

# **Road Safety & Operations Proposal: East Emory Road (SR-131) at Brown Gap Road Knox County, Tennessee**

Prepared for Commissioner Kim Frazier, At-Large Seat 11, Vice-Chair  
Knox County Commission

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## Proposal Summary

This proposal requests targeted safety and operational improvements at the intersection of East Emory Road (State Route 131) and Brown Gap Road in North Knox County. The location has a documented pattern of high-risk driving behaviors and crash history on the East Emory corridor, with resident reports of frequent near-misses and difficulty making left turns to and from Brown Gap Road due to limited gaps, speed, and sight-distance constraints. Because East Emory Road in this segment is a state route (SR-131), near-term countermeasures should be coordinated with TDOT Region 1, while Knox County Engineering & Public Works can deliver county-maintained elements on Brown Gap Road. The package below blends quick-build measures (30–180 days), medium-term upgrades (6–24 months), and long-term alternatives (2–5 years) to reduce severe crashes, improve predictability, and smooth daily operations.

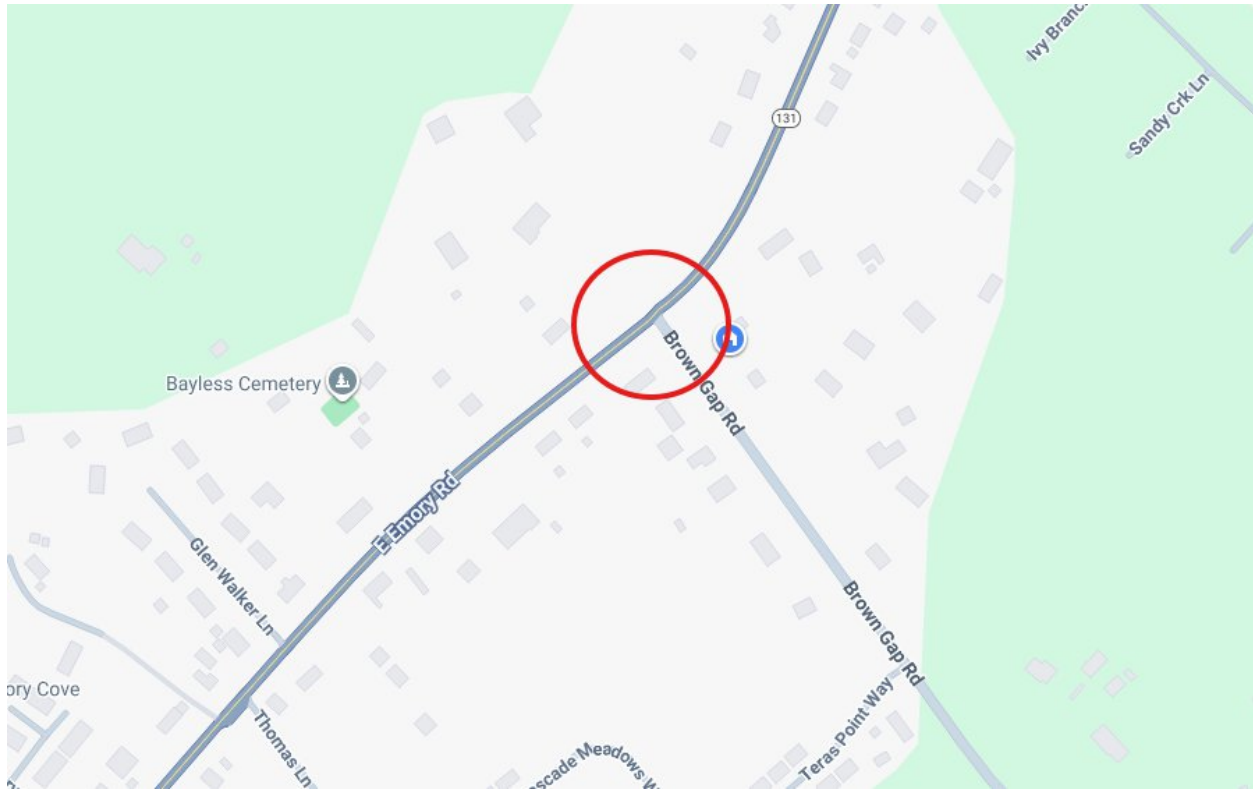
## Project Purpose & Objectives

- Reduce the likelihood and severity of angle, left-turn, and run-off-road crashes at and near the intersection.
- Improve driver expectancy and sight distance approaching the Brown Gap intersection from both directions on East Emory Road.
- Provide safer and more reliable access for local residents and businesses along the corridor without degrading through mobility.
- Align near-term actions with longer-term TDOT corridor projects to avoid rework and leverage funding opportunities.

