, reflective of, and attractive to the diverse customer needs within the County. Ms. Zang has been involved in the demand analysis portion of the study; she has developed proper weighting methodology for Location-Based Services (LBS) samples using available survey and Census data, and conducted LBS data validation and travel behavior analysis based on the LBS data and survey-based data.

North County Transit District Transit Implementation Plan. For North County Transit District (NCTD), CS is conducting travel demand modeling, developing strategies to strike a balance between ridership and coverage, while ensuring transit is competitive with other modes, and supporting transit system design using LBS data. CS also will conduct a social media survey to help understand attitudes and travel patterns of nonriders. Ms. Zang is managing and leading all efforts on demand analysis and market research, overseeing technical analysis and providing support on quality control, and engaging in stakeholder outreach efforts.

Reimagine RTD Transit Restructuring Project. For the Denver Regional Transportation District (RTD), CS is conducting a systemwide analysis of travel in the region using LBS data, measuring the competitiveness of transit versus auto, and overlaying demand with demographic information to support equity analysis. Ms. Zang is providing support on project operation and delivery side, and she is heavily involved in technical analysis, development of key performance metrics, visualization, and stakeholder outreach.

MassDOT Bus Network Redesign. For the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA), CS is leading a team to redesign the Boston-area bus network to reliably and efficiently serve the largest number of current and future riders, while also addressing inequities in transit access throughout the region. The approach sets network-level goals and metrics, utilizes LBS data to understand the travel demand in the region, develops and evaluates network alternatives, and provides a comprehensive implementation and rollout strategy.

Ms. Zang led the efforts on analyzing and weighting the LBS device samples, and assisted with data validation efforts.

OCTA Onboard Bus Passenger Survey. For the Orange County Transportation Authority (OCTA), CS provided oversight, quality control, and data processing for a survey of 12,500 riders on 74 percent of the OCTA bus trips between 6:00 a.m. and 9:00 p.m. This included planning and reviewing the administration of the survey to attain statistically valid and representative geocoded information about system users that would allow ridership analysis, meet Federal requirements, and support the modeling of the bus system. CS calculated expansion factors to relate surveys to the ridership by route, direction, time of day, and boarding location. Ms. Zang created an interactive dashboard tool to visualize and assist with survey results analysis and validation.

LA Metro Geofencing Strategy for Hyperfocused Targeting Campaign. For LA Metro, CS is providing support for a hyperfocused targeting campaign, using a geofencing strategy developed based on LBS data. Ms. Zang has led the effort on defining rail riders based on the frequency, home location, and trip distance of cell phone users that show up at rail stations. Rider estimation by market segments was validated against transit farecard data and will be used for targeting users based on their rider/nonrider status.

STA SMART Station and Solano Express Study. For Solano Transportation Authority (STA), CS will provide processed LBS origin-destination trip tables at disaggregated geographies to support analyses on regional travel demand, long-distance travel, and commute patterns by market segments, as part of the Solano Express study. Ms. Zang will be the Key Staff supporting LBS data processing, expansion, and validation.

Caltrans Visitor Framework using LBS. For the California Department of Transportation (Caltrans), CS conducted exploratory research using LBS data to study visitor travel patterns in the State of California. The final deliverable included several key summaries and statistics that show, using examples, how LBS data may be used to supplement or replace traditional data collection methods to support visitor modeling. Ms. Zang led the efforts on technical analysis and data visualization.

FHWA and AASHTO Census and CTPP Technical Support. For the Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials (AASHTO), Ms. Zang is providing technical and administrative assistance for the CTPP program, including assisting planners and policy analysts at State departments of transportation, metropolitan planning organizations, transit operators, local governments, and universities with the proper use of CTPP, American Community Survey, and decennial Census; providing assistance for the CTPP program in the design and drafting of training materials, design and review of the data access tool and data visualization tool, preparation of meeting minutes, and development of data profiles.

