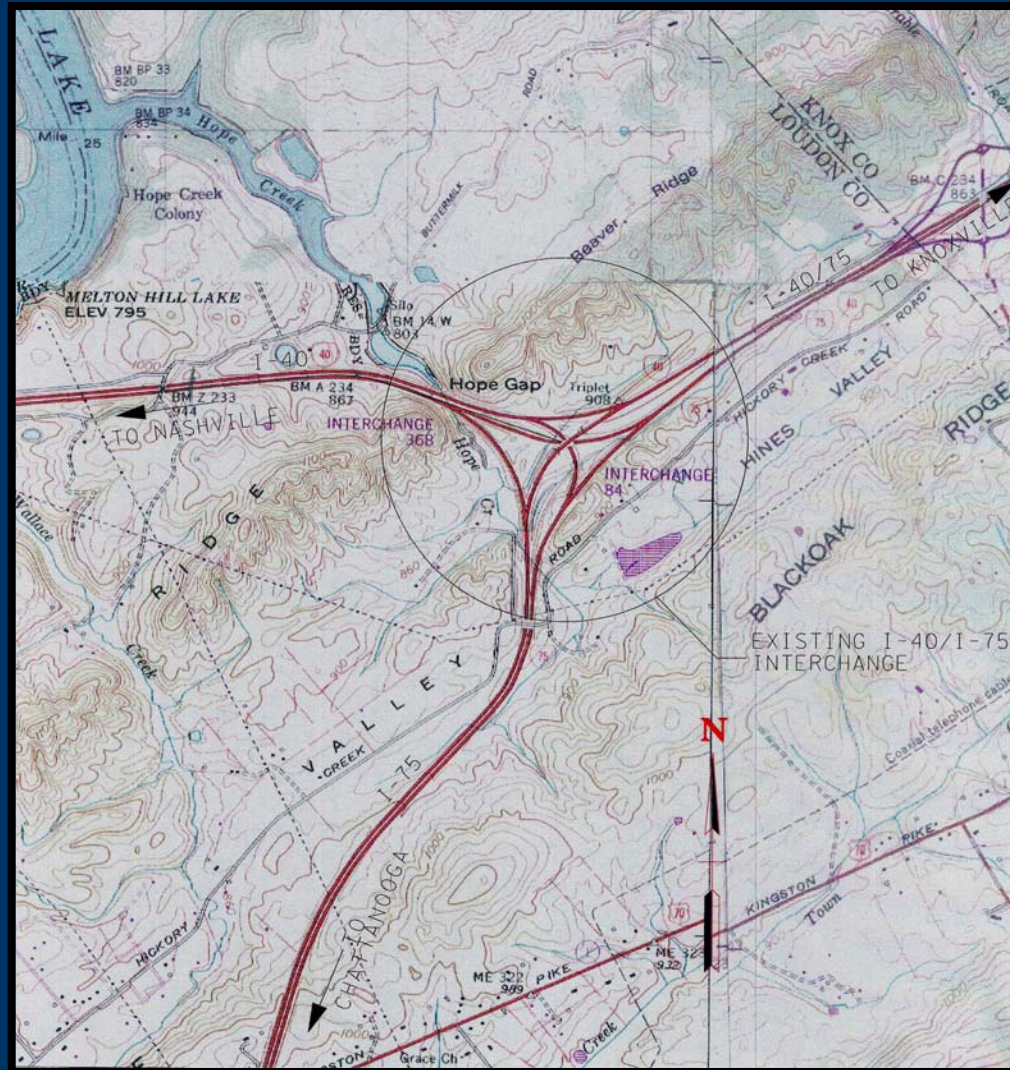


Existing I-40/I-75 Interchange



Existing I-40/I-75 Interchange

- **Three leg directional**
- **Three level**
 - **I-40 eastbound lanes on bottom level**
 - **I-75 northbound to I-40 westbound ramp on middle level**
 - **I-75 southbound lanes on top level**

