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Special Crash Investigations: Remote Move-Over-Law Crash Investigation; Vehicle: 2016 Dodge Charger Pursuit; Location: Nevada; Crash Date: May 2021

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16. Abstract This report documents the remote investigation of a "Move-Over-Law" crash. The crash occurred at night in May 2021 in Nevada. The crash site was designated as a north/south U.S. highway but was oriented east/west at the crash site. Conditions at the time of the crash were dark with artificial lighting and dry with clear visibility. The posted speed limit was 105 kmh (65 mph). The struck vehicle was a 2016 Dodge Charger Pursuit police vehicle, and the striking vehicle was a 2006 Ford Escape. At the time of the crash, the Dodge was unoccupied and stopped, facing west on the right shoulder while police officers investigated a prior crash. The Ford was being driven westbound by a belted 33-year-old female at a police-estimated speed of 89 to 105 kmh (55 to 65 mph). For unknown reasons, the Ford departed the roadway on the right edge and traveled onto the right shoulder where its front plane struck the Dodge's back plane. Both vehicles came to rest near the impact area. Following the crash, the driver of the Ford refused to submit to field sobriety testing and was subsequently arrested for impairment due to alcohol. No police officers were injured in the crash. The driver of the Ford sustained a police-reported "C" type (claimed) injury but was not transported. Both vehicles were towed due to damage.			
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**Special Crash Investigations
Remote Move-Over-Law Crash Investigation
Case No. DS21006
Vehicle: 2016 Dodge Charger Pursuit
Location: Nevada
Crash Date: May 2021**

Background

This report documents the remote investigation of a crash selected by the Special Crash Investigations (SCI) group of the National Highway Traffic Safety Administration to be included in their “Move-Over-Law” investigations. The investigation used data obtained from local authorities, police reports, on-scene police photos, and other sources. The source material was used to document the facts and reconstruct the crash relative to Nevada’s Move-Over Law requiring drivers to slow down, proceed with caution, and when possible, move to the far lane when passing an emergency response vehicle on the roadside with emergency lights activated. This investigation was initiated by SCI in response to a notification sent by the SCI team containing an online news release. The SCI team obtained the police report and on-scene police photos in July 2021 and the case was assigned to Dynamic Science, Inc., in August 2021. The SCI team interviewed the on-duty State highway patrol supervisor in December 2021.

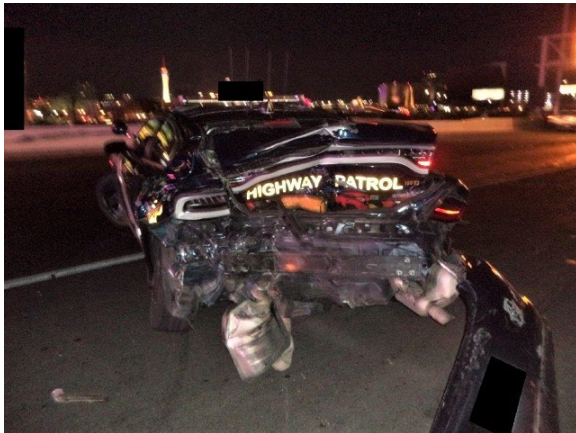


Figure 1. Struck subject vehicle, 2016 Dodge Charger (police photo)



Figure 2. Striking vehicle, 2006 Ford Escape (police photo)