Education

M.S., Transportation System Engineering, M.S., Urban and Regional Planning, University of California, Irvine, California 2013

B.E., Finance; B.A., English, University of Electronic Science and Technology of China (UESTC), Chengdu, China, 2010



Cory Hopwood, P.E., RSP₂₁

Senior Associate



Cory Hopwood is a Traffic Safety Engineer at Cambridge Systematics (CS) with over 10 years of experience in transportation safety and planning. He is experienced in managing a variety of teams and projects on transportation safety plans, including Strategic Highway Safety Plans (SHSP) and Local Road Safety Plans (LRSP), supported by the Safe System approach. Cory is adept at utilizing safety data and predictive analysis to guide these planning efforts towards outcomes with quantifiable benefits that support safety investments and decisions. These outcomes are supported by strategies and implementation plans he developed for Vision Zero and Toward Zero Deaths initiatives, as well as Highway Safety Improvement Program (HSIP) Implementation Plans, Highway Safety Plans (HSP), Long Range Transportation Plans, and Highway-Rail Grade Crossing Safety Action Plans.

Relevant Experience

Strategic Highway Safety Planning. Cory has assisted in updating SHSPs for Alaska, Arkansas, Florida, Indiana, and Ohio. As a member of Ohio's SHSP Steering Committee, he was responsible for analyzing and presenting crash data trends relating to the SHSP emphasis areas that helped drive the multi-agency Steering Committee's strategies, programs, and initiatives. He assisted in updates of the plan, including developing performance targets for serious injuries, fatalities, and crash rates on Ohio's roadways. After Ohio's previous SHSP update, he assisted in the creation of the Active Transportation and Aging Road Users emphasis area teams, and development of action plans which guided implementation of their strategies. He also is assisting in the implementation and tracking of Ohio's most recent SHSP emphasis area teams.

HSIP Implementation Plans. Cory managed and assisted with the development of HSIP Implementation Plans for New Jersey and Florida. He managed the coordination between the State, metropolitan planning organizations (MPO), Federal Highway Administration (FHWA), and other stakeholders to assess the program and relevant processes, and share the purpose and outcomes of the plans. The plans detailed how the proposed projects, activities, and strategies funded under the State HSIP will help meet or make significant progress towards meeting their targets in the subsequent years. This included updates to how projects are identified and selected through data-driven means, and how funds will be allocated through the projects, activities, and strategies to be implemented. Each of the plans discussed how the Safe System approach is addressed by the program's updated processes, the related benefits, and its importance in reaching the targets.

Regional Safety Analysis and LRSP Development. Cory has conducted safety analysis for various MPOs and counties in the Nation, including the Metropolitan Washington Council of Governments, Ulster County Transportation Council, NY, and El Paso County, CO. Crash trends, jurisdictional considerations, and analysis of crash types and contributing factors were provided to diverse committees of stakeholders to determine emphasis areas and priorities for reducing serious injuries and fatalities in the respective regions. Cory completed network screenings to provide priority locations based on the highest potential for safety improvement. Top-ranked locations were reviewed through a combination of inspections, audits, and Highway Safety Manual predictive analysis, and potential treatments were compared and

recommended based on benefit-cost analysis. The strategies for reducing severe crash types within the chosen emphasis areas and the priority lists and recommendations are documented in the regional safety plans and shared with regional partners and stakeholders. The final plans and analyses were shared in a variety of presentations, workshops, ongoing technical support, interactive mapping, decision-making support tools and dashboards, and websites.

FHWA Safe System Solutions for Highway Safety Improvement Projects. Cory is on the project management team for a task order to determine alignment of safety improvements with the Safe System approach. He directed the literature review of national and international best practices regarding Safe System approaches, solutions and countermeasures, development of a toolbox of countermeasures and strategies that align with the Safe System approach, and a prioritization framework for assessing Safe System alignment. Criteria and weights for the prioritization framework were developed in coordination with a practitioner focus group discussing key factors around Safe System considerations, such as transportation equity in safety. The framework prioritizes vulnerable road user safety and addresses risk factors associated with severe crash exposure, likelihood, and severity. The CS team is coordinating with FHWA to conduct Safe System pilot project case studies that will illustrate how specific countermeasures and strategies help mold a safer and more accessible roadway system beyond traditional safety benefit-cost and related measures.

Highway Safety Office Support. Cory has provided support to State Highway Safety Offices (SHSO) in Alaska, Mississippi, and West Virginia. He assisted with collection of safety program, project information, and crash and performance data for updating State HSPs and the Annual Reports required by the National Highway Traffic Safety Administration to support grants provided to states to conduct effective highway safety programs. Cory leads problem identification (crash trend analysis), performance reporting on core outcome measures and other safety measures, and evaluation of various safety program activities. He coordinates with SHSOs to document expenditures and funding sources, and is responsible for addressing each performance measure. He also assists States in setting and tracking performance measures and targets, and improving their performance target development process through agency coordination and in-depth knowledge of the strategic safety planning requirements.

