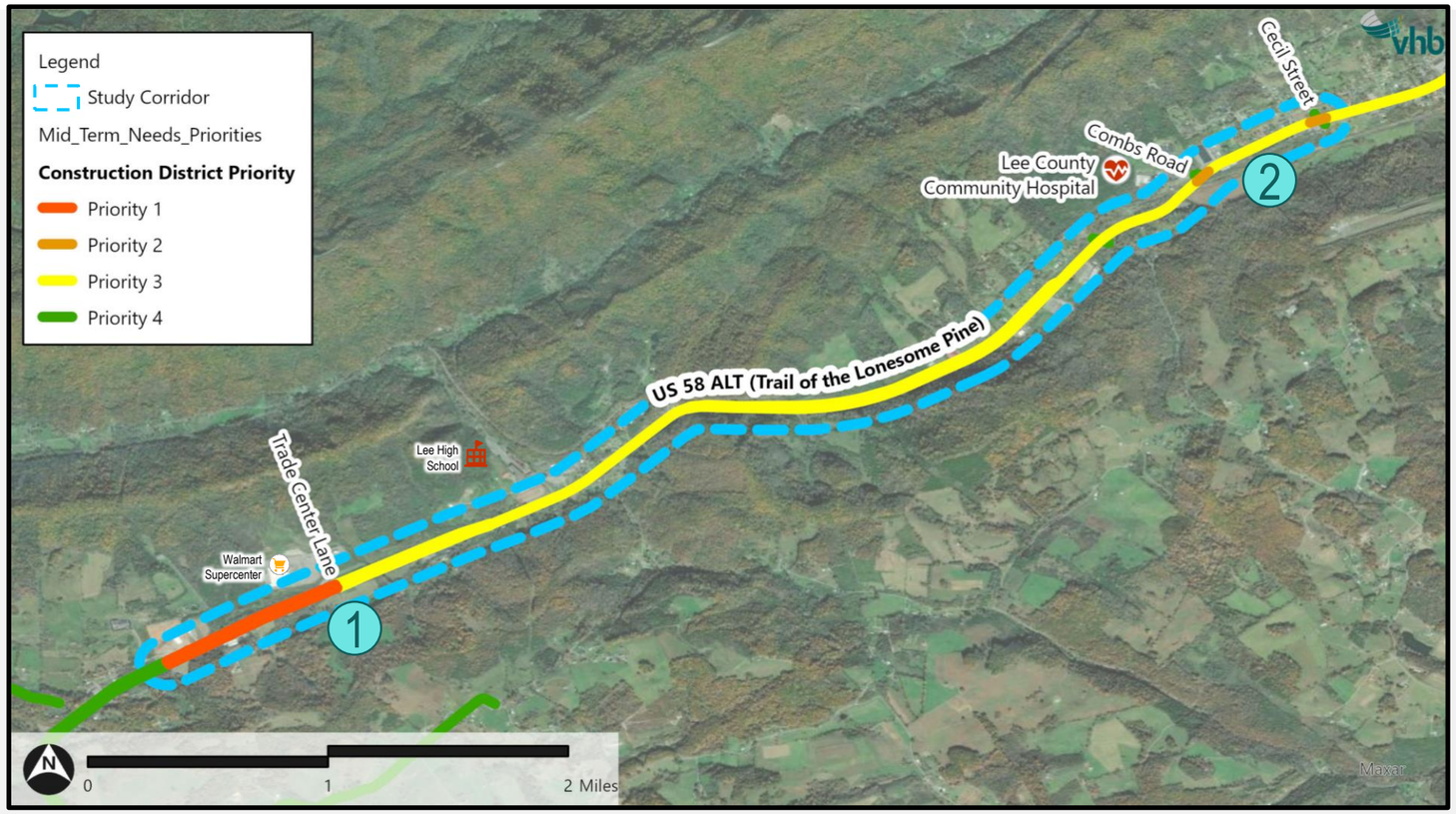
Project Overview | BR-23-10

Alt. US 58 (Trail of the Lonesome Pine Road / W. Morgan Avenue) between Trade Center Lane and Cecil Street



Previously Proposed Projects

1. **Offset left-turn lane project proposed at Trade Center Lane.**

2. **Roundabout proposed at Combs Road and two-way left-turn lane (TWLTL) and sidewalk between Combs Road and Cecil Street.**

Previously Proposed Projects

- These projects were identified and developed during a Pipeline Round 1 Study in 2021-2022.
- These projects were unsuccessfully submitted for SMART SCALE funding in Round 5.

Project Purpose, Goals, & Objectives

Conduct value engineering of previously developed project recommendations.

Focus on improving project benefits, reducing project cost, and defining project risk.

