

## **SOUTH JERSEY TRANSPORTATION PLANNING ORGANIZATION**

### **ITEM 1403-10: Approving the Selection of Rodriguez Consulting, LLC as Consultant for the FY 2014 Traffic Safety Survey**

#### **PROPOSAL**

The Technical Advisory Committee at its March 10, 2014, meeting vested authority for a consultant selection recommendation in a committee consisting of SJTPO staff. Subsequently, the Consultant Selection Committee recommended that the Policy Board approve the selection of Rodriguez Consulting, LLC to conduct the FY 2014 Traffic Safety Survey.

#### **BACKGROUND**

The Traffic Safety Survey is the new incarnation of the seat belt observation survey which began in 2006. The seat belt survey was originally created to provide a baseline for seat belt use in the region and to monitor seat belt use from year to year. Since seat belt use has remained in the ninety percent use range for four years, the Executive Board of the SJTSA recommended changing the name so the survey could be expanded to include and determine the extent of other traffic safety issues in the region.

For FY 2014, the survey will focus on distracted driving, including cell phone use, both hand-held and hands-free, as well as identifying other driver distractions, including eating, reaching, outside distraction, personal grooming and reading for example.

FY 2014 Traffic Safety Survey will:

1. Determine an overall distraction rate by drivers for the SJTPO region.
2. Confirm the seat belt survey hand-held cell phone use rate.
3. Identify other driver distractions and rate of distraction.
4. Compare distraction rates for SJTPO region with national and state data.

If awarded, the contract with Rodriguez Consulting LLC will be \$47,000.00, with a 51% DBE participation. Rodriguez Consulting, LLC is a Disadvantaged Business Enterprise (DBE), as well as a Minority Owned Business Enterprise (MBE) and Small Business Enterprise (SBE). Consequently, the total SJTPO DBE/ESBE participation rate to date for FY 2014 would become 28.9%.

The Notice of Availability of Requests was sent to approximately 140 firms and two proposals were received and reviewed by the Selection Committee.

**SOUTH JERSEY TRANSPORTATION PLANNING ORGANIZATION**

**RESOLUTION 1403-10: Approving the Selection of Rodriguez Consulting, LLC as Consultant for the FY2014 Traffic Safety Survey**

**WHEREAS, the South Jersey Transportation Planning Organization (SJTPO) is the Metropolitan Planning Organization (MPO) designated under Federal law for the southern region of New Jersey including Atlantic, Cape May, Cumberland, and Salem Counties; and**

**WHEREAS, the Fiscal Year 2013-2014 SJTPO Unified Planning Work Program includes Federal Highway Administration and Federal Transit Administration planning funds for this project; and**

**WHEREAS, a Selection Committee consisting of SJTPO staff was formed; and**

**WHEREAS, the SJTPO Technical Advisory Committee vested authority in the Selection Committee to forward a recommendation to the Policy Board; and**

**WHEREAS, the Selection Committee selected Rodriguez Consulting, LLC of Williamstown, NJ, a Certified Disadvantaged Business Enterprise firm, and Minority-Owned Business Enterprise (MBE) and Small Business Enterprise (SBE).**

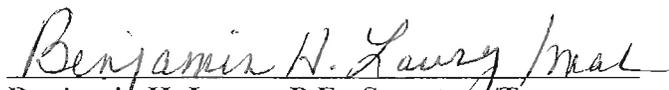
**NOW THEREFORE BE IT RESOLVED, that the Policy Board of the South Jersey Transportation Planning Organization hereby approves the above selection for the FY 2014 Traffic Safety Survey; and**

**BE IT FURTHER RESOLVED, that the SJTPO Executive Director is hereby authorized to negotiate minor changes to the scope of work within the overall intent of the project; and**

**BE IT FURTHER RESOLVED, that the Policy Board requests that the South Jersey Transportation Authority execute the appropriate contractual arrangements with the consultant on behalf of the SJTPO.**

**Certification**

**I hereby certify that the foregoing is a correct and true copy of a resolution adopted by the Policy Board of the South Jersey Transportation Planning Organization at its meeting of March 24, 2014.**

  
**Benjamin H. Laury, P.E., Secretary/Treasurer**

## SECTION I

### TECHNICAL APPROACH

#### A. WORK PROGRAM

##### Introduction

**Rodriguez Consulting, LLC (Rodriguez)** is very pleased to present this response to the subject Request for Proposal. **Rodriguez** is a DBE certified firm located in Mullica Hill, New Jersey. **Rodriguez** welcomes the opportunity to place our experienced professionals and support staff at the disposal of the **South Jersey Transportation Planning Organization (SJTPO)** on this important assignment.

