



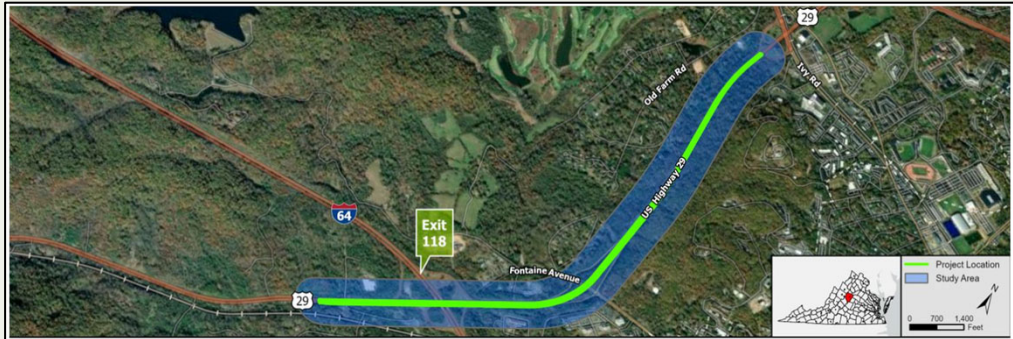
PROJECT PIPELINE NEEDS AND EXISTING CONDITIONS SUMMARY

U.S. Route 29

VDOT District: Culpeper / Locality: Albemarle County and City of Charlottesville

CU-25-01

Sheet 1 of 2



Study Purpose, Goals, and Objectives

To resolve the traffic backup of the dual left-turn lane from US Route 29 southbound to get onto I-64 eastbound. There are significant safety concerns here due to the short turn lane length. The study also aims to improve the small park and ride lot located on Teel Lane, just south of the interchange on the east side of US Route 29 southbound.

VTrans Needs

	Safety Improvement
	Capacity Preservation (Keep traffic flowing smoothly)
	Transportation Demand Management (TDM)
	Rail Reliability
	Bicycle Access
	Pedestrian Access

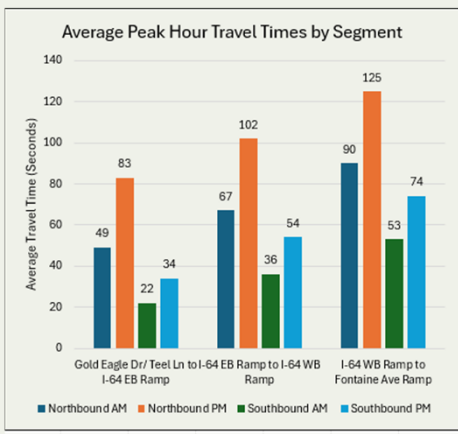
Study Facts

Major Study Intersections	US 29 & I-64
Length of Study Area	2 miles
Classification	Other Principal Arterial/ Freeway
2022 ADT (Average Daily Traffic)	18,000
Speed Limit	55 mph

Safety Needs

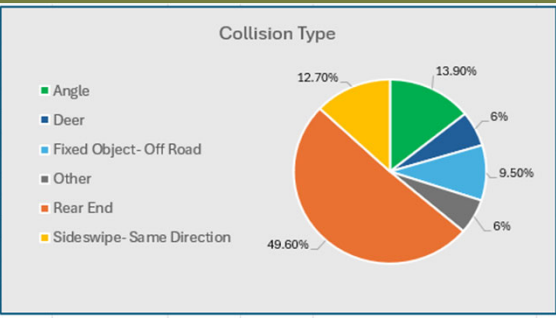
- A total of 252 crashes occurred in the past five years within the study area. Crash numbers have increased in recent years, with two fatalities since 2020—one from a rear-end crash and one from an angle crash.
- Areas of concern within the study area include US 29 at the I-64 EB on-ramp and the US 29 SB merge area with the I-64 WB off-ramp.
- Rear-end crashes make up approximately 50% of the total crashes, particularly with vehicles travelling southbound in the left lane on US 29 in the vicinity of the I-64 WB off-ramp. One (1) resulted in a fatality at the intersection of US 29 SB at I-64 WB Off Ramp Merge Area.
- Multiple crashes have occurred involving vehicles exiting the I-64 WB off-ramp, failing to maintain control, resulting in fixed object off-road crashes.
- There is a crash pattern with vehicles travelling northbound on US 29 colliding with vehicles attempting left turns from US 29 SB to travel onto the I-64 EB on-ramp.
- High rear-end occurrence with vehicles travelling southbound on US 29 in either of the dual left turn lanes, particularly in the evening.