## Location & Context

- Intersection: East Emory Road (SR-131) at Brown Gap Road, Knox County, TN.
- Functional class: East Emory (SR-131) is a state route; Brown Gap Road is a county facility with varying classifications per the Knox County Major Road Plan.
- Corridor context: TDOT is advancing a Diverging Diamond Interchange (DDI) at I-75 & SR-131 (Emory Road, Exit 112). While outside the project limits, this underscores the strategic importance of the SR-131 corridor and the need for coordinated improvements.

## Site Map (Not to Scale)



## Existing Conditions & Safety Concerns

- Approach speeds along East Emory Road are frequently above the posted limit, and the approach geometry near Brown Gap includes curvature and grade that can limit sight distance. Residents have documented multiple crashes and near-misses along this stretch, noting the difficulty of turning left from Brown Gap Road onto East Emory Road and vice versa.
- Regional safety plans and dashboards identify East Emory Road (SR-131) as part of a broader high-injury network where higher operating speeds outside the City of Knoxville contribute to crash severity. The Knoxville Regional TPO maintains a crash map showing recent fatal and serious-injury crashes across the region.

## Media Coverage & Prior Commitments (WBIR, May 26, 2022)

WBIR News reported on May 26, 2022 that residents living at the corner of East Emory Road and Brown Gap Road experienced multiple crashes within a short period and expressed serious safety concerns about turning movements and speeds near the intersection. The report noted that TDOT stated they were planning improvements on East Emory Road.

Status update: As of August 10, 2025, no TDOT-constructed intersection safety project has been completed specifically at East Emory Road (SR-131) & Brown Gap Road aside from 4 crossroad warning signs. Corridor-level work is advancing at the I-75/SR-131 interchange (DDI), but intersection-level improvements at Brown Gap have not been delivered. This underscores the need for near-term countermeasures at the subject location.

Source: [WBIR: "Emory Road resident sees four wrecks in 15 days right outside home" \(May 26, 2022\)](#)

## Resident Video Documentation — Incident Log

The following incidents were recorded on personal video devices at or near the intersection of East Emory Rd (SR-131) and Brown Gap Rd. Full videos are available at: [YouTube: @nicklordman](#)

| Date         | Video-Documented Description                                                                                                                                                                     |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feb 3, 2022  | Vehicle 1 stops on SR 131 to turn left onto Brown Gap Road. Vehicle 2 approaching from behind on SR 131 fails to slow in time and veers, hitting a telephone pole to avoid a rear-end collision. |
| May 11, 2022 | Vehicle 1 (a KCSO unit) stops on SR 131 to turn left onto Brown Gap Road. Vehicle 3 approaching from behind on SR 131 fails to slow and rear-ends Vehicle 2, pushing Vehicle 2 into Vehicle 1.   |
| May 18, 2022 | Vehicle 1 stops on SR 131 to turn left onto Brown Gap Road. Vehicle 2 approaching on SR 131 fails to slow and veers to hit the telephone pole to avoid a rear-end collision.                     |
| May 21, 2022 | Vehicle 1 stops on SR 131 to turn left onto Brown Gap Road. Speeding Vehicle 2 approaches on SR 131, fails to slow, and veers to hit the telephone pole to avoid a rear-end collision.           |

|              |                                                                                                                                                                                                                                             |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| May 27, 2022 | Speeding Vehicle 1 traveling on SR 131 fails to negotiate the curve, strikes a tree, the mailbox, and the guardrail, and comes to rest in a neighbor's front yard.                                                                          |
| Jul 23, 2023 | Minor crash: Vehicle 1 veers off the roadway into a neighbor's mailbox.                                                                                                                                                                     |
| Sep 13, 2023 | Vehicle 1 traveling on SR 131 slows to make a left turn onto Brown Gap Road. Vehicle 2 at the Brown Gap Road stop sign makes a left turn, runs the stop sign, and turns into Vehicle 1.                                                     |
| Sep 15, 2023 | Vehicle 1 is traveling on SR 131 attempting to clear the intersection. Vehicle 2, stopped on Brown Gap Road to turn left onto SR 131, proceeds into the intersection disregarding the stop sign and collides with Vehicle 1.                |
| Sep 26, 2023 | Vehicle 1 is stopped at a driveway waiting to proceed straight across SR 131 onto Brown Gap Road. Vehicle 1 proceeds and is T-boned by Vehicle 2 traveling on SR 131.                                                                       |
| Nov 16, 2023 | Vehicle 1 traveling on SR 131 is struck when Vehicle 2 pulls up to the Brown Gap Road stop sign and turns left onto Emory Road.                                                                                                             |
| May 13, 2024 | Vehicle 1 stops on SR 131 to turn left onto Brown Gap Road. Speeding Vehicle 2 approaching on SR 131 veers into oncoming traffic; Vehicle 3 traveling the opposite direction on SR 131 is then forced off the road and into the front yard. |
| Oct 17, 2024 | Vehicle 1 stops on SR 131 to turn left onto Brown Gap Road. Vehicles 2 and 3 stop behind. Vehicle 4 approaching on SR 131 fails to slow and veers into the ditch to avoid a collision, flipping the car.                                    |
| Nov 16, 2024 | Speeding Vehicle 1 traveling on SR 131 fails to negotiate the curve, strikes the mailbox, then a tree, and flips onto its side.                                                                                                             |