We have reviewed the Request for Proposal carefully and have assembled a Project Team that provides the necessary personnel who possess a wide range of technical skills and versatility in Traffic Data Collection and Analysis. Our team is composed of individuals that successfully completed the 2006-2013 **SJTPO** Seat Belt Surveys as well as other Transportation Planning and Roadway Safety projects. The **Rodriguez** team has access to the necessary equipment (count boards, vests, supplies and computers/software) and other resources to satisfy the stated project requirements. The work on this effort will be managed from **Rodriguez's** office located at South Jersey Technology Park, 107 Gilbreth Parkway, Suite 103E, Mullica Hill, NJ 08062 which is in close proximity to the **SJTPO** office.

We are confident that our Team has the key qualities and experiences necessary for this assignment. We will commit skilled managers and personnel to achieve the stated project schedule. We have also established a comprehensive quality control process to maximize efficiency and product reliability.

##### Management Plan

A successful project begins with a good program management plan, the selection of quality team members and the commitment to get the job done right the first time. Achieving success further requires that we identify issues that may create an impediment to progress as quickly as possible. If such issues arise they will be brought to the immediate attention of the **SJTPO** along with a proposed solution so they may be resolved quickly.

**Louis A. Rodriguez, P.E.**, President of **Rodriguez** will serve as the Principal-in-Charge and the Project Manager. Lou will also serve as the licensed Professional Engineer, if required. Lou will negotiate the contract, establish processes and procedures, and provide adequate staffing and support to effectively manage this agreement. He will continue in an active role in the process by serving as the contact for **Rodriguez** in reviewing work, discussing any billing issues, and addressing other issues with **SJTPO**. Lou will also perform overall supervision, scheduling, staffing, and ensuring the quality of the seat belt survey activities.

We will begin the project with a startup meeting with **SJTPO** to introduce the **Rodriguez** team members and managers. We will discuss the operational plan to finalize the distracted driver survey

format, scheduling, field data collection procedures conformity with NOPUS, modifications to previous report format, and billing dates, as well as any other relevant details.

We understand that accuracy is important therefore control of work will be maintained through regular in-house meetings that will include the review of data collected and hours worked (for control of budget). We will also hold meetings/phone conferences with the **SJTPO** as necessary.

Administrative cost control begins with completion of time-sheets by personnel on a daily basis. The Project Manager will review time-sheets weekly to ensure time is correctly stated and correctly apportioned. The time-sheet system is coordinated with the entire company bookkeeping system; therefore, billings should accurately reflect the time and salaries actually spent on the work. Bills will be prepared monthly in conformance with the established **SJTPO** submission date. The initial bill and supporting documentation (time and expense records, and other direct costs) is prepared by the Office Manager in the agreed upon format. The Project Manager will then review it for completeness, consistency, and accuracy. Any costs over the agreed upon amount will not be billed unless extra work has been agreed in advance by **SJTPO**.

### Data Collection Design

The *Rodriguez* team recognizes that **SJTPO** and **SJTSA** are looking to meet past survey objectives as well as expand the research program in this study. We understand that **SJTPO** seeks to expand the overall sample size and incorporate more moving traffic (MT) data to supplement controlled intersection (CI) data. Our scope of work addresses the need to have a more diversified sample pool and collect data from an expanded list of distracted driving categories.

*Rodriguez* will structure its data collection methodology to achieve the following **SJTPO** 2014 Traffic Safety Survey objectives:

1. Determine an overall distraction rate by drivers for the **SJTPO** region.
2. Confirm the seat belt survey hand-held cell-phone use rate.
3. Identify other driver distractions and rate of distraction.
4. Compare distraction rates for **SJTPO** region with national and state data.