Issues

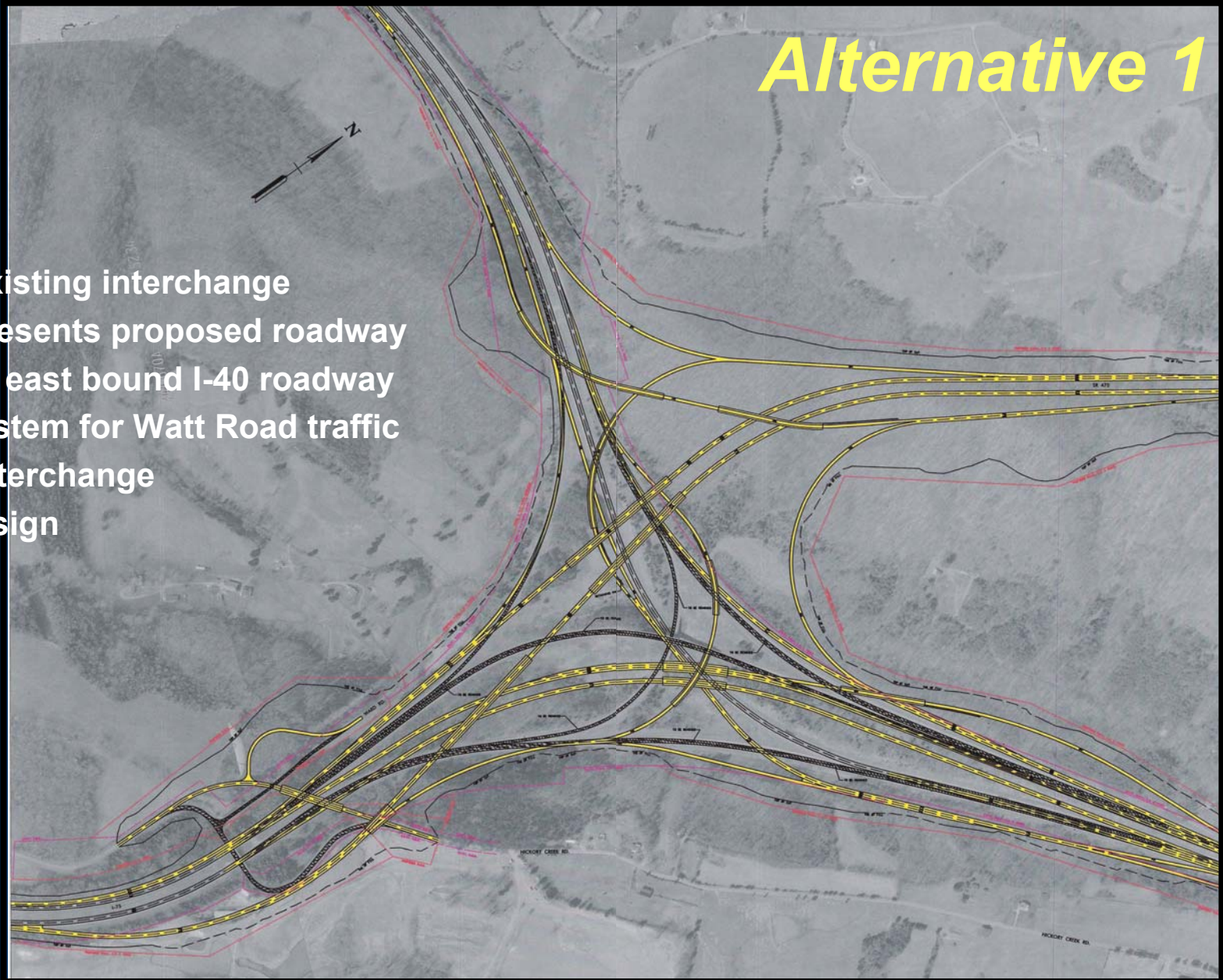
- **Address existing left hand entrance and exit**
- **Potential weaving problems because of close proximity to Watt Road Interchange**
- **Provide route continuity for both I-40 and I-75, requiring right hand exits and entrances for SR 475**
- **Constructability – Maintenance of Traffic during construction**

