HAWKS, RRFBs and Other Pedestrian Crossings

NorCAL ITE Section Lunch
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Todd Taylor, P.E., PTOE
City of Scottsdale
Senior Traffic Engineer
Mid-Block Pedestrian Crossing Options

• Pedestrian Refuge, raised crossing, neck down crossing, high visibility crosswalk
• Rectangular Rapid Flashing Beacon (RRFB) (no PPH requirement)
• High intensity activated crosswalk (HAWK) Pedestrian Hybrid Beacon (PHB) (20 PPH)
• Grade Separated Crossings
Pedestrian Refuge Example
Camelback Raised Crossing

Scottsdale Fashion Square

Old Town Entertainment District

San Francisco Giants Spring Training Fields
Rectangular Rapid Flashing Beacon (RRFB)
Features of an RRFB
How a RRFB Operates

Motorists stop behind the advance yield markings until pedestrians and bicycles have cleared the intersection.

RRFB will flash when pedestrian is present.

Cyclists in the roadway yield to pedestrians and bicycles in the crosswalk.
Highland RRFB Before
Highland RRFB
64th Street and Osborn RRFB
64th Street and Osborn RRFB
64th Street and Osborn RRFB
HAWKs and PHBs

- The Disappearing HAWK Man
Chaparral HAWK
Chaparral HAWK
Pima Road and Jomax Road HAWK (PHB)
Scottsdale and Jomax HAWK (PHB)
Scottsdale and Jomax HAWK (PHB)
Pedestrian Crossing Design Question?

Equestrian/Pedestrian/Bike Trail

50 MPH
Scottsdale and Dixileta HAWK (PHB)
Pima and Dixileta HAWK (PHB)
Scottsdale Road and Dixileta Drive
Location – Scottsdale Road

- Westin Kierland
- Kierland Commons
- Greenway-Pkwy.
- Butherus Dr. Scottsdale Road
- Greenway-Hayden Loop
- Scottsdale Quarter
Why HAWK Is Needed
Scottsdale Quarter PHB (HAWK)
HAWK At Scottsdale Quarter
Finished Product
Finished Product
Finished Product
Double HAWK Pedestrian Crossing
(aka PTERODACTYL)

Pedestrian Transfer by Effective Refuge On Displaced Area Controlled Through Yielding Lanes
Double HAWK Pedestrian Crossing (aka; PTERODACTYL)

CONCEPT

<table>
<thead>
<tr>
<th>What Drivers See</th>
<th>What Pedestrians See</th>
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<tbody>
<tr>
<td>1. DARK</td>
<td>Push the button.</td>
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<td>2. FLASHING</td>
<td></td>
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<tr>
<td>3. STEADY</td>
<td>Start crossing.</td>
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<tr>
<td>4. STEADY</td>
<td>Continue crossing.</td>
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<td>5. ALTERNATING</td>
<td></td>
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<td>6. DARK</td>
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Scottsdale Quarter HAWK Counts

- Just met the Warrants at 20 PPH in 2010
- November 2011 Pedestrian Counts showed 391 PPH during the highest hour
- November 2012 Pedestrian Counts showed 606 PPH with 4,710 Pedestrians on Saturday from 9 a.m. to 9 p.m. (vehicular volume on Scottsdale Road was approximately 38,000)
HAWK Crossing Safety

- Signalized Intersection or HAWK? Click Here
HAWK Collision Data
Grade Separated Crossings

- Enhanced Crossings: 110 total
- Grade-Separated Underpasses: 40
- Tunnels: 50 *
- Bridges: 21

* 3 tunnels are closed pending path construction
Grade-Separated Crossings

McDowell Road Underpass west of Crosscut Canal
Grade-Separated Crossings

Soleri Bridge and Plaza – Arizona Canal
Grade-Separated Crossings

Sweetwater Bridge over the Loop 101
Grade-Separated Crossings

Goldwater Underpass south of Arizona Canal – Looking west
Grade-Separated Crossings

Thompson Peak Parkway Underpass west of 90th Street
Grade-Separated Crossings

Indian Bend Wash – underpass during storm event
Scottsdale Elite Pedestrian Crossing
Camelback Road Pedestrian Crossing
Questions?

Todd Taylor, P.E., PTOE
City of Scottsdale
Senior Traffic Engineer
Ttaylor@ScottsdaleAZ.gov