To meet **SJTPO** data collection objectives, our tools will capture data on regional distracted driving behaviors and cell-phone use rates. The reported data will allow for comparisons to state and national data. To make the comparison, data points captured in 2014 will mirror points reported by recent NHTSA "Traffic Safety Facts" reports (<http://www-nrd.nhtsa.dot.gov/Pubs/811719.pdf>). These include but are not limited to:

1. Demographics (Age, Gender, Race)
2. Site Conditions (Time, Weather)
3. Location (Latitude/Longitude, Road Type, Urban/Rural/Suburban)
4. Vehicle Type (Type, Commercial/Private)

The list will include the three key cell-phone related distracted driving categories measured nationally by the report:

1. Driver holding phones to their ears while driving
2. Driver visibly manipulating hand-held devices while driving
3. Driver speaking with visible headsets on

To meet the SJTSA's objectives regarding identification of a wider variety of distracted driving behaviors, Rodriguez will use the NHTSA's research plans regarding distracted driving as well as selected published reports to create a list of distracting behaviors. We propose to present a draft list which can then be evaluated and finalized during the project kick-off meeting:

Type of Secondary Task	
•	Reaching for a moving object
•	Insect in vehicle
•	Looking at external object
•	Reading
•	Applying makeup
•	Dialing hand-held device
•	Inserting/retrieving CD
•	Eating
•	Reaching for non-moving object
•	Talking/listening to a hand-held device
•	Drinking from open container
•	Other personal hygiene
•	Adjusting the radio



Figure 1-1 - Rodriguez will work with the SJTPO to define a list of Distract Driving Tasks to Study

We will establish a relational database to input and manage field data and project management data.

#### Sample & Site Plan

**Rodriguez** has extensive hands-on knowledge of the South Jersey transportation system. Since the team started working on this project in 2006, we have catalogued data from more than 1,600 sites. Just in the last three years Rodriguez has collected more than 50,000 observations in more than 90 locations across South Jersey. Utilizing our historical working knowledge we are able to quickly and accurately calculate data on daily and hourly observations rates and spot trends that offer deeper insights into driver behavior. **Rodriguez** is also committed as a firm to evaluating and implementing the latest technology to gather and report data. We do this a standard course of business on every project so that SJTPO will receive the benefit from technological advances delivered in an efficient manner.

**Rodriguez** has structured this year's sample plan to reflect SJTPO's objectives to compare current data to past data. At a minimum, **Rodriguez** seeks to obtain at least 25,000 total observations consisting of 50% MT observations and 50% CI observations. Considerations determining CI criteria will include the following:

- Matching historically relevant distribution patterns: Since 2006, Cumberland and Atlantic Counties have hosted more sites than Salem and Cape May counties
- Matching sites that we've consistently visited: Since 2010, there are 78 sites across all four counties we've visited regularly.
- Using spatial analysis to identify CIs with high AADT.

The 2014 sample plan is designed by location based on the distribution of sample data collected since 2006. Adjustments will be made as necessary to account for the influence of various factors

such as population, traffic volume, road type, etc. Given these considerations and using historical collection rates, we anticipate the following number of site visits and CI observations:

CI Observations by County	# of Sites	Projected Total Observations
Cumberland	18	4,538
Salem	10	1,688
Cape May	9	1,742
Atlantic	23	7,010
<b>TOTALS</b>	<b>60</b>	<b>14,978</b>

This projection will decrease the total number of CI sites from 78 to 60 and provide approximately 15,000 observations.

To determine the sample plan for MT observations we will utilize:

- Staff knowledge of the SJTPO region to identify survey sites on roadways with high AADT and minimal controlled intersections.
- Utilize GIS software to perform a spatial analysis of roadways in the SJTPO region to randomly select survey sites for:
  - Sites with high AADT volume, high speed limits (i.e. over 45-65 MPH)
  - Sites with high AADT volume, low speed limits (i.e. under 45 MPH)

We are targeting approximately 12,000 MT observations to augment the CI count. The number of sites and expected observations are as follows:

MT Observations by County	# of Sites	Projected Total Observations
Cumberland	15	2,580
Salem	10	1,900
Cape May	15	2,850
Atlantic	25	4,750
<b>TOTALS</b>	<b>65</b>	<b>12,080</b>

Taking the CI and MT targets together we are estimating 125 Data collection site locations and projecting over 26,000 Total Observations.