Traffic

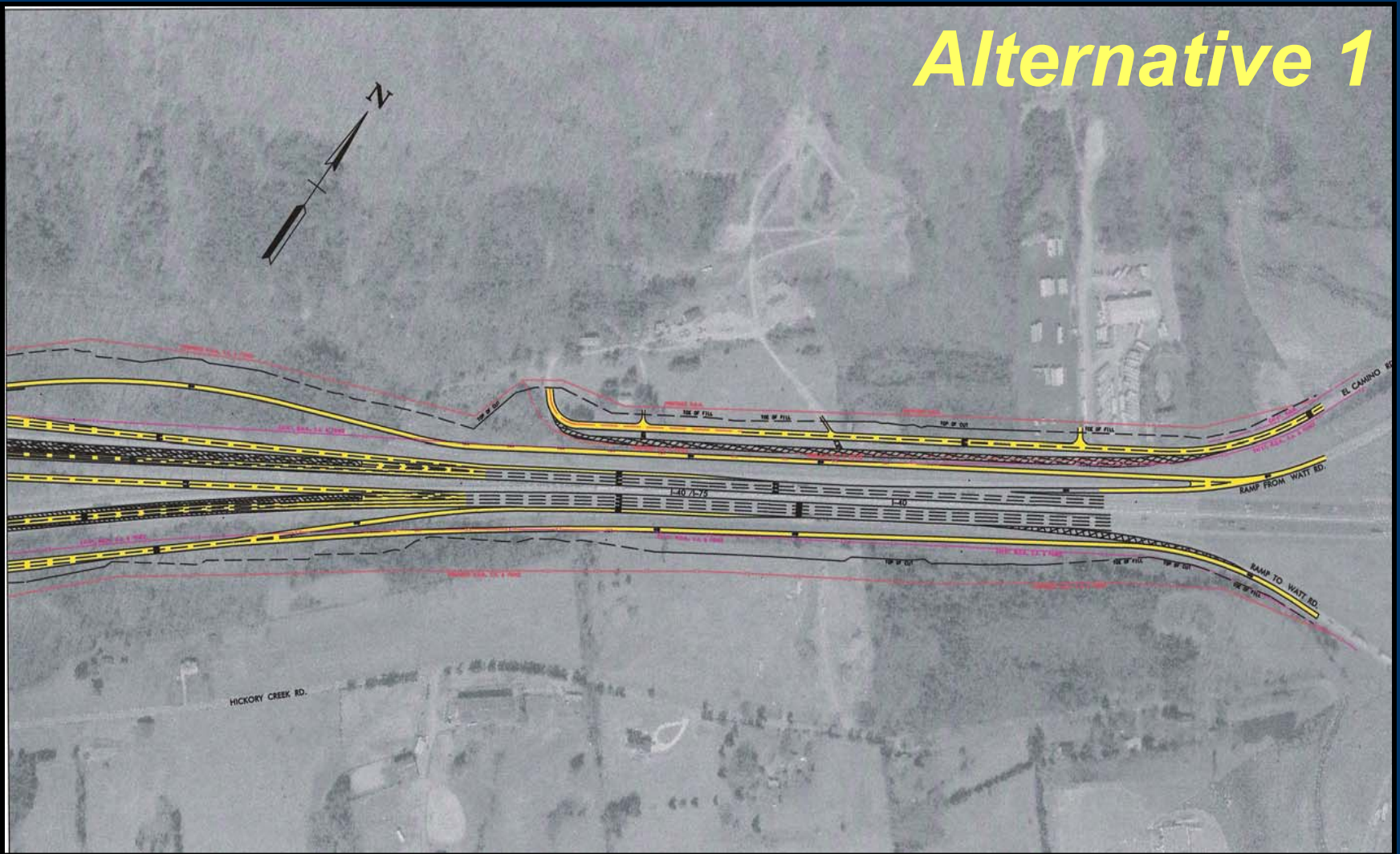
- **Traffic projections provided by TDOT**
- **Existing system analyzed for capacity and level of service for basic freeway, ramp & weaving sections**
- **Recommended Alternative analyzed**
- **Adjacent Interchanges at U.S. 321 analyzed for effects of recommended alternative**
- **Analysis based on future widening of I-40 and I-75**

Alternative 1

- Overlays existing interchange
- Yellow represents proposed roadway
- Retain only east bound I-40 roadway
- CD road system for Watt Road traffic
- Complex Interchange
- Difficult to sign