The crash occurred at night in May 2021 in Nevada. The crash site was designated as a north/south U.S. highway but was oriented east/west at the crash site and is referred to as such in this report. Conditions at the time of the crash were dark with artificial lighting from overhead streetlamps, and dry with clear visibility. The posted speed limit was 105 kmh (65 mph). The struck subject vehicle was a 2016 Dodge Charger Pursuit police vehicle (Figure 1), and the striking vehicle was a 2006 Ford Escape (Figure 2). At the time of the crash, the Dodge was unoccupied and stopped facing west on the right shoulder while police officers investigated a prior crash nearby. The Ford was being driven westbound by a belted 33-year-old female at a police-estimated speed of 89 to 105 kmh (55 to 65 mph). For unknown reasons, the Ford departed the roadway on the right edge and traveled onto the right shoulder where its front plane struck the Dodge’s back plane. Both vehicles came to rest near the area of impact. According to the police report, the driver of the Ford refused to submit to field sobriety testing and was

subsequently arrested for impairment due to alcohol. No police officers were injured in the crash. The driver of the Ford sustained a police-reported “C” type (claimed) injury but was not transported. Both vehicles were towed due to damage.

Summary

Crash Site

The crash site was in the westbound lanes of a two-way physically divided east/west U.S. highway. The roadway had three westbound asphalt lanes each measuring approximately 3.7 m (12 ft) wide, separated by dashed white painted stripes. The roadway was bordered on the left edge by a solid yellow painted fog line, a paved asphalt shoulder measuring approximately 1.5 m (5 ft) wide, and a concrete jersey barrier. It was bordered on the right edge by a solid white painted fog line, a paved asphalt shoulder measuring approximately 6.1 m (20 ft) wide, and a concrete jersey barrier. The roadway was straight with a slightly descending slope. The posted speed limit was 105 kmh (65 mph). The crash site was within an interchange area and next to a gore between the right lane and right exit ramp. Conditions at the time of the crash were dark with artificial lighting from overhead streetlamps, and dry with clear visibility (Figure 3). Additionally, the Dodge police vehicle's lights were activated. The only known vehicle present on the shoulder was the Dodge police vehicle that had stopped in response to a prior incident. It was unknown if any other stopped vehicles were present; none were mentioned in the police report or visible in on-scene photos. A crash diagram and crash site satellite view are included at the end of this report.

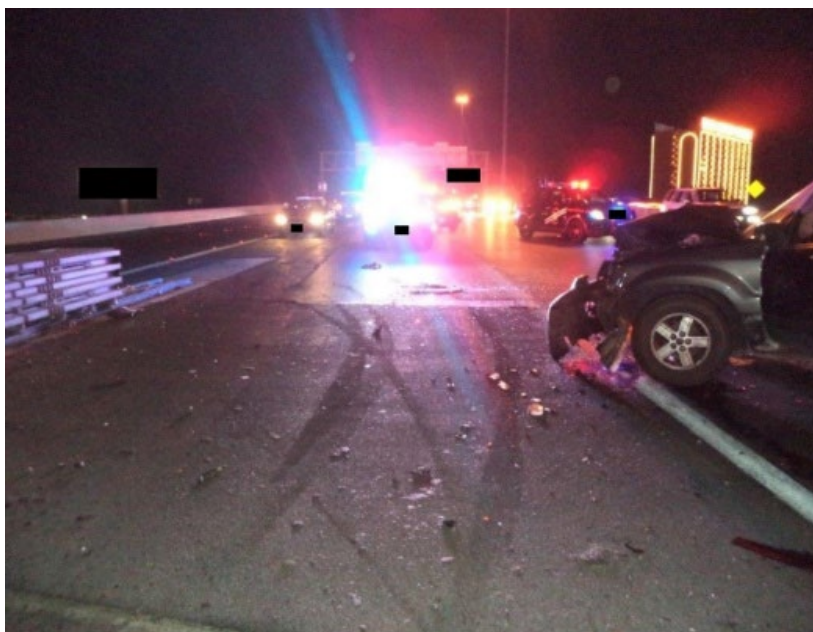


Figure 3. Lookback view from area of impact, looking east (police photo)

Pre-Crash

A Dodge police vehicle was stopped facing west in the right shoulder. The vehicle's rear-facing emergency lights were activated. The driver, a male State trooper, had stopped and exited the vehicle for the purpose of investigating a prior incident. The Ford was driven westbound by a



Figure 4. Final rest location looking west, 2016 Dodge Charger Pursuit (police photo)



Figure 5. Final rest position looking east, 2006 Ford Escape (police photo)

belted 33-year-old female in the first lane from the right at a police-estimated speed of 89 to 105 kmh (55 to 65 mph). According to the police report, the driver of the Ford failed to maintain her travel lane and the vehicle entered the right shoulder.