### 1. Roadway Data Acquisition

As we stated previously, there is an old saying that definitely applies to successful Data Collection Programs - "plan the work and work the plan." Additionally, in order to be successful, the plan has to be flexible to address various issues which may arise while conducting the work.

Rodriguez has developed a strategic relationship with a geospatial technology firm which will enable us to utilize a software platform called Fulcrum ([www.fulcrumapp.com](http://www.fulcrumapp.com)) to plot the locations of each survey site and to collect data based on the proximity of the sites to each other and the Rodriguez office. Our project management approach will allow our crews to maximize the amount of time spent observing vehicles and minimize the amount of time driving from site to site. The results of each work day will be logged into Fulcrum's dynamic mapping application enabling our project

manager to view real-time progress and modify work schedules accordingly. Figure 1-2 depicts a screen capture of the application.

For data collection at CI's, our primary methodology will be to utilize a two-person team to capture observed behaviors. One person will serve as the "observer" and one will serve as the "recorder" who will enter data into the data collection tool. Supplemental teams will be available should the data collection rate lag for any reason. Observers will be provided with binoculars to allow for optimal observance of driver behavior.

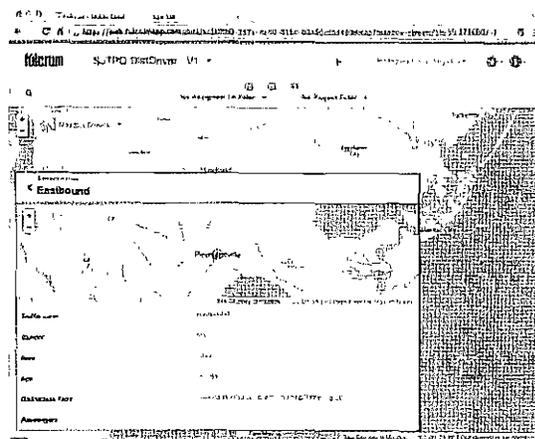
We will use two methodologies to capture data for Moving Traffic (MT);

1. **Moving Traffic (MT)/Moving Observers (MO)** – MT/MO observations will involve a two-person team in a vehicle capturing data while moving with the flow of traffic. For MT/MO observations the passenger will perform both the observer and recorder duties.
2. **Moving Traffic (MT)/Stationary Observers (SO)** – MT/SO observations will involve a two-person team safely located along the side of roadways with a clear view of moving traffic. An observer with binoculars will observe driver behavior while a recorder captures the data.

For all sites, we will capture high-resolution digital video (see Figure 1-3). The video will serve as a third observer. While the team is focused on counts coming from one particular direction of traffic, the video will record the other opposite-bound lane of traffic. Footage serves as additional data to capture should sample size need to be expanded or if further exploration of data is needed.

Our experience with previous data collection efforts has confirmed the practicality and efficiency of conducting a pilot study to evaluate whether the process is sufficient to meet the project's objectives. Our experiences leads to several recommendations and considerations applicable to this survey, as follows:

1. Use of existing traffic observers – The ability to observe the traffic and the use of seat belts/cell phones was difficult on multi-lane, multi-movement intersections. Consequently, to secure dependable data, we will utilize existing staff which are already trained and experienced in data collection procedures. The field staff proposed for this project have experience performing surveys for the SJTPO and others. Please note that we have sufficient staff to meet the deadlines for this effort.
2. The best location for observation for the driver was very near the roadway, and on the opposite side of the roadway looking at approach traffic. Locating near an intersection was helpful since it helped reduce the approach speed.