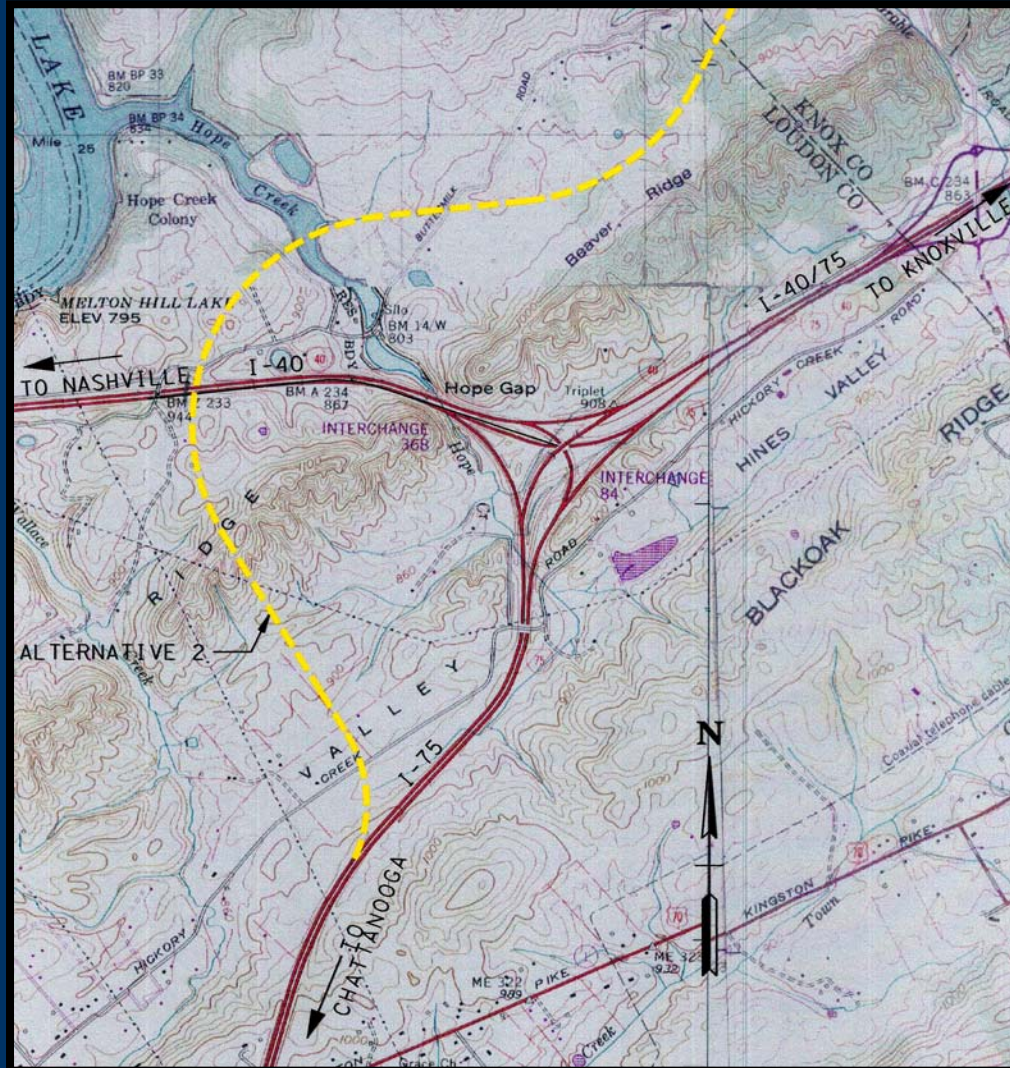


Alternative 1

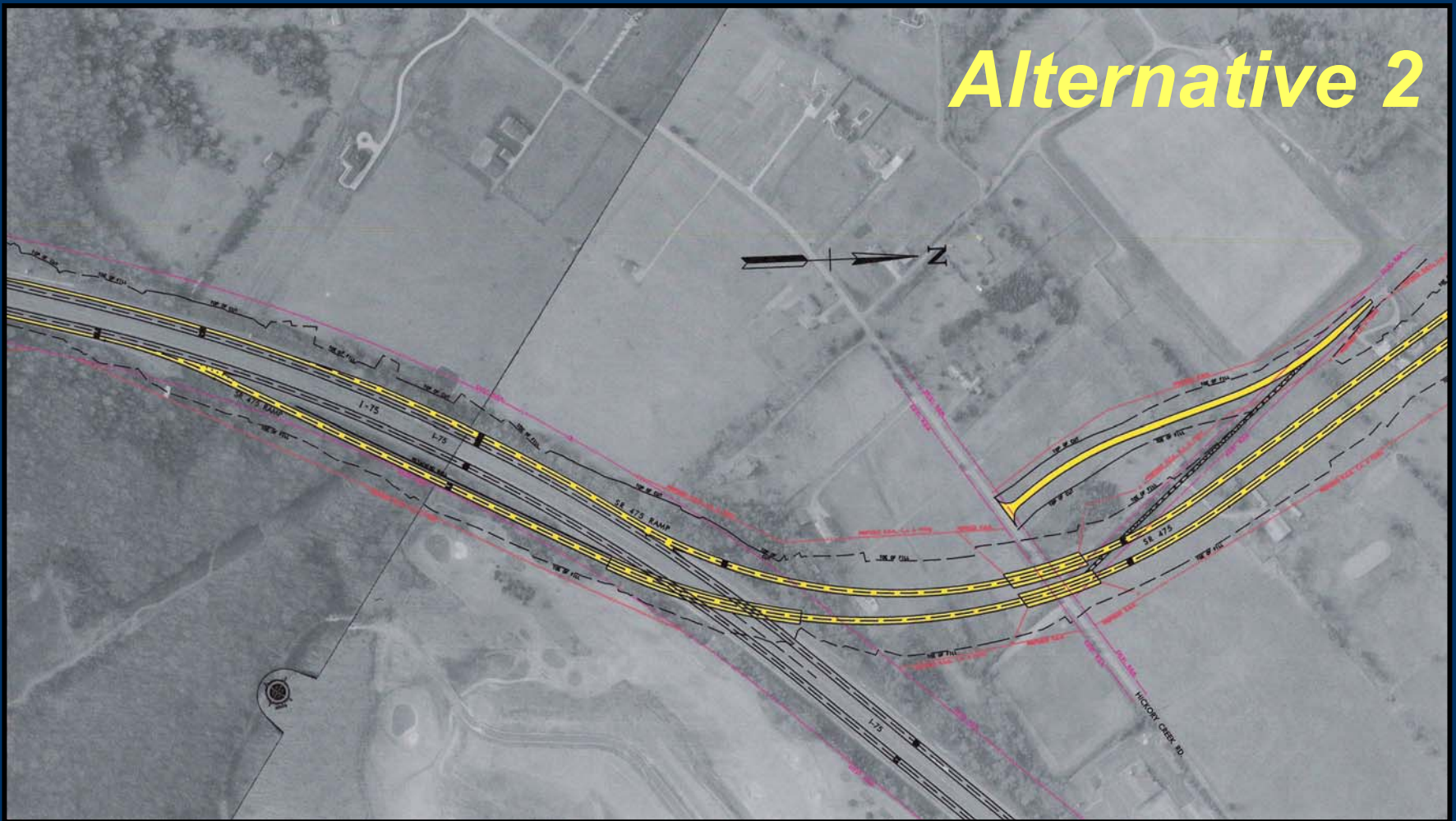


- C-D road system to Watt Road ramps
- EL Camino Road relocation