Crash

The crash included a single event. After entering the right shoulder, the Ford's front plane struck the Dodge's back plane. Impact forces pushed the Dodge forward in a westbound trajectory and counterclockwise rotation. It came to rest facing south in the right shoulder and first lane from the right (Figure 4). The Ford traveled westbound in a post-impact trajectory while rotating clockwise. It traveled approximately 3 m (10 ft) and came to rest facing north in the first and second lanes from the right (Figure 5).

Post-Crash

The driver of the Ford had a police-reported "C" (claimed) lower extremity injury. There was no indication in the police report that she was treated or transported. The driver refused to perform field sobriety testing and was subsequently arrested for DUI. By her own admission, police determined she was positive for alcohol and unspecified drug involvement. She was taken into police custody and booked for unspecified violations. Both involved vehicles sustained police-reported major severity damage and were towed on orders of the police.

Move-Over Discussion

According to a State government website, since 2003 Nevada law has required drivers to slow down, proceed with caution, and when possible, move to the far lane when passing an official emergency response vehicle stopped on the roadside with its flashing amber lights activated. Beginning July 1, 2017, the law expanded to lawfully require drivers to do the same for State department of transportation vehicles stopped on the roadside with their flashing amber or non-flashing blue lights activated. Drivers found guilty of violating the State's Move-Over Law can be charged with a misdemeanor. Since October 2017, the Move-Over Law has further applied to any traffic incident including stalled vehicles and debris on the roadway. According to an online

source, Nevada's Move-Over Law fine is \$395.¹ If the offense occurs in a work zone, the fine is up to \$790. If the violation results in injury or death, the fine may be higher. In addition to the fine, a violation also includes the possibility of jail time.

It is unknown if the driver of the Ford was familiar with the State's Move-Over Law and the actions required of drivers in such circumstances. Police determined the primary driver factor in this crash was that the driver of the Ford had been drinking alcohol, and the primary vehicle factor was a failure to maintain its travel lane.

2016 Dodge Charger Pursuit

Description

The struck subject vehicle was a 2016 Dodge Charger Pursuit State Police vehicle identified by the Vehicle Identification Number (VIN) 2C3CDXATXGHxxxxxx. It was a full-size 4-door sedan with a manufacture date of July 2016. Standard equipment for the vehicle included a 5.7-liter 8-cylinder gas engine, rear-wheel drive, automatic transmission, power steering, tilt and telescoping steering functionality, and power windows. The vehicle manufacturer recommended size P245/45R20 tires for the front and rear. The Dodge was a fully marked police vehicle, blue in color. It had retroreflective yellow lettering on the left, right, and back planes. The lettering "HIGHWAY PATROL" was on the left and right front-door panels and above the bumper on the back plane. The lettering "STATE TROOPER" was on the left- and right-front fenders, and "DIAL *NHP" was on the left and right-rear quarter-panels. White retroreflective stripes in a diagonal pattern were positioned on the left- and right-front door panels.

Emergency Lighting Discussion

The Dodge Charger was a patrol vehicle equipped with an array of emergency lighting features. It had a Federal Signal Police Integrity roof-mounted LED light bar,² red and blue forward-facing and rear-facing lighting, two forward-facing amber light bars mounted on the windshield, and 4-way amber emergency flashers on the front and rear. When stopped, the vehicle's brake lamps flash in an alternating pattern. White LED lamps were installed on the front push bar.