Segment Travel Times



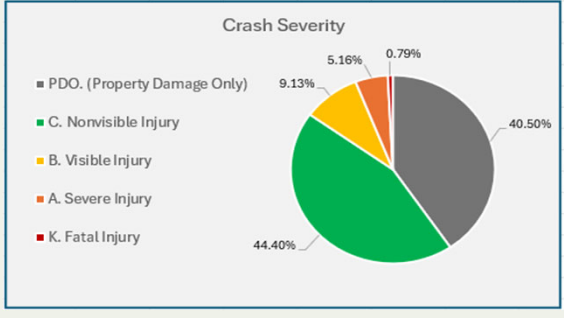
Crash Type

252 Total Crashes (2020-2024)



Crash Severity

252 Total Crashes (2020-2024)





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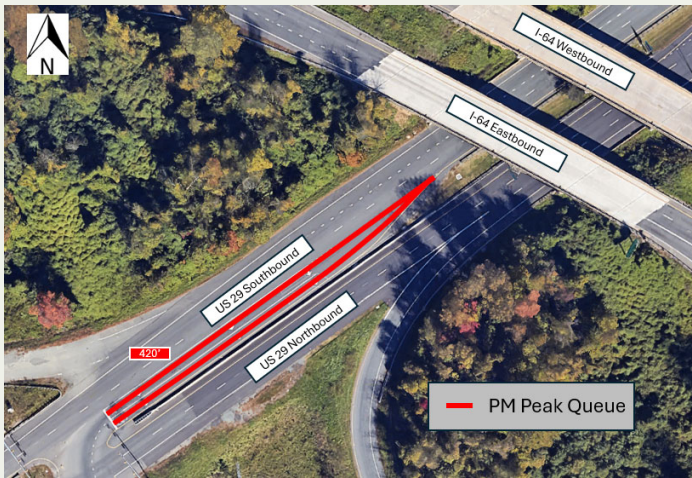
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Sheet 2 of 2

Operations Summary

- Based on HCM analysis using Synchro software, all intersections operate at an overall acceptable LOS D or better during both Peak hours. However, two movements in the corridor operate at LOS E or worse during the PM Peak Hour
 - US 29 & Teel Lane/ Golden Eagle Drive EB Approach (LOS F & delay of 76.0 sec/veh)
 - US 29 & NB Left Turn (LOS E & delay of 72.2 sec/veh)
- Segments of I-64 EB and I-64 WB were analyzed as well. Two segments were found to operate at LOS E or worse during peak hours.
- Queue lengths at the US 29 & SB left turn movement seem to exceed the available storage. During the PM peak, the 95th percentile queue was reported to be 420 feet, exceeding the available storage length of 400 feet.

Level of Service by Intersection	AM	PM
US 29 & Teel Lane/ Gold Eagle Drive	A	A
US 29 & Southbound Left Turn	B	B
US 29 & Northbound Left Turn	A	A



Transit and TDM Needs

- The Teel Lane Park and Ride Lot is located on US Route 29 south of the I-64 interchange. Based on field observations, the park and ride lot had up to 28 vehicles (including 8 working pickup trucks). Parking on the gravel area is permitted only during off-peak (nighttime) hours.

Bike and Pedestrian Access Needs

- No existing bicycle/pedestrian infrastructure along the study corridor
- 8' shared-use-path begins on eastbound Fontaine Avenue
- Rivanna Trail serves the City and surrounding areas

Summary of Needs Identified Through Public Outreach

- Survey dates: June 2nd – June 16th, 2025
- Participants: 451
- Highest ranked areas of concern: capacity preservation, safety, difficulty weaving/merging, rear-end crashes, speeding/ aggressive driving.
- Reasons for travel: shopping/errands (74%), home (54%), work (49%), passing through (37%), entertainment (36%).
- Highlighted mobility issues: difficulty making left turns (56%), lack of turn lanes (44%), difficulty accessing businesses (28%), and poor signal coordination (27%).
- Most travel occurs during weekday peak hours.
- Trucks on US 29 NB have difficulty safely making left turns onto I-64 WB On-Ramp.
- The general consensus opposes signalized entrance to I-64 EB On-Ramp due to backups and short merge length.

Potential Solutions to Evaluate in Phase 2

- Pavement marking and signage improvements
- Revision of existing signals
- Implementing a wide RCUT/ Median U-turn at the Teel Lane Park & Ride to create a safer movement for vehicles exiting I-64 eastbound to head north on US 29.

