

# Using a Road Safety Audit to Improve the Entrance to Don Edwards San Francisco Bay National Wildlife Refuge

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**What is the Transportation Scholars Program?**  
The Public Lands and National Park Foundations' Transportation Scholars programs provide parks and public lands with transportation professionals for six to 12 months who assist in transportation planning and implementation to help parks and public lands reduce traffic, congestion and pollution while improving visitor experiences. These programs are designed to place individuals with substantial knowledge and expertise in transportation planning and related areas. *See footer for a list of sponsors.*

## The RSA Process

### Background

In 2012, an evaluation of the transportation needs around the San Francisco Bay National Wildlife Refuge Complex conducted by a transportation scholar determined that the greatest safety need centered on improving pedestrian and cyclist conditions around the entrance of Don Edwards San Francisco Bay National Wildlife Refuge. The Refuge decided a road safety audit (RSA) was the best way to identify and prioritize possible improvements. As defined by the Federal Highway Administration, an RSA is “a formal safety performance evaluation of an existing or future road or intersection by an independent, multidisciplinary team.”

### Reasons for choosing an RSA

The roads around the entrance area were owned, maintained, or patrolled by multiple government and private agencies. No individual group could make all the improvements necessary. A road safety audit allowed all the involved groups to come together at the same time to form a cooperative plan and is the critical first step in developing long term plans. The improvements will come from different agencies over differing time periods, and the final report created by the RSA will provide a guideline for ensuring connectivity between the different projects on or near refuge roads.

### Project Funding

In order to conduct the RSA, the refuge received a grant from the Paul S. Sarbanes Transit in Parks Technical Assistant Center (TRIPTAC). TRIPTAC used one of its partner organizations—Vanasse Hangen Brustlin (VHB)—to serve as a consultant on the project.

### Organization

The transportation scholar at the refuge invited participants, collected and aggregated data, and organized the schedule for the two day road site observations. A consulting team from VHB with RSA expertise assisted with observations and prepared the final report.

## Study Area



The study area was defined as the road sections between the two signalized intersections nearest the refuge entrance and included the area around the refuge entrance itself.



- A. The intersection at Gateway and Thornton Avenues
- B. The refuge entrance
- C. Road section 1 from Gateway Avenue to the refuge entrance.
- D. Road section 2 from Thornton Avenue to Willow Street

## Data Collection & Site Observations

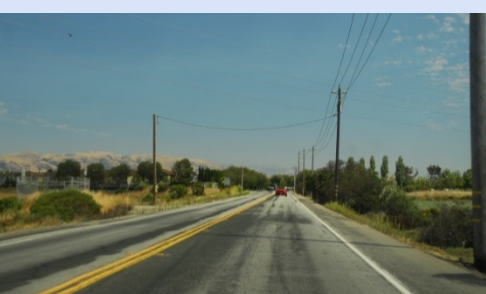
### Pedestrians and bicycle count over a three day period

Period	Pedestrians	Bicyclists	Peds + Bikes
Weekday AM Peak	10	32	42
Weekday PM Peak	4	60	64
Sunday PM Peak	18	29	47
Total	32	121	153

### Collision map sample: A description of the 6 recorded collisions at Thornton Avenue and Gateway Boulevard from 2008 - 2011



### Site Observations



Above photos courtesy of VHB and used with permission.

### RSA Schedule

#### Day One: August 6, 2013

- 9:00 - 9:30 Introduction to RSA Process
- 9:30- 10:00 Project Objectives
- 10:15-12:00 Initial field review
- 1:00 -3:30 Detailed field review
- 3:30 - 5:30 PM peak period field review
- 5:30 - 6:30 Discussion
- 8:30 - 9:30 Nighttime field review

#### Day Two: August 7, 2013

- 7:30-12:00 Detailed Site Review
- 1:00 - 3:00 RSA Team Workshop Summary
- 3:30 - 4:30 Preliminary Findings Meeting

## Recommendations



Diagram courtesy of VHB and used with permission.

The RSA report divided recommendations into two categories, as summarized below:

### Short Term

- Fix an incorrectly installed divided road sign.
- Trim bushes along the road side that obstruct visibility.
- Change the configuration of the Cargill Parking lot.
- Change the signal timing on the traffic signals to allow clearance by bicycles.

### Intermediate

Possible intermediate term improvements include:

- A. Install a formal crossing on the south leg of the intersection.
- B. Install a 2-way pedestrian facility connecting a new access point to the new crossing at Gateway Boulevard.
- C. Formalize Refuge access points.
- D. Install bike lanes on both sides of roadway in sections with no existing bike facilities.
- E. Consider crossings on Thornton Avenue at Hickory Street.
- F. Install a 2-way pedestrian facility connecting the new access point to Willow Street.

## Next Steps

### Follow-up Meeting

The RSA team met for a follow up meeting on October 29, 2013. The various stakeholders discussed the proposals in the draft RSA and which areas they considered to be the highest priority. After the meeting, each member submitted comments for incorporation into the final RSA report. After the final report is released, the refuge will meet with each of the stakeholders to discuss implementation timelines.

### Project Coordination

The RSA process brought together agencies responsible for road sections beyond the RSA study area and opened up discussions about how improvements in the RSA area will connect with other planned road improvements. The commitment to work together to insure that the pedestrian and cyclist components for future projects are coordinated may prove to be one of the greatest long term benefits of the RSA.

### Stakeholders



The Bay Trail Organization, the City of Newark Public Works Department, the Newark Community Development Group, the Newark Police Department, Refuge Law Enforcement, Fish & Wildlife Service Region 8 Administration, Don Edwards San Francisco Bay National Wildlife Refuge Visitor Services, and the Aloft Hotel, the nearest business to the refuge.