Alternative 2 General Corridor

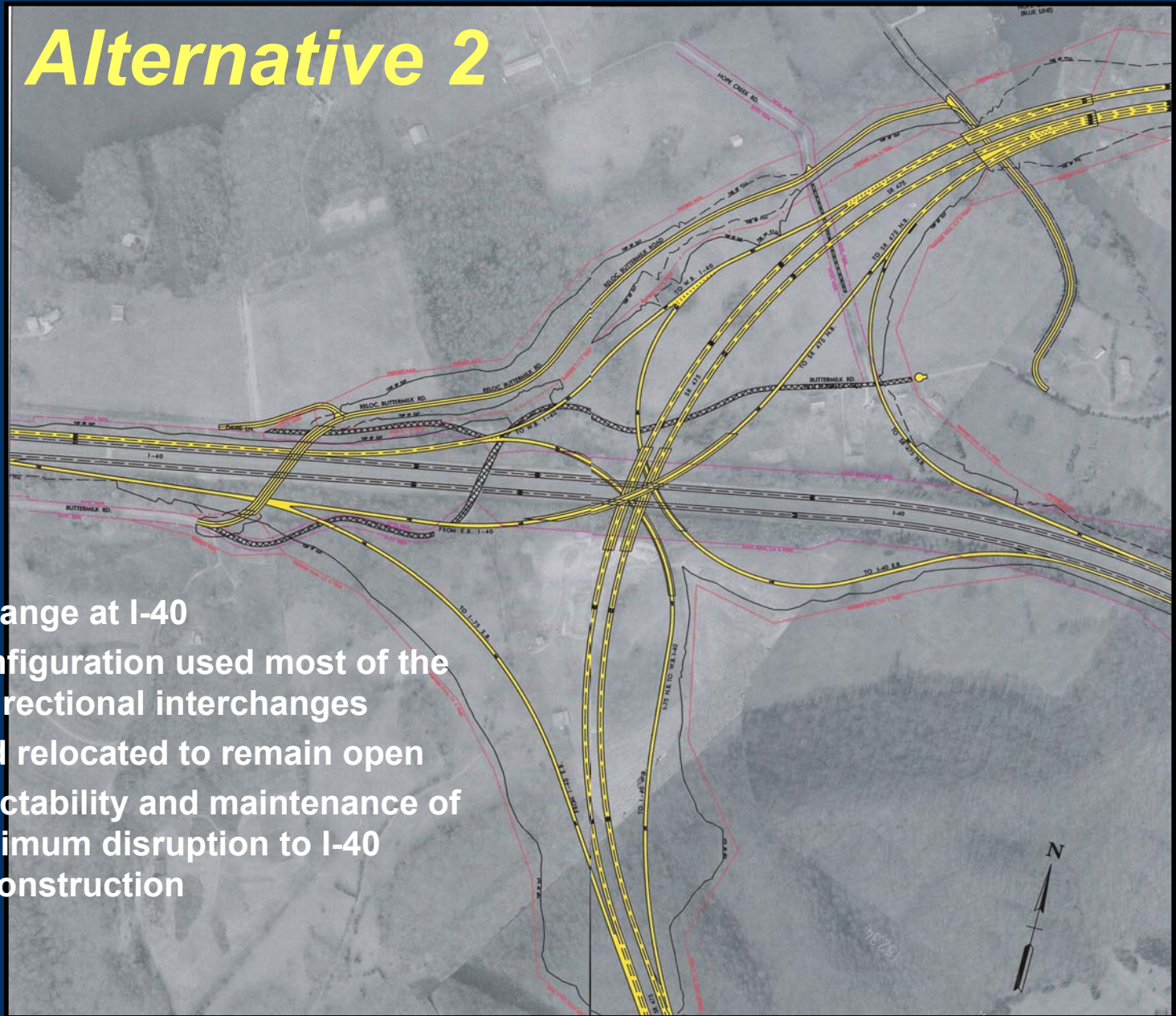


Alternative 2

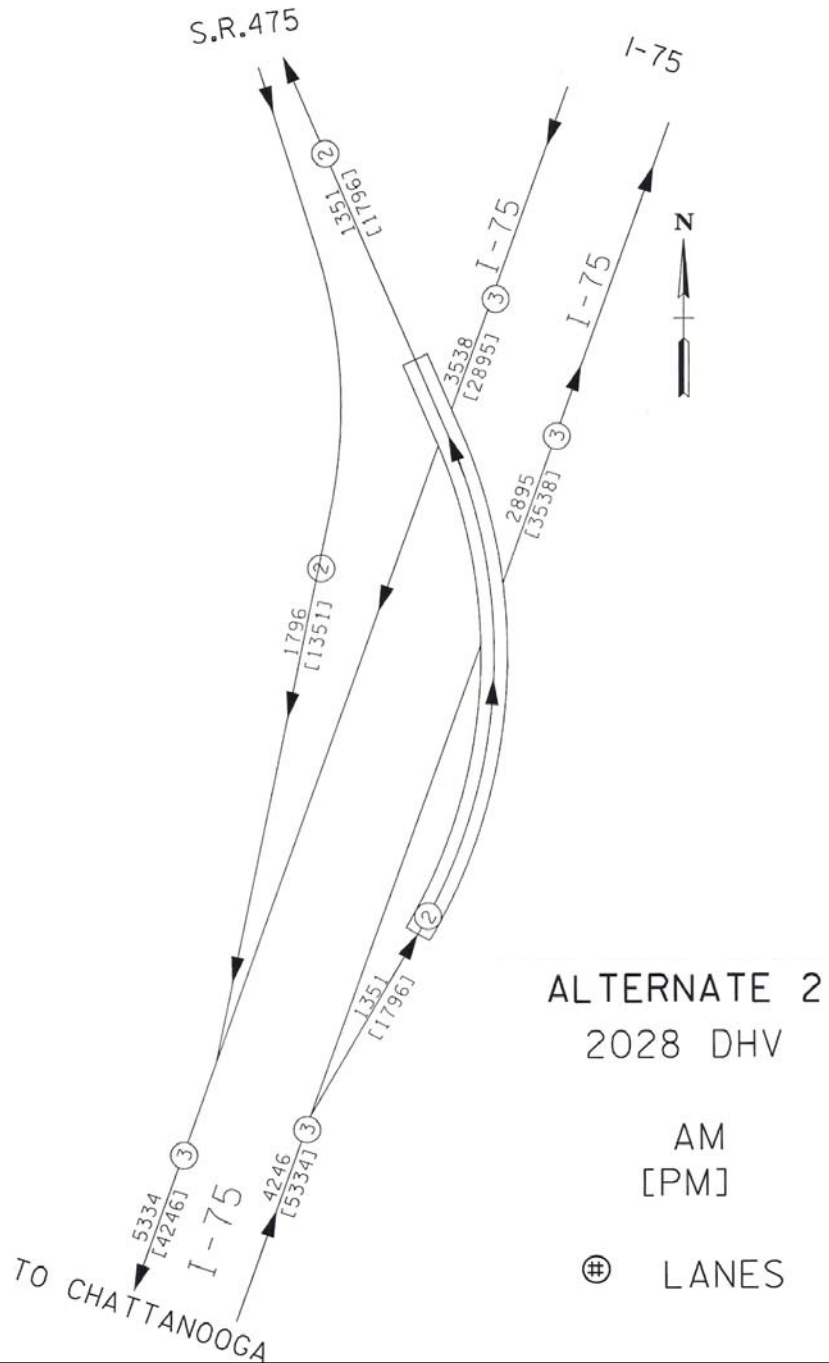


- Ties to I-75 south of I-40/I-75 existing interchange and north of bridge over Kingston Pike
- Simplistic arrangement
- Ease of constructability and maintenance of traffic with minimum disruption to I-75 traffic during construction
- Easy to sign