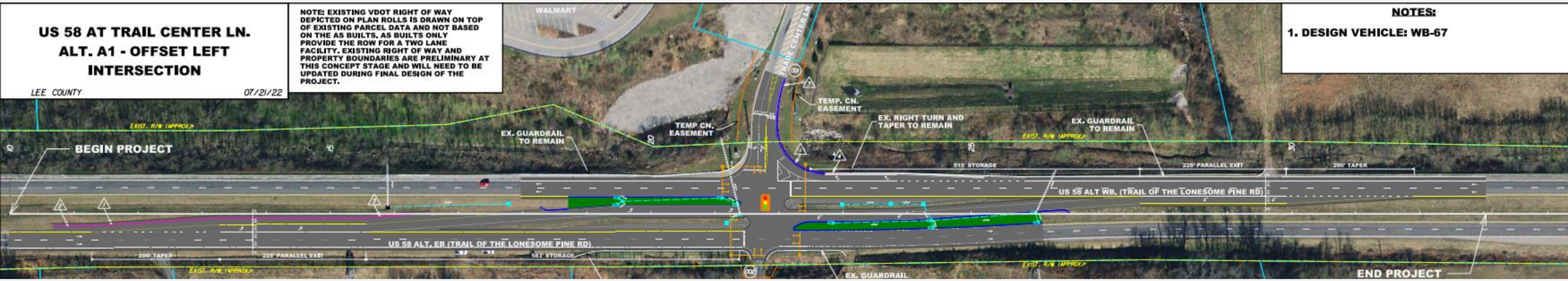
Project Fact Sheet	
VDOT District	Bristol
Locality	Lee County
Functional Classification	Rural Minor Arterial
Speed Limit	55 MPH at Trade Center Lane 35 MPH at Combs Road / Cecil Street
AADT	6,100 at Trade Center Lane 8,400 at Combs Road / Cecil Street

VTrans Needs	
NEED	**PRIORITY**
Road Safety	**High**
Capacity Preservation	**Very High**
Transportation Demand Management (TDM)	**Low**

Project Overview | BR-23-10

Alt. US 58 (Trail of the Lonesome Pine Road / W. Morgan Avenue) between Trade Center Lane and Cecil Street

Project 1 – Offset Left-Turn Lanes – Previous Design Concept



Original Project Development Details

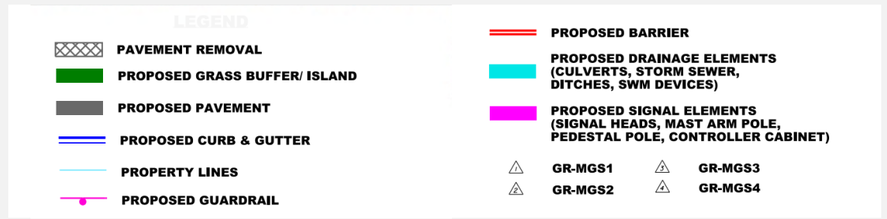
- VTrans Needs
  - District Safety – High
  - Capacity Preservation – Very High / High
- Crash Data
  - 7 crashes between 2015-2019
    - 4 B Injury, 3 PDO
- Operational Analysis
  - EB left-turn volume (2021)
    - 41 AM / 71 PM
  - WB left-turn volume (2021)
    - 0 AM / 2 PM
  - Protected Only, Concurrent Left-Turn Phasing
  - LOS A (AM) and LOS C (PM)
- Submitted SMART SCALE Cost of **$9,996,225**

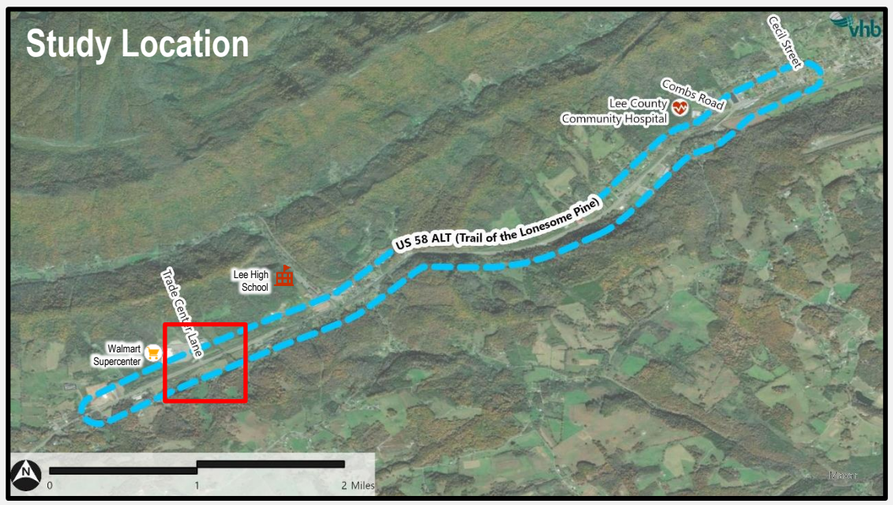
Project Evaluation

- SMART SCALE Scoring (Prior Round)
  - Benefit Score of 0.5, Total Score of 0.5.
  - Only scored in Safety Category.
- Fewer crashes during new study period - 4 crashes between 2018-2022; none are correctable by offset left-turn lanes; Safety scoring anticipated to be lower on potential application resubmittal.