*Figure 1-2 – Rodriguez will utilize the Fulcrum App to collect data. All data will have a geospatial tag to allow for analysis in GIS software.*



*Figure 1-3 – Rodriguez will utilize Contour +2 HD Digital Cameras mounted to our vehicles or nearby structures to collect data at survey sites for post-processing at our office.*

Because we are leveraging advanced technology, a revamped survey instrument and new workflows to meet project goals, we will conduct a small pilot study prior to full data collection to satisfy that our methodology meets the project goals

Once a Notice to Proceed is received, we will request the project kickoff meeting. After the initial kickoff meeting we will initiate the data collection effort by:

1. Conducting a two-day Pilot Test
2. Creating a database based on the target locations
3. Establishing a deployment schedule
4. Reviewing Pilot Data and modifying the procedures, if necessary

Upon the completion of the preparations, initiation of the data collection will involve the following:

1. Notification of local police of the survey,
2. Mapping the locations and deploying the observers,
3. Evaluating the quality of the data as it is collected ensuring time to gather additional data if necessary
4. Safeguarding the data collected.

Subsequent to collection of the data, the following actions will be accomplished:

1. Analysis of the data and
2. Initiate development of the formal report

The **Rodriguez** team recognizes the high importance of properly trained data collection personnel (the observers) and ensuring that these personnel are properly equipped. The observers will be provided the following materials:

1. Training Manual,
2. iPhones and iPads with 4G access,
3. Hard copy daily work plans with site locations,
4. Schedules including site locations,
5. Observation Forms to be used if necessary,
6. Clipboards and pens,
7. NJDOT approved safety vests,
8. Digital Cameras, Video Cameras as appropriate,
9. Binoculars,
10. Additional batteries, and
11. A company vehicle appropriately marked.

The aforementioned observer form package will consist of the following:

1. A Daily Work Report – a chronological account of the observer’s day,
2. Observation Forms – the traffic safety survey forms that reflect the data fields finalized for data collection. (NOTE: *The aforementioned two forms will only be used as back-up if electronic forms are not available for data collection*)
3. Company ID badge, and
4. Letter of Authorization with an explanation of the project.

We will also see that our observer schedules meet existing legal requirements in terms of hours of work and break periods without creating overtime issues within the contract.

An initial kickoff and coordination meeting will be held within 7 days of the NTP. Monthly progress meetings/reports will be scheduled; however, based on a mutual agreement between the **SJTPO** and the **Rodriguez** Team, the monthly meetings may be waived or conducted by telephone but the monthly progress reports will still be submitted.

## 2. Data Analysis and Report

The **Rodriguez** Team will provide a statistical analysis of the collected data similar to the analysis provided in the previous studies. The data will be summarized in both tabular and graphical formats with maps produced by GIS software.

The results of the analysis will be presented to the **SJTPO** in a draft report summarizing the 2014 Traffic Safety Survey's factual findings based on the data collected. One hard copy of the actual data, diagrams, maps, etc. will be provided as a supplement to the report. We currently anticipate utilizing a format similar to the 2013 seat-belt usage report, highlighting the main findings of the report in bullets on the left side of the page, with the full text, tables, and maps on the right side of the page. As noted above, the actual format of the report is subject to modification and will be discussed at the initial project meeting with the **SJTPO**.

After the **SJTPO** has received and commented on the draft document, five (5) hard copies of a final report will be generated along with a CD ROM containing the electronic deliverables presented in a web site format (see Figure 1-3) and submitted as a final deliverable. We have provided a ten (10) day review period for the **SJTPO** in our project schedule, although this schedule may be able to be modified if desired to provide a slightly longer review period.

The report will provide a written description summarizing the project, the data collection procedures and analysis of the collected data for each distracted driver category. Data will be presented in comparison to reference sources as described herein.

### Issues

The outline provided below is intended to supplement and enhance the management procedures and issues already identified, and not to provide a replica of the desires statement of work. The highlighted text contained herein refers to key issues, problems, solutions, or innovative concepts.

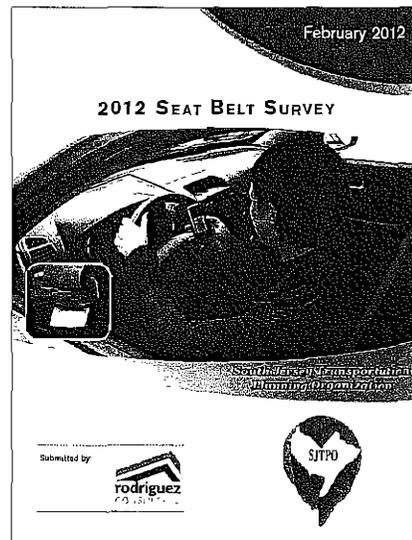


Figure 1-4 - Rodriguez will utilize a report format similar to previous safety studies.

