

**Irvington High School**  
**Fremont School Traffic Safety Assessment**  
**Technical Memo**

November 2017


Prepared by Alta Planning + Design



# Irvington High School

A Traffic Safety Assessment was conducted at Irvington High School during the morning arrival on Thursday, November 2, 2017. The assessment was attended by representatives from the City of Fremont, Alta Planning + Design, and Irvington High staff.

## School Information

Address	41800 Blacow Road Fremont, CA 94538
Morning Bell(s)	M, Tu, F: 8:00 AM W, Th: 8:00 AM
Afternoon Bell(s)	M, Tu, F: 3:05 PM W, Th: 3:05 PM
Grade Levels	9-12
Enrollment	2,249
School Type (neighborhood or magnet)	Enrollment Boundary
Students' Proximity to School (Number of students)	Less than ¼ mile (5-minute walk): 300 Between ¼ and ½ mile (5- to 10-minute walk): 1,000 Between ½ and 1 mile (10- to 20-minute walk): 700 Greater than 1 mile (more than 20-minute walk): 700
Participating School in Alameda County Safe Routes to Schools?	No
Student Travel Mode Info (Percentage of students)	<b>School Estimate:</b> Walking: 10% Biking: 7% School bus: 10% Transit: 10% Carpool: 5% Family Vehicle: 50% Other: 0%
Does the school have bike racks? What is the capacity? Is it secure bike parking?  On a typical day, what percentage of racks are used?	Yes. Capacity is about 50 bikes.  Racks are near capacity most days.  

How do school and transit buses interact with the school?	Buses are separated from primary drop-off loop
Does the school have special pick-up/drop-off policies/procedures?	The drop-off loop is managed by campus supervisors and assistant principals

Irvington High School is located at the intersection of two arterials in Fremont: Grimmer Boulevard and Blacow Road. Most school access occurs along Blacow Road, with secondary access along Carol Avenue to the north. Irvington High has a high volume of both student drivers, drop-off, and public transit. Some students bicycle to school, but road conditions and driver behavior make it very difficult for these students to use the existing bike lanes.

Between 2011 and 2015 there were 6 pedestrian-involved collisions (including one fatality) and 2 bicycle-involved collisions within a ¼ mile of the school and 2 pedestrian-involved collisions and 7 bicycle-involved collisions between a ¼ and ½ a mile of Irvington High School. Most of these collisions occurred along Blacow Road.

## Existing Conditions

The following existing conditions were observed or reported by participants during the walk audit.

### 1. Grimmer Boulevard & Grimmer Boulevard/Blacow Road

- ◆ Grimmer Boulevard is the primary route that students travel if they are coming from the south, including students walking to school and those walking from nearby bus stops.
- ◆ The bike lane/curb space was observed to be consistently blocked by cars pulling to the curb to drop off students.
- ◆ Bicyclists attempting to cycle along Grimmer Boulevard either had to weave through traffic or dismount and walk on the sidewalk. There are too many pedestrians for students to ride their bike on the sidewalk.
- ◆ AC Transit has a stop for route 623 near the intersection, but due to the congestion, each of the observed runs alighted students before the actual stop. It would have taken the bus several minutes to slowly reach the stop. There are a significant number of students who use these buses.
- ◆ The drop-offs, combined with the transit users, resulted in a large volume of pedestrians on the east sidewalk. Pedestrians were also observed crossing Grimmer Boulevard, approaching from the west.

- ◆ There is a gas station at the southeast corner of the Grimmer Boulevard/Blacow Road intersection and multiple cars were observed cutting through the gas station to get from Grimmer to Blacow and avoid the intersection.



*Left: The Blacow Road/Grimmer Boulevard intersection from the southeast corner.  
Right: Grimmer Boulevard south of Blacow Road (looking south) immediately after the AC Transit bus alighted students short of the formal stop.*



*Left: Grimmer Boulevard, looking towards the Blacow Road intersection.  
Right: The nearside AC Transit stop next to the gas station.*