Phase 1 Value Engineering Conclusions

- Project does not appear to address an existing need.
  - Protected only left-turn phasing precludes need for increased sight distance.
  - No operational concerns with existing level of service.
  - Offset left-turn lanes would not specifically mitigate any crashes that happened during the study period.
  - Extremely low westbound left-turn volume.
- **Recommendation to drop this project from further consideration.**

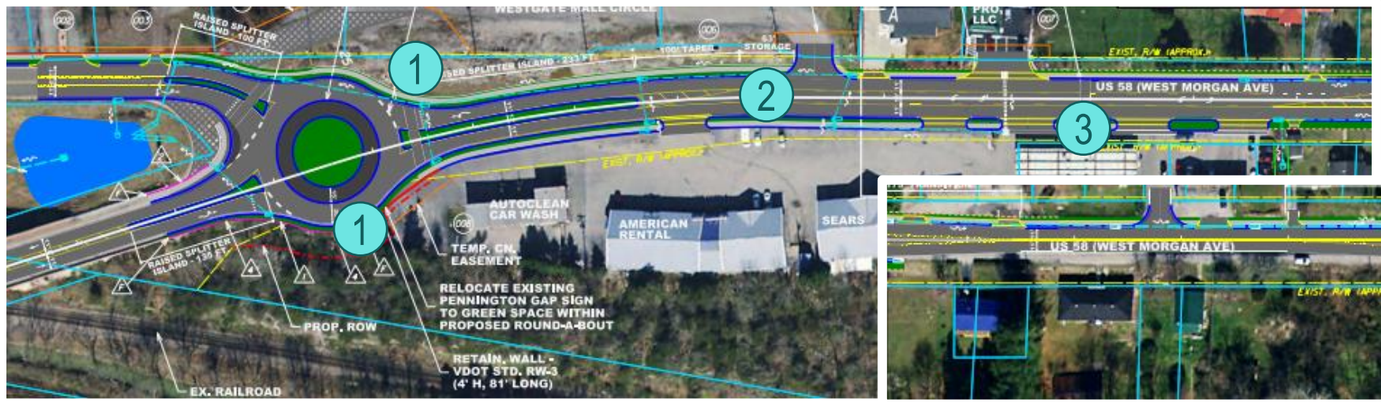


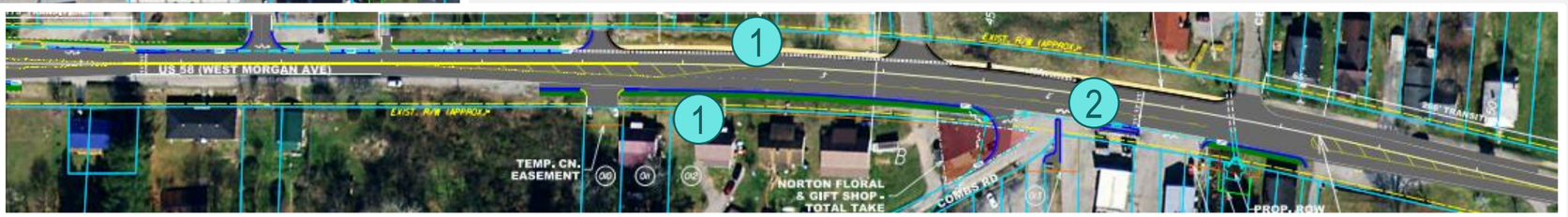


Project Overview | BR-23-10

Alt. US 58 (Trail of the Lonesome Pine Road / W. Morgan Avenue) between Trade Center Lane and Cecil Street

Project 2 – Roundabout and TWLTL – Previous Design Concept





Updated Findings

1. Significant Elevation Difference
2. Rear End Crash Pattern
3. Utility Poles in Conflict

Original Project Details

- VTrans Needs
  - District Safety – Low
  - Capacity Preservation – High/ Low
- Crash Data
  - 7 crashes between 2015-2019 at Combs Road
- Submitted SMART SCALE Cost of **$18,057,497**

Project Evaluation

- SMART SCALE Scoring
  - Benefit Score of 1.2, Total Score of 0.7.
  - Most benefit from Land Use Category – driven by sidewalk.
  - Second-most benefit from safety improvement. Previous study reported 7 crashes at Combs Road intersection. Current study period (2018-2022) has only 1 reported crash. Multiple crashes along proposed TWLTL segment remain.

Phase 1 Value Engineering Conclusions

- Combs Road Roundabout
  - Originally intended as a traffic calming measure.
  - Does not add much to the SMART SCALE benefit score but is a significant portion of the cost.
  - Value engineering potential includes:
    - Reducing roundabout diameter, shifting roundabout to the north to avoid steep drop, and potential stormwater efficiencies.
    - Consider alternative intersection control, speed management, and/or gateway treatments.
- Two-Way Left-Turn Lane and Sidewalk
  - Sidewalk is providing most benefit to the SMART SCALE score and should be maintained.
  - Crash data reveals significant access-related issue, particularly at gas station.
  - Consider providing dedicated left-turn lanes at targeted crash / access hot spots instead of a continuous two-way left-turn lane to minimize widening at higher cost locations.
  - Potential value engineering savings in stormwater management.