The SCI team interviewed an on-duty highway patrol supervisor to obtain the State Highway Patrol's emergency lighting protocols. On-scene police images were used to obtain emergency lighting equipment and activation specific to this crash. According to the police officer interview, State troopers stopped on the side of the roadway while working an incident or traffic stop must have emergency lighting activated; however, during a DUI investigation, they turn their forward-facing emergency lighting off. Activating the vehicle's 4-way amber emergency flashers is not a requirement by the agency while working an incident or traffic stop.

Based on department minimum requirements for roadside traffic stops, the Dodge had rear-facing red and blue emergency lighting activated. It was unknown if additional emergency lighting was activated.

Exterior Damage

The Dodge sustained direct and induced damage to the back plane, and induced damage to the left, right, top, and bottom planes. The SCI team used on-scene police photos to assess the

¹ www.askadamskutner.com/nevada-law-resources/nrs-484b-607-nevada-move-over-law

² Federal Signal Corporation, Oak Brook, Illinois. www.fedsig.com/product/police-integrity

damage. Direct damage to the back plane appeared to be located laterally in the left and center sections, and vertically from the bumper to the beltline. The back bumper fascia was displaced, the left quarter-panel was crumpled, the trunk lid was crumpled, and the backlight was disintegrated. The left-rear axle, wheel, and tire were displaced forward, shortening the left wheelbase. The estimated collision deformation classification (CDC)³ for the Dodge in Event 1 was 07BYEW2. A WinSMASH Photo-CDC run calculated a total delta-V in the 25 to 40 kmh (16 to 25 mph) range.

Event Data Recorder

The Dodge had an air bag control module (ACM) with event data recorder (EDR) capability. Police did not provide SCI with an EDR report.

NHTSA Recalls and Investigations

VIN-based NHTSA recall searches in January 2022 and August 2023 revealed no unrepaired recalls for this vehicle.

³ Collision Deformation Classification, SAE J224, May 2022.

2006 Ford Escape

Description

The 2006 Ford Escape was identified by police using the VIN 1FMYU02Z56Kxxxxxx. The manufacture date was unknown. The Ford was a 4-door compact utility vehicle with front-wheel drive and five-passenger seating. Standard equipment included a 4-cylinder, 2.3-liter gas engine and automatic transmission. The vehicle manufacturer recommended size P225/75R15 tires for the front and rear. The vehicle's ACM was supported by the Bosch Crash Data Retrieval system. It was unknown if police imaged the vehicle's crash data.

Exterior Damage

The Ford sustained direct and induced damage to the front, left, right, and top planes. The SCI team used on-scene police photos to assess the damage. Direct damage to the front plane appeared to be located laterally in the middle and right sections, and vertically from the bumper to the beltline. The front bumper fascia was displaced at the right aspect, and the left and right quarter-panels and hood were crumpled. The right-front tire appeared to be restricted. The estimated CDC for the Ford in Event 1 was 12FZEW3. A WinSMASH Photo-CDC run calculated a total delta-V in the 40 to 55 kmh (25 to 34 mph) range.

NHTSA Recalls and Investigations

VIN-based NHTSA recall searches in January 2022 and August 2023 revealed no unrepaired recalls for this vehicle.

2006 Ford Escape Occupant

Driver Demographics

Age/sex:	33 years/female
Height:	Unknown
Weight:	Unknown
Eyewear:	Unknown
Seat type:	Bucket
Seat track position:	Unknown
Manual restraint usage:	Lap and shoulder belt used
Usage source:	Police report
Air bags:	Frontal air bag deployed
Alcohol/drug data:	Per the police report, positive for alcohol, suspected for unspecified drug(s)
Egress from vehicle:	Unknown
Transport from scene:	None
Type of medical treatment:	Assessed on-scene

Driver Kinematics

The driver was belted in a bucket seat. Police reported that she braked prior to impact. She exited the vehicle in an unknown manner.