## 2. Blacow Road

- ◆ On the south side of Blacow Road (opposite the school), some drop-off was observed along the curb, but not to the same extent of volume observed along Grimmer Boulevard.
- ◆ The sidewalk on the north side of the street (in front of the school) was observed to be narrow for the volume of pedestrian traffic that this segment of the street receives.
- ◆ Westbound traffic backed-up as cars waited to enter the student parking lot or drop-off loop.
- ◆ Walk audit participants reported that some cars stopped along the curb to drop-off students. Although the curb is signed as a “No Stopping” area, the curb is not painted

red. Due to frequent curb conflicts, bicyclists are forced to either weave between cars or ride on the sidewalk

### 3. Blacow Road/Greenpark Drive

- ◆ This intersection is signalized and has a marked transverse crossing across Blacow Road.
- ◆ Walk audit participants observed that cars regularly encroach on the crossing, stopping in the pedestrian ROW. This was especially true for cars turning left from Greenpark Drive onto Blacow Road.



*Looking south from the school at the Blacow Road/Greenpark Drive intersection.*

### 4. Blacow Road/Sherwood Street

- ◆ This intersection has a history of bicycle-involved collisions.
- ◆ Walk audit participants reported that due to the volume of pedestrians and westbound vehicle traffic, very few cars could complete any southbound movements per cycle. Because parking is allowed close to the intersection, there is not enough space for a second lane or defacto turn lane.

### 5. Carol Avenue/Field Path

- ◆ Carol Avenue provides an alternative drop-off location to the main school entrances along Blacow Road. The Carol Avenue entrance is underutilized; walk audit participants and school staff reported that a relatively small number of students enter campus from the back.
- ◆ There are three existing speed humps along Carol, in addition to two transverse crosswalks at the Thurston Street intersection
  - The speed hump pavement markings do not currently meet CA MUTCD standards
- ◆ Currently there is a dirt pathway that links Carol Avenue to main section of campus through the athletic fields



- Walk audit participants and school staff reported that during inclement weather the path is muddy and unusable.



*The school-side of the field path. The paved path transitions to dirt further north.*

## Recommendations

Recommendations to improve infrastructure or operations surrounding Irvington High School can be seen on the conceptual improvement plan found on the following page. Engineering cost estimates for the infrastructure recommendations are also provided.

The following improvements are recommendations for policy and program implementation at Irvington High School to increase safety and active commutes to school.

### Policy & Program Recommendations

- ◆ Distribute Recommended Walk/Bike Maps to students and their families in an effort to promote walking and biking to school on suggested routes. Safety tips are also included on these maps to promote good behavior among bicyclists, pedestrians, and drivers.
- ◆ Consider working with AC Transit to address route efficiencies for the Route 623 stop near Grimmer Boulevard and Blacow Road. For example, consider moving the stop to north of intersection on Grimmer Boulevard to avoid heavy curb traffic.
- ◆ Work with parents to connect them with others who live nearby to increase the number of students carpooling, which may reduce the number of vehicles coming to campus. Similarly, Walking School Buses and Bike Trains can be established with the same type of coordination.
- ◆ Continue to promote the use of the AC Transit buses as a method of getting to and from school.

- ◆ Join the Alameda County Safe Routes to School (SR2S) program and participate in events that encourage and educate students about walking, bicycling, and carpooling to campus.
  - Participate in SR2S evaluations each fall and spring to monitor progress on mode shift goals.
- ◆ Send regular reminders to parents and students regarding the drop-off and pick-up location options and encourage parents to use the relatively underutilized drop-off space along Carol Avenue. Remind parents to not drop-off their students along Grimmer Boulevard or Blacow Road, not block bike lanes, and not stop in “No Stopping” zones.
- ◆ Consider working with the Irvington Community Center, across Blacow Road, to use their parking area as an alternative drop-off/pick-up location.





**Fremont School Traffic Safety Assessment  
Irvington High School  
Preliminary Cost Estimate**

Alta Planning + Design

6/4/2018

**Traffic Safety Improvements - City of Fremont Recommendations**

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	COST
1	Mobilization	1	LS	\$48,200	\$48,200
2	Traffic Control	1	LS	\$48,200	\$48,200
3	High Visibility Crosswalk	10	EA	\$2,000	\$20,000
4	Speed Hump Pavement Markings (Renew)	3	EA	\$500	\$1,500
5	Advance Stop Markings	2	EA	\$100	\$200
6	Trim Vegetation	1	LS	\$500	\$500
7	Class IV Bike Facility*	1	LS	\$300,000	\$300,000
8	Widen Concrete Sidewalks	8,000	SF	\$20	\$160,000
9	All Way Stop Intersection and Study	1	EA	\$6,000	\$6,000
10	Painted Curb Marking [Optional]	1	LS	\$800	\$800
11	Pedestrian Lighting Allowance [Optional]	1	LS	\$250,000	\$250,000