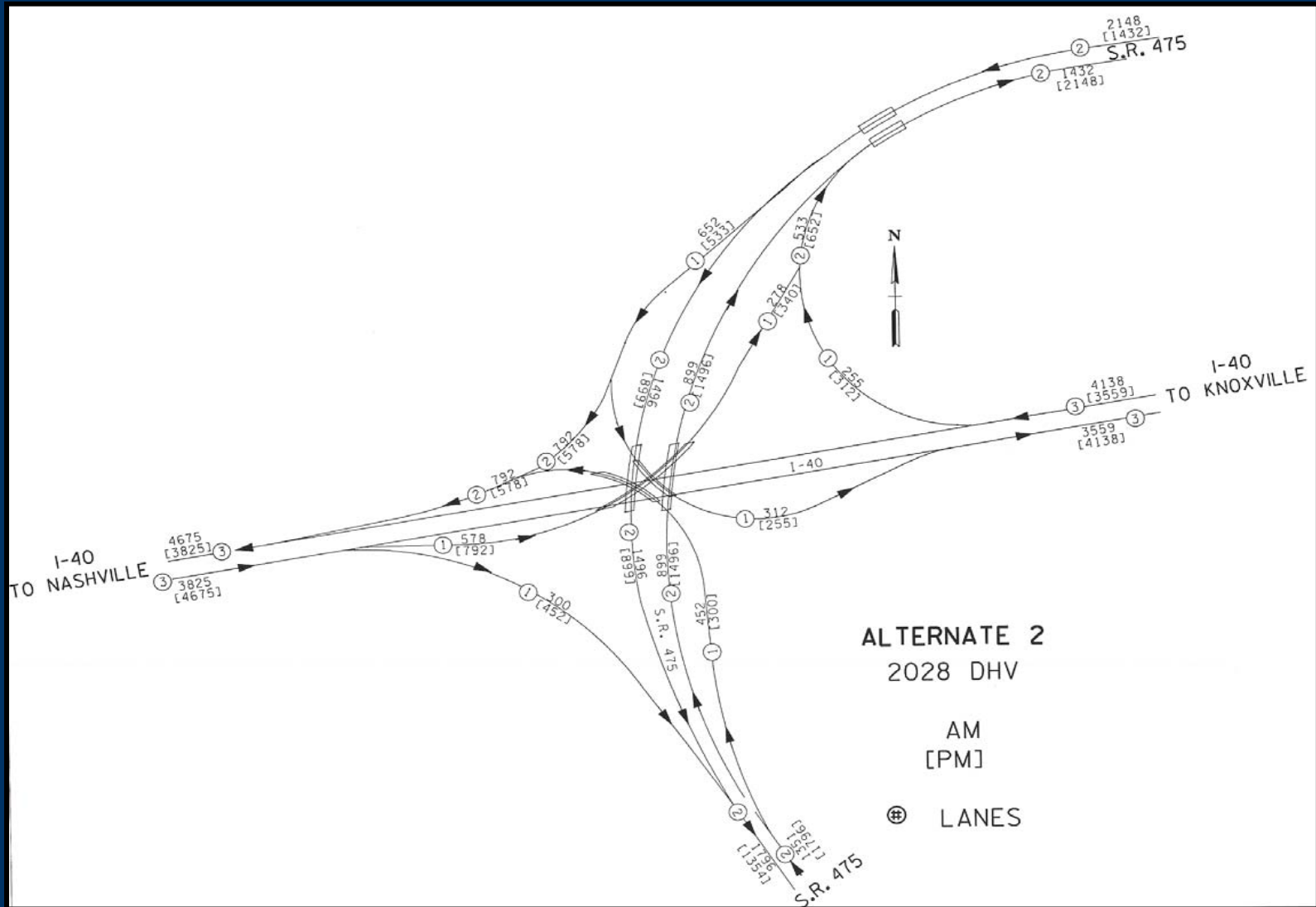
Alternative 2



- S.R. 475 interchange at I-40
- Interchange configuration used most of the time for fully directional interchanges
- Buttermilk Road relocated to remain open
- Ease of constructability and maintenance of traffic with minimum disruption to I-40 traffic during construction
- Easy to sign



- No weaving segments
- No adverse effect to traffic operations at adjacent interchange @ U.S. 321