|              |                                                                                                                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Apr 13, 2025 | Vehicle 1 traveling on SR 131 is struck when Vehicle 2 turns left off Brown Gap Road, runs the stop sign, and collides with Vehicle 1.                                                                      |
| Apr 25, 2025 | Vehicle 1 is stopped on Brown Gap Road waiting to turn right onto SR 131. Vehicle 1 pulls out onto SR 131, colliding with Vehicle 2 and pushing Vehicle 2 into Vehicle 3, flipping Vehicle 2 onto its roof. |
| Jun 28, 2025 | Vehicle 1 traveling down SR 131 is struck when Vehicle 2 turns right off Brown Gap Road, runs the stop sign, and collides with Vehicle 1.                                                                   |
| Jul 1, 2025  | Vehicle 1 traveling down SR 131 is struck when Vehicle 2 turns right off Brown Gap Road, runs the stop sign, and collides with Vehicle 1.                                                                   |
| Jul 17, 2025 | Vehicle 1 traveling down SR 131 is struck when Vehicle 2 turns right off Brown Gap Road, runs the stop sign, and collides with Vehicle 1, forcing Vehicle 1 into a tree head-on.                            |

Note: Descriptions reflect observed actions in the videos and are not official crash report summaries.

# Proposed Improvements

## A. Near-Term (30–180 days)

- 1) Install dual radar speed feedback signs on East Emory Road in both directions approaching Brown Gap Road; equip with data logging to track operating speeds.
- 2) Upgrade advance warning signs: add oversized, high-reflectivity intersection and curve warning signs with advisory speed plaques; add 'Cross Traffic Does Not Stop' plaques if applicable.
- 3) Refresh and enhance pavement markings: extend no-passing zone with double yellow, add wider edge lines, and apply thermoplastic for durability at the intersection approaches.
- 4) Add supplemental, rectangular rapid flashing beacon (RRFB) or intersection-ahead flashing beacons where warranted to heighten driver awareness of turning traffic (vehicle-activated if feasible).
- 5) Vegetation and shoulder maintenance: clear sight triangles, remove obstructions, and grade shoulders to restore recovery area.
- 6) Temporary access management: evaluate and, if needed, temporarily restrict highest-risk left-turn movements during peak periods while design solutions are refined.

## B. Medium-Term (6–24 months)

- 1) Add dedicated left-turn lanes on East Emory Road at Brown Gap Road with adequate storage and taper lengths; include channelizing islands to separate movements if feasible.
- 2) Lighting: install LED intersection lighting to improve nighttime visibility and conflict recognition.
- 3) High-Friction Surface Treatment (HFST) on approaches if crash data indicate wet-weather run-off-road/curve-related crashes.
- 4) Permanent vehicle-activated warning beacons tied to side-street detection to alert mainline drivers when vehicles are present on Brown Gap Road.
- 5) Targeted access management within 500–1,000 feet of the intersection (consolidate or re-align driveways, restrict direct lefts where feasible).

### C. Long-Term (2–5 years)

- 1) Signalization: Conduct a warrant analysis. If warrants are met, design and construct a traffic signal with protected left-turn phases and coordinated timing along East Emory Road.
- 2) Geometric reconfiguration: Evaluate a compact roundabout or offset-T/RCUT (restricted crossing U-turn) if signal warrants are not met but angle crashes persist. Select alternative should consider freight, emergency response, right-of-way, and proximity to curves/grades.
- 3) Corridor coordination: Ensure compatibility with TDOT's SR-131 projects (e.g., I-75 DDI) and future widening plans eastward to avoid throw-away work.