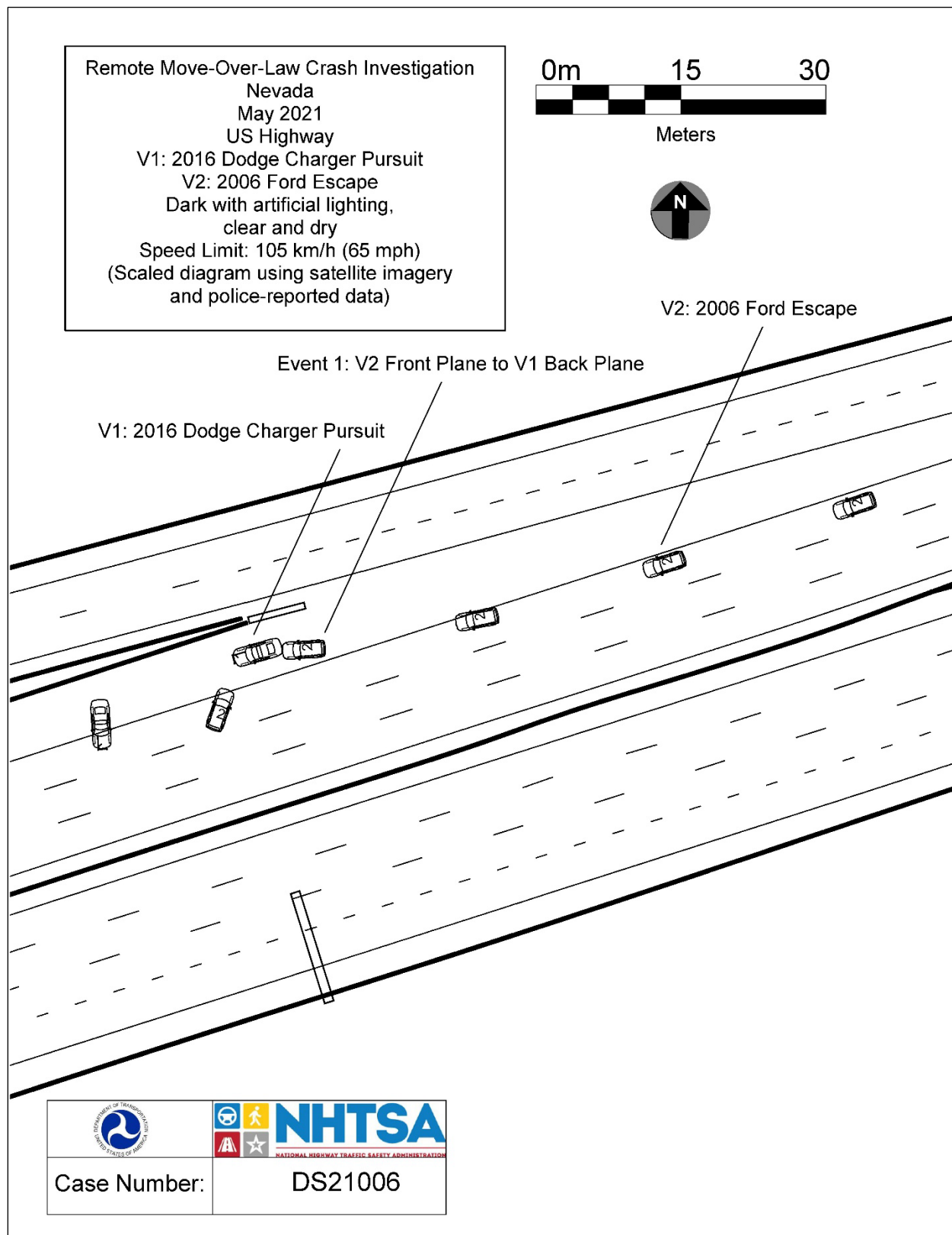
Driver Injuries

The driver reported a claimed injury and was not transported. Her injury status was assessed on-scene. After police determined she was positive for alcohol she was arrested for DUI.