New Jersey DOT Bureau of Research On-Call. Cory served as Project Manager for a variety of transportation safety and planning projects in support of offices and programs across the New Jersey Department of Transportation (DOT). He led teams to research best practices, assess processes, and update key methodologies and plans, including the evaluation and selection of locations for Safe Corridor Programs, the development and recommendations for the New Jersey HSIP Implementation Plan, implementation of predictive safety methodologies and tools, and policies and guidance for implementing Complete Streets practices. Research included the review of existing analysis, related programs and plans, and interviews with peer State and local transportation agencies conducting the respective best practices. The initial research drove each of the projects, analysis, and development of actionable plans that prioritized the most effective and proven strategies for New Jersey to implement. Cory managed the development and delivery of each of these plans through effective coordination with New Jersey DOT staff, New Jersey MPOs and other partner agencies, and subject matter experts throughout the Nation.

Education

B.S., Civil Engineering, The Ohio State University, 2012

Professional Registrations

Professional Engineer: Ohio No. 82241; New York No. 099945; New Jersey No. 24GE05383600
Certified Road Safety Professional Level 2, Infrastructure

Moggan 'Megan' Motamed, Ph.D.

Analyst Jr. II (Associate)



Dr. Moggan 'Megan' Motamed is an Analyst Jr. II (Associate) at Cambridge Systematics, Inc. (CS) with five years of consulting experience in data-driven transportation planning for freight, safety, operations, and transit clients. She has experience in research design, applied statistical modeling, machine learning, decision-making tool/dashboard development, and financial analysis. Megan is proficient in an array of analytical tools, and has developed ArcPy toolboxes, Geographic Information System (GIS) and data visualization products, spreadsheet tools, and interactive analytic tools based on the Microsoft Power Business Intelligence (BI) and Python platforms for clients across the U.S. Megan was Deputy Project Manager for the New Jersey Department of Transportation (DOT) Safe Corridor Program, for which she analyzed the crash data and developed an interactive web-based dashboard (Power BI) to visualize the result. Megan currently is Deputy Project Manager for the Valley Metro Transit Asset Financial Analysis Tool and the Indianapolis Public Transportation Corporation Transit Asset Management Maturity Assessment.

Relevant Experience

El Paso County Safety Plan. CS is developing the Local Road Safety Plan for El Paso County in Colorado. CS performed safety data analyses countywide to determine the overrepresented crash types, contributing factors, and roadway risk characteristics in severe crashes, specifically focused on unincorporated roadways. Megan used the Google application programming interface and Python to geolocate crash data. She created an interactive web-based dashboard (Power BI) to visualize the result. This tool will help decision-makers to prioritize safety projects.

New Jersey DOT Safe Corridor Program. For the New Jersey DOT, Megan worked on a methodology to identify and prioritize locations (corridors) most likely to produce future crashes and where the potential to improve safety was highest. She analyzed the crash data and created an interactive web-based dashboard (Power BI) to visualize the result for the New Jersey DOT. The result of this effort was used by New Jersey DOT executive leadership for safety project selection. Megan was the Deputy Project Manager on this task.

Valley Metro TAM. CS, as part of a team, developed a 20-year scenario analysis of asset investment and performance for Arizona's Valley Metro Regional Public Transportation Authority (Valley Metro) Transit Asset Management (TAM) Services executive leadership. The analysis considered how the agency would need to prioritize or defer asset replacement and repair across all operations under a variety of funding futures. Megan assisted with compiling asset inventory, quality control of data, and creating cash flow for future investments. As part of this project, she assisted with development of a 20-year needs analysis under multiple funding scenarios.

Texas DOT Freight Equity Analysis. CS assisted Texas DOT to make more informed, equitable decisions about transportation investments and helped identify areas to focus community and stakeholder

engagement. The analysis consists of two major elements: the definition of equity focus areas and analysis of freight transportation impacts to these communities. Megan analyzed crash, parking, Texas Highway Freight Network, and at-grade crossings data to determine the freight system's impacts on the locations of historically marginalized communities.