## Implementation Plan

- Lead Agencies: TDOT Region 1 (SR-131 mainline improvements, signal/approach turn lanes, HFST, beacons) and Knox County Engineering & Public Works (Brown Gap Road approaches, lighting if on county poles, vegetation/sight triangle maintenance).
- Partners: Knoxville Regional TPO (data support, TIP programming), Knox County Sheriff's Office (targeted enforcement during transition), Rural Metro (incident response input), local neighborhoods and businesses (access management coordination).
- Data & Design: Initiate a focused safety study using the past five years of THP crash reports, TDOT Safety Office dashboards, and field observations (speed studies, sight distance measurements).
- Permitting & Coordination: Because East Emory is SR-131, TDOT permits and review are required for work within the state ROW. County-delivered quick-build items on Brown Gap Road can proceed in parallel.

## Planning-Level Cost Ranges (Order-of-Magnitude)

| Improvement                                     | Typical Range (2025 \$) | Lead                    |
|-------------------------------------------------|-------------------------|-------------------------|
| Radar feedback signs (pair, installed)          | \$15,000 – \$35,000     | TDOT or County (coord.) |
| Advance warning/beacons                         | \$10,000 – \$60,000     | TDOT                    |
| Pavement marking refresh (thermo at approaches) | \$20,000 – \$75,000     | TDOT                    |
| Vegetation/shoulder work                        | \$5,000 – \$25,000      | County                  |
| LED intersection lighting                       | \$25,000 – \$80,000     | TDOT/County utility     |

|                                     |                       |      |
|-------------------------------------|-----------------------|------|
| Dedicated left-turn lanes + islands | \$300,000 – \$1.2M    | TDOT |
| HFST (both approaches)              | \$80,000 – \$200,000  | TDOT |
| Full traffic signal (if warranted)  | \$250,000 – \$500,000 | TDOT |
| Compact roundabout (if selected)    | \$1.5M – \$3.0M       | TDOT |
| RCUT/offset-T (if selected)         | \$1.0M – \$2.5M       | TDOT |

Notes: Costs are planning-level ranges based on recent southeastern U.S. bid experience and vendor quotes; final costs depend on design, utilities, drainage, right-of-way, inflation, and procurement strategy.

## Funding & Programming Options

- TDOT Highway Safety Improvement Program (HSIP) for data-supported systemic or spot safety countermeasures (HFST, lighting, signing, beacons).
- Knoxville Regional TPO TIP: Local-lead safety/operations projects using federal Surface Transportation Block Grant (STBG) or HSIP with county match.
- County Capital Improvements Program for quick-build items (markings, vegetation, interim beacons) on Brown Gap Road.
- Federal SS4A (Safe Streets & Roads for All) supplemental safety funding if county pursues corridor-level action plan implementation.

## Community Engagement & Communications

- Host an on-site meeting and an evening open house with nearby residents to confirm problem locations, peak-time issues, and driveway constraints; use a large-format aerial to gather comments and provide a project email for ongoing input.
- Coordinate with KCSO for targeted enforcement during and after quick-build installation to reinforce new traffic control and speed management.

## Next Steps & Request to Commissioner Frazier

- 1) Support a TDOT Region 1 safety review request for SR-131 at Brown Gap Road, including speed study and signal warrant analysis.
- 2) Direct Knox County Engineering & Public Works to scope quick-build near-term items on Brown Gap Road and coordinate permits with TDOT for work within SR-131 ROW.

- 3) Ask the Knoxville Regional TPO to assist with data (five-year crash summary, speed profiles) and programming options for medium-term construction.
- 4) Schedule a field visit with TDOT, County staff, and KCSO to confirm sight triangles, signage needs, and staging for improvements.
- 5) Target implementation of near-term items within 90 days of approval, with progress check-ins every 30 days.

## References (Selected)

- Knox County Commission – Commissioner Kim Frazier (At-Large Seat 11, Vice-Chair), official bio & contact.
- WBIR — “Emory Road resident sees four wrecks in 15 days right outside home,” May 26, 2022. Notes TDOT planned improvements on East Emory Road. URL: <https://www.wbir.com/article/traffic/east-emory-road-knoxville-tennessee-traffic-car-crashes/51-82641e09-f441-4f80-b9c0-51b9ba416f58>
- Tennessee Secretary of State – Public Chapter naming SR-131 segments; confirms SR designation for East Emory Road.
- TDOT Project Page: I-75 Interchange at SR-131 (Emory Road, Exit 112) – proposed DDI.
- Knoxville Regional TPO – Traffic Crash Map & Roadway Safety Action Plan (regional context on high-injury corridors and crash severity).
- Knox County Major Road Plan (2018) – functional classifications for Brown Gap Rd and East Emory connections.