<b>ALTERNATIVE 2</b>	<b>SubTotal Items (Optional Items Not Included)</b>	<b>\$584,600</b>
	CONSTRUCTION CONTINGENCY	20% \$116,900
	<b>Total</b>	<b>\$701,500</b>
<b>ALTERNATIVE 2</b>	<b>SubTotal Items (Optional Items Included)</b>	<b>\$835,400</b>
	CONSTRUCTION CONTINGENCY	20% \$167,100
	<b>Total</b>	<b>\$1,002,500</b>

\*Cost may vary depended upon extents of facility

**Traffic Safety Improvements - Fremont Unified School District Recommendations**

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	COST
1	Mobilization	1	LS	\$7,500	\$7,500
2	Traffic Control	1	LS	\$7,500	\$7,500
3	DG Path	7,200	SF	\$10	\$72,000
4	Painted Curb Marking	1	LS	\$3,000	\$3,000
	<b>SubTotal Items</b>				<b>\$90,000</b>
	CONSTRUCTION CONTINGENCY			20%	\$18,000
	<b>Total</b>				<b>\$108,000</b>

**Traffic Safety Improvements - All Recommendations**

<i>City of Fremont Recommendations (Without Optional Items)</i>	<i>Total</i>	<i>\$701,500</i>
<i>Fremont Unified School District Recommendations</i>	<i>Total</i>	<i>\$108,000</i>
<b>All Recommendations</b>	<b>Total</b>	<b>\$809,500</b>
<i>City of Fremont Recommendations (With Optional Items)</i>	<i>Total</i>	<i>\$1,002,500</i>
<i>Fremont Unified School District Recommendations</i>	<i>Total</i>	<i>\$108,000</i>
<b>All Recommendations</b>	<b>Total</b>	<b>\$1,110,500</b>



# Irvington High School DRAFT Fremont

## Safe Routes to Schools Improvement Plan

Site Assessment held November 2017

- 1 Grimmer Boulevard/Blacow Road & Grimmer south of Blacow Road**
  - The City and School District should coordinate with AC Transit and consider relocating the NB bus stop for route 623 on Grimmer Boulevard to the far (school) side of the intersection
  - Upgrade existing transverse crosswalks to high visibility crosswalks
  - Widen sidewalk using existing landscaped parkway to accommodate high pedestrian volumes
  - Upgrade existing Class II bike lanes to Class IV separated bikeways
- 2 Blacow Road**
  - Upgrade existing Class II bike lanes to Class IV separated bikeways
  - Widen sidewalk using existing landscaped parkway to accommodate high pedestrian volumes
- 3 Blacow Road/Greenpark Drive**
  - Install advance stop pavement markings at the eastbound approach
  - Enhance the existing crosswalk across Blacow Road to high visibility
- 4 Blacow Road/Sherwood Street**
  - Install advance stop markings at the southbound approach
  - Enhance existing transverse crossing to high visibility crossing
  - Trim vegetation around both student parking lot driveways
  - Consider restricting parking near intersection approach to allow for a formal second lane or a defacto turn lane
- 5 Carol Avenue & Carol Avenue/Thurston Street**
  - Widen sidewalk using existing landscaped parkway or part of school field to accommodate high pedestrian volumes
  - Ensure street lights across the street provide sufficient lighting, if not install pedestrian level lighting on school side of street
  - Enhance the two existing transverse crosswalks to high visibility crosswalks
  - Update speed hump markings to meet current CA MUTCD standards
  - Conduct an all-way stop analysis at this intersection
- 6 Grimmer Boulevard/Carol Avenue**
  - Enhance the two existing transverse crosswalks to high visibility crosswalks
- 7 Blacow Road**
  - Paint red curb along Irvington High's frontage along Blacow Road
- 8 Field Pathway**
  - Upgrade existing dirt path to crushed gravel or other weather resistant surface



The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.

0 200 ft



**Fremont**



Improvements not to scale