### Safety:

1. Safety of the public: Consideration to public safety is a very important issue that will be addressed when conducting the field survey work. Vehicles will be parked in a safe site not obscured from traffic due to vertical or horizontal geometry or other visual barriers.
2. Safety of our staff: All staff members responsible for the field surveys will have safety training. As necessary the staff is equipped with reflective vests. Additionally, since the observer will be stationed outside the vehicle, care will be taken to select a safe observation location.
3. Safety during Field Observations: Care will be taken to pick locations that do not attract attention of passing motorists, yet provide a clear view of the roadway.
4. **Rodriguez** will review its in-house safety plan with all staff prior to the start of the site observations.

### Cost Effectiveness:

1. Our office is located in the center of southern New Jersey; for this reason we are able to keep our costs down and keep our production at a high level.
2. We possess sufficient equipment and trained manpower so that in the event a need for multiple operations arises we are able to handle this type of situation(s) in a timely and efficient manner.
3. Our staff is very familiar with the **SJTPO** highway network, having performed similar work in this area with the **SJTPO**, NJDOT, Cumberland County and other agencies. As Figure 1-5 depicts, **Rodriguez's** office is in close proximity to the **SJTPO** and has convenient access to the entire **SJTPO** region..

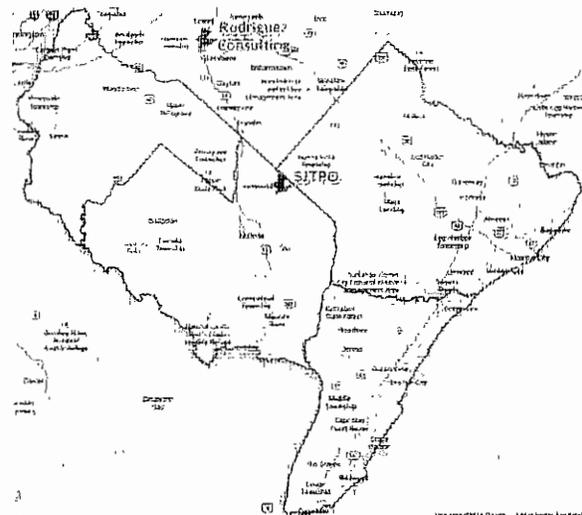


Figure 1-5 - The Close Proximity of Rodriguez's Office to the SJTPO Office and Region Ensures Focused & Efficient Teamwork

### Public Relations and Representation:

1. Our staff will conduct themselves in an appropriate and professional manner in regard to their appearance and their dealing with the public. Our equipment and vehicles are marked with the firm's name, address and phone number.
2. Permission is requested, when the need arises for parking on private property for observations.
3. Our staff is provided with photo identification cards with the company's contact phone number.
4. We anticipate the field observation and data collection phase will involve discussions with the local and State Police to insure they are aware of our operations.

### Communications:

1. Open and continuous communication is a key factor in the success of multidisciplinary projects with multiple stakeholders. Telephones (both land and cell lines), email, and text

messages have been, and will continue to be, effective methods of communication for schedules, special requests and data transmission of data with our clients.

2. Our observers will be equipped with iPhones and iPads on 4G for immediate communications with local and state police, and our office.

**Responsiveness:**

It is essential to respond to this contract in a timely fashion in order to have the time to plan, prepare and execute the Survey effectively and efficiently. The staff assigned to this project have an excellent record in responding to large efforts such as this on very short notice while meeting deadlines.

**Staffing:**

To be able to respond to various requests on a very short notice our personnel are cross-trained on the proper use of all equipment. This is the most effective means we have found to address the manpower needs to adequately handle any number of special requests.

**Issues Requiring Schedule Modifications:**

1. Weather
2. Road Closures
3. Accidents

**Deliverables:**

Deliverables for this project include the following:

1. **Completed Daily Work Reports and Observation Sheets**, one hard copy and Adobe PDF format.
2. **Digital Videos** of field locations.
3. One copy of the **2014 Distracted Driver Survey** (Microsoft Excel, Microsoft Access, and/or ESRI shapefile formats).
4. **Draft Distracted Driver Survey Report** (1 copy), full color, double sided format.
5. **Final Distracted Driver Survey Report** incorporating review comments; 5 hard copies full color, double sided format; Microsoft Word and Adobe PDF formats.
6. One digital **CDROM** with the digital version of the various deliverables listed above.