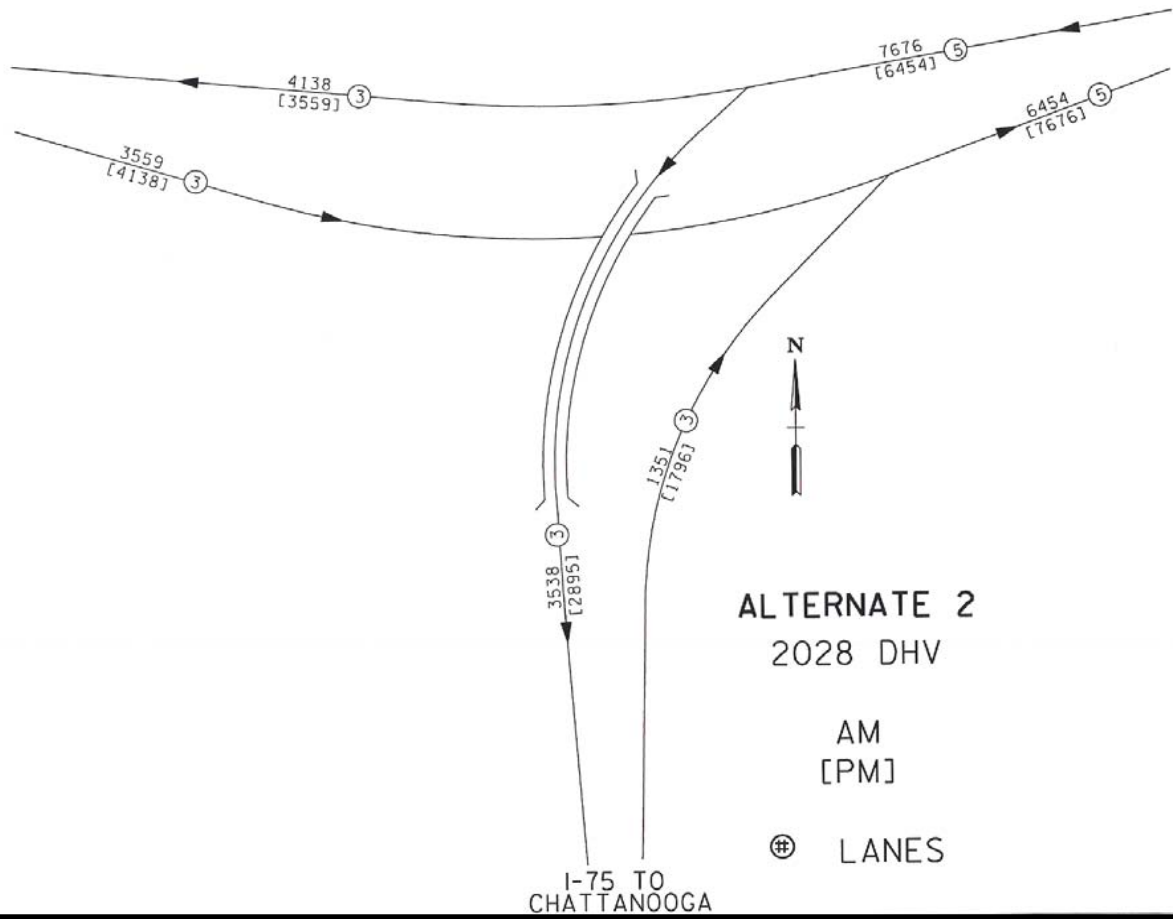


- No weaving segments
- No adverse effect to traffic operations at adjacent interchange @ U.S. 321

I-40
TO NASHVILLE

I-75/I-40
TO KNOXVILLE

I-75 TO
CHATTANOOGA



ALTERNATE 2

2028 DHV

AM
[PM]

⊕ LANES

Costs from Draft Study

| | Alt. 1 | Alt. 2 |
|--|-------------------------|------------------------|
| Estimated Right-of-way Cost | \$3,209,000.00 | \$8,664,000.00 |
| Estimated Utility Cost Reimbursable | \$1,100,000.00 | \$2,300,000.00 |
| Estimated Utility Cost Non-Reimbursable | \$1,500,000.00 | \$200,000.00 |
| Estimated Total Construction Cost | \$99,043,000.00 | \$72,776,000.00 |
| Estimated Preliminary Engineering Cost | \$9,004,000.00 | \$6,616,000.00 |
| Total Estimated Project Cost | \$113,856,000.00 | \$90,556,000.00 |

Recommendations

Alternate Two is recommended for the following reasons:

- **Allows uninterrupted travel on Interstates 40 and 75 during most of the construction process.**
- **Better Constructability. Provides for better maintenance of traffic during construction resulting in less inconvenience and safer for the motoring public.**
- **Interchange configuration is simpler providing for a smoother, safer flow of traffic. “The need to simplify interchange design from the standpoint of signing and driver understanding cannot be overstated.”**
- **Lower cost**