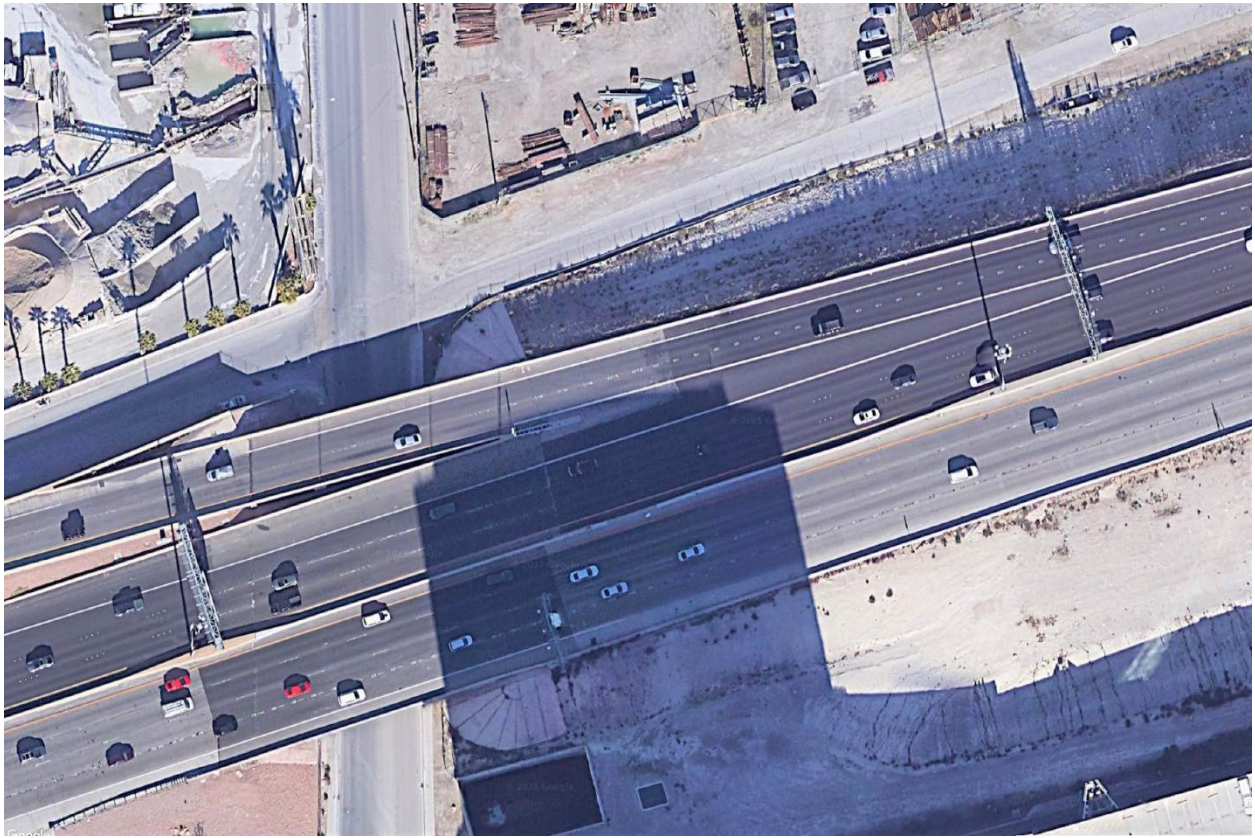
Driver Factors (Striking Vehicle, Police Reported)

Speeding related:	No
Impairment:	Yes
Alcohol presence:	Positive
Alcohol test:	Driver refused
Method of drug determination by police:	Driver admission
Police reported other drug presence:	Positive
Drug test:	Driver refused
Method of drug determination by police:	Driver admission
Physical/mental conditions:	None noted
Driver fatigue:	No
Driver distraction/inattention:	No
Driver illness:	No
Driver's license type/status:	DL/valid
Obstructed view:	No
Violations charged:	DUI

Crash Diagram



Crash Site Satellite View



(Image source: Google Maps ©2023 Maxar Technologies)

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