**B. SCHEDULE**

We have prepared and included a project schedule (summarized in Figure 1-6) based on our experience performing the 2006-2013 **SJTPO** Seat Belt Surveys and the goals outlined in the current RFP. **Rodriguez** will utilize Zoho Projects (see Figure 1-6), a cloud-based integrated project management solution to manage resources and the project schedule. Zoho Projects access will be provided to the **SJTPO** so that you can monitor the project status and review data in real time.

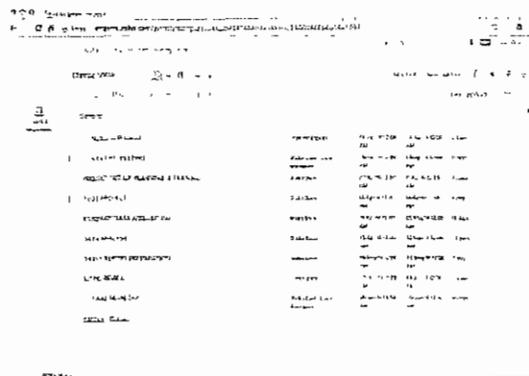


Figure 1-6 – Zoho Projects

In reviewing the project approach, it is important to note that the **Rodriguez** team is prepared to meet the **SJTPO**'s projected schedule for the completion of the 2014 Traffic Safety Survey by utilizing our staff's experience with the previous Seat Belt Surveys. We will complete the Data Acquisition (Traffic Safety Surveys), Draft Report, and Final Report ahead of the desired schedule, in a manner that best utilizes the resources of the **Rodriguez** team and the **SJTPO** staff.

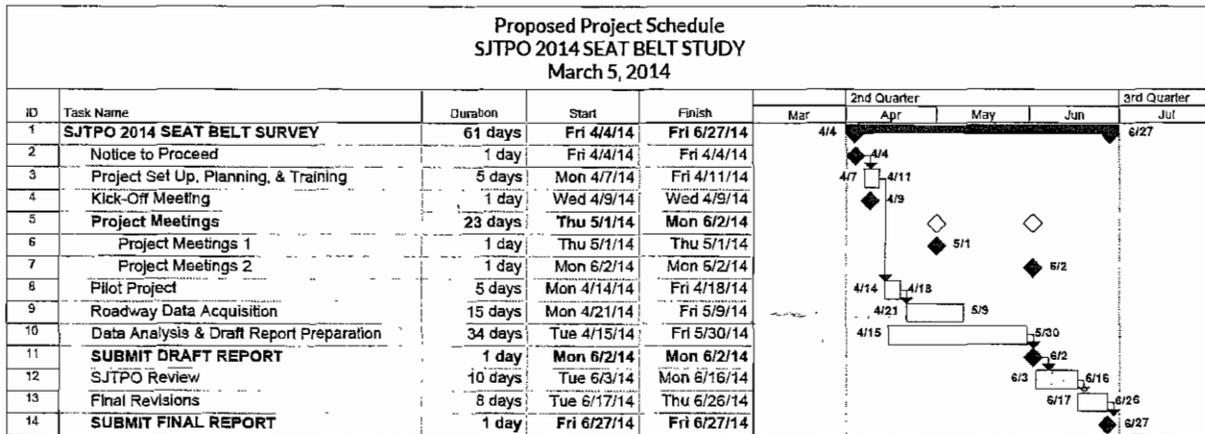


Figure 1-7 – Proposed Project Schedule

## COSTS

Rodriguez Consulting LLC (*Rodriguez*) is pleased to present our cost proposal as follows:

**Cost Estimate** – Totaling **\$46,996.25**. Work under this effort includes: Project Management & Training; Data Collection; Data Analysis; and Report Preparation for the SJTPO FY 2014 TRAFFIC SAFETY SURVEY.

A breakdown of our costs is presented on the following pages, as well as a listing of our key personnel.