Virginia DOT SHSP. This effort included obtaining input from a wide range of stakeholders on the strategies and action plans for each of the Strategic Highway Safety Plan (SHSP) emphasis areas. Megan created a web-based SHSP dashboard (Power BI) to assist Virginia DOT with tracking strategies and action plans and is working with the client to update the dashboard.

OIPI, Federal Measures Dashboard at the State and MPO Level. CS assisted the Office of Intermodal Planning and Investment (OIPI) to calculate the Performance Measure Rule 2 (PM2) and Performance Measure Rule 3 (PM3) performance measures as per the Federal Highway Administration's (FHWA) Moving Ahead for Progress in the 21st Century Act Final Rule. The PM3 measures were developed for the entire state, each of the Districts, metropolitan planning organizations (MPO), and Maintenance Jurisdictions in Virginia. These results also were calculated for five years—2017, 2018, 2019, 2020, and 2021—to determine any trends. These results were used to identify the targets for the measures as required by the Final Rule. Megan analyzed the historic pavement data and developed PM2 pavement performance measures for each of the 27 MPOs. She is leading the team to analyze the data, create Performance Measure Rule 1 (PM1), PM2, and PM3 measures and develop dashboard (Power BI) for each performance measure.

West Virginia LRTP. For this Long-Range Transportation Plan (LRTP), CS assisted West Virginia DOT to calculate the PM2 and PM3 performance measures and create dashboards to enhance public access. Megan conducted an in-depth analysis of Federal performance measures for Pavement, Bridges, Reliability, and Safety. She created an interactive web-based dashboard (Power BI) to visualize Federal measures at the County, District, MPO, and State level.

Michigan DOT Further Assessments of Safe, Quick Clearance Strategies, Phase II. Megan worked with the Michigan DOT to assess and raise awareness for safety laws regarding highway incidents management. As the Lead Research Scientist, Megan analyzed the surveyed data and summarized results into a concrete actionable report.

FHWA Implementation of Mobility Data Business Plan. Megan supported this FHWA project to help State, regional and local DOTs to manage and govern data through ongoing mechanisms and framework for engaging in data coordination activities and sharing of current initiatives and best practices. She supported on-site informational meetings and workshops with identified agencies and their respective stakeholders in a full range of support areas.

Education

Ph.D., Transportation Engineering, University of Texas at Austin, 2016
M.S., Transportation Engineering, University of Texas at Austin, 2012
B.S. Civil Engineering, Babol Noshirvani University of Technology, 2007



Kimon Proussaloglou, PhD

Executive Vice President

Dr. Proussaloglou is leading the firm's activities in travel demand modeling and market research and serves as Director of the Chicago Office. He has over 25 years of experience working with FHWA, State DOTs, regional planning agencies, public transit agencies and private sector transportation companies. He has designed customized surveys, integrated, and analyzed sources of data, and applied multivariate statistical techniques to understand traveler patterns and develop econometric models of traveler choice.

Relevant Experience

CTA Ridership Behavior and Preference Research. He was the principal in charge for a market research study to investigate the factors contributing to Chicago Transit Authority's lower bus and rail ridership. The study focused on surveying rider segments that cannot be reached by online surveys and used a set of bilingual online, onboard, and intercept surveys targeting current riders, former users, and cash paying customers. Respondents were asked about their current modal preferences and travel behavior and examined whether, when, how, and why they decreased their use of CTA. Focus groups were used to examine the decision factors, perceptions, and user experiences about ride-sourcing services, feelings of personal safety while riding CTA, and fare choice behavior.

California High Speed Rail. For the High-Speed Rail Authority, he reviewed the properties of the intercity model system. He responded to a review by University of California faculty and presented his findings to a Board meeting and a legislative hearing at the California State Assembly. He has been working with the Ridership Technical Advisory Panel since 2011 to refine the model properties by helping design a new stated-preference survey and new choice models for intercity travel. He is now focusing on assessing the size of the visitor market.

Cell Phone Data to Estimate Travel Flows. In a study for the National Cooperative Highway Research Program, he evaluated the potential of cell phone call detail records (CDR) to infer travel flows. He examined recent research work at MIT where heuristic rules and clustering algorithms inferred home, work, and nonwork locations from CDR data to estimate regional travel patterns. He developed a handbook for transportation practitioners to help them evaluate the utility of CDR data for a range of planning and modeling purposes.

Travel Behavior Inventory. Dr. Proussaloglou led the Metropolitan Council's massive data collection and modeling efforts in the Twin Cities. The data collection effort included the design, fielding, and analysis of a travel diary survey of 12,000 households; an onboard survey of 15,000 riders; a GPS survey of 300 households; origin-destination external surveys; innovative web-based intercept surveys of airport travelers; and traffic counts and transit ridership statistics. A state-of-the-art activity model was developed using the CS TourCast software platform to simulate the travel choices of all area residents.

SCAG Truck Congestion Pricing. Dr. Proussaloglou led a study in the Los Angeles region to study the impact of roadway pricing, lane pricing and cordon pricing on truck traffic. Five versions of a stated-preference survey were developed with customized experiments to study potential changes in route, time of day, and destination choices by truck drivers in response to different forms of facility pricing.

Financial Impacts of Transit Riders. For the Chicago Transit Authority (CTA), Dr. Proussaloglou managed a large-scale market research study to assess the financial contributions of CTA riders to the

Chicago metropolitan area's economy. Intercept surveys of CTA riders and nonusers in downtown Chicago and outlying malls were used to quantify riders' and nonusers' typical spending patterns.

Airline Market Research Study. For United Airlines, he undertook a market research study that examined the determinants of carrier, flight, and fare class choice. He developed customized computer-aided surveys to assess travelers' search for information, choice set formation, and choice behavior. He estimated econometric models of carrier market share accounting for market presence, frequent flyer program participation and quality of service. He developed econometric models of carrier, fare class and flight choice accounting for schedule delay, frequent flyer membership, carrier market presence, fare differentiation, and carrier preferences.

Transit Strategic Market Plans. He designed travel behavior surveys for the Regional Transportation Authority and the Pace bus system in Chicago, the San Diego Metropolitan Transit, and the Capital Metro in Austin. He segmented the transit rider and non-rider markets and estimated mode choice models to support strategic planning efforts. Factor and cluster analysis were used to define market segments based on traveler attitudes, observed behavior, and stated preferences and to measure traveler tradeoffs between cost and levels of service.

Chicago Regional Market Analysis. For the Regional Transportation Authority, Dr. Prousaloglou used the 2008 CMAP household survey for a baseline of regional travel patterns to document the role of transit in serving different markets. He also designed a survey of transit riders and nonriders to measure traveler attitudes toward transit and developed distinct market segments of Chicago residents to evaluate barriers to transit use.

Last Mile Suburban Transit Analysis and Key Activity Centers. In a study for the Regional Transportation Authority (RTA), he focused on the "last mile" suburban egress including a detailed analysis of reverse commute patterns to better understand the barriers to transit due to issues related to egress to suburban workplaces in Chicago. In a second study for the RTA, he evaluated opportunities for and barriers to travel to key suburban workplaces and retail corridors in the Chicago suburbs.

Minnesota DOT HOV Evaluation Study. For the Minnesota DOT, Dr. Prousaloglou evaluated the benefits of high-occupancy vehicle (HOV) lanes in the Twin Cities. He designed four different sets of surveys, managed the statistical analysis, and summarized the key market research findings. The segments included single occupant drivers, carpool users, bus riders, and a random sample.

Commuter Rail Access to Work. Dr. Prousaloglou led the Access to Work project for Chicago's Metra to identify potential bus egress services for reverse peak and suburb-suburb travelers. The approach combined an extensive qualitative analysis, the fielding and analysis of a commuter rail rider survey, analysis of the Census origin-destination travel data, a database of employer characteristics and location, and set of employment forecasts. Case studies for 19 Metra stations were used to evaluate alternative service improvements for different types of stations.

Statewide Transportation Investments. For the Indiana DOT, he led a market research study to support the long-range transportation plan for Indiana. Residents' needs and wants were addressed through a statewide survey to "listen to Indiana residents" and to help set priorities among transportation improvements that were considered.

FHWA Forecasting Course and Survey Manual. He developed the chapters on Mode Choice, Trip Distribution, and Future Directions in Travel Modeling as part of the Advanced Travel Demand Forecasting course prepared for the FHWA. He also authored the chapter on Sampling Issues for the FHWA Survey Manual.

Education

Ph.D., Civil Engineering, Northwestern University, 1992
M.S., Civil Engineering, Northwestern University, 1987
B.S., Civil Engineering, Aristotelian University, Greece, 1985