






I-35 E Southbound, Carrollton and Lewisville, TX

Includes I-35 E, FM 3040, SH
121, SH 190 (PGBT), and South
to I-635

Overview

- Two major problems are present in Carrollton and Lewisville
 - Traffic added TO freeway before traffic removed FROM freeway
 - HOV lane not being deployed to maximum benefit
- The old adage that “State Highways were not meant to move traffic but to pave roads” is shown in SH 77, also known as I-35 E
 - Service roads, entrance and exit ramps need to be better utilized in order to hasten the flow of freeway traffic
- I-35 E needs to be utilized as a freeway, not as the state highway it’s original design and present engineering constrain it’s useful limits to
 - Relieving traffic flow immediately will not take a massive reconstruction
 - On the contrary, this plan will help where new construction only promises to cause delays and problems

Key for Diagrams

- Freeway Lanes (I-35 E) 
- HOV lane 
- Crossing / service roads 
- Entrance ramps 
- Exit ramps 

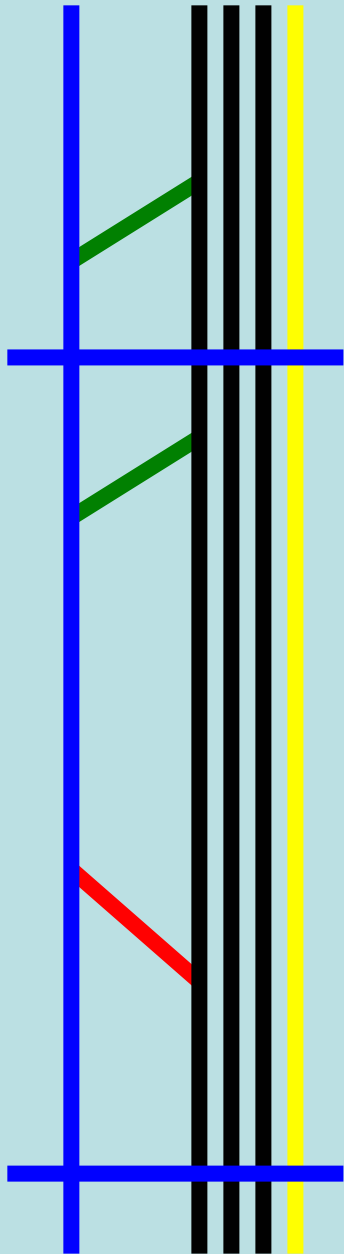


Diagram #1

Back-up occurs in next slide.

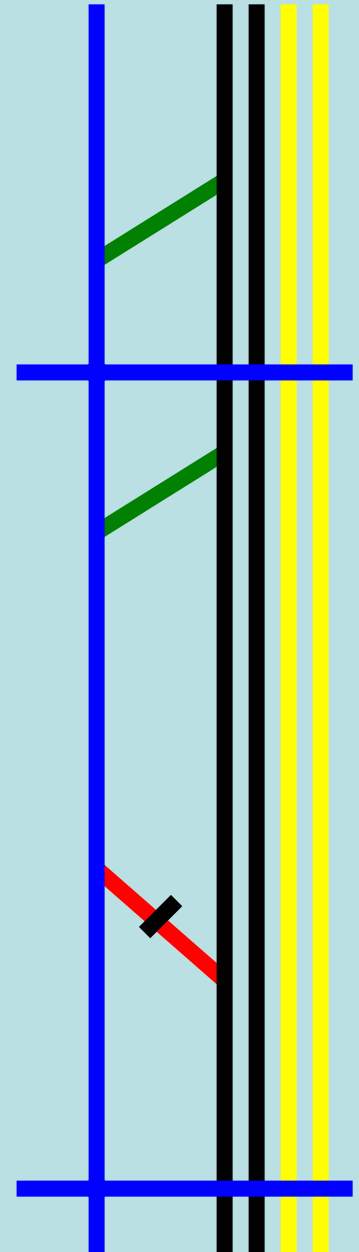
FM 3040 / Round Grove Rd

Close entrance ramp (red)
and re-direct traffic south to
next entrance.

Re-deploy HOV lane and left
lane as express lanes (yellow,
at right).

Right two lanes serve as exit
and entrance lanes until south
of SH 190. Separate from
express lanes with concrete
barriers.

SH 121 (toll).



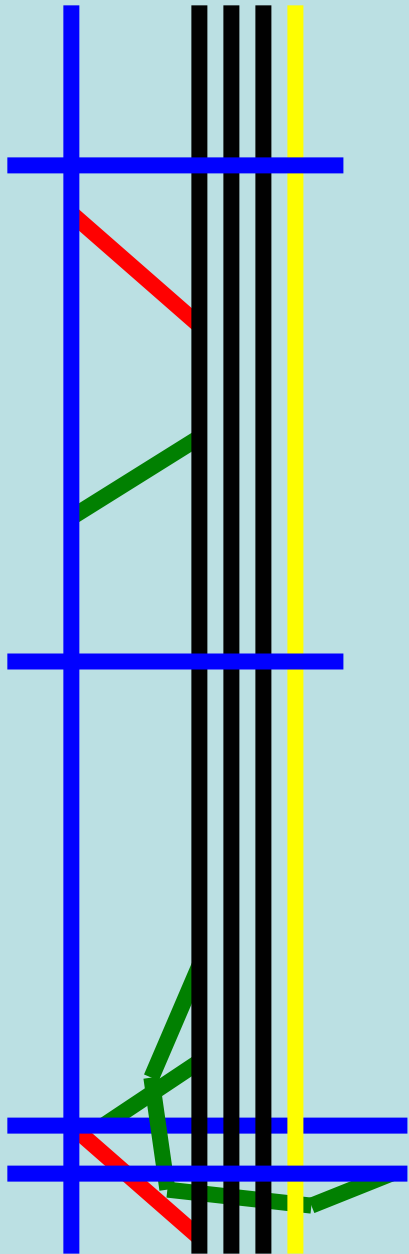


Diagram #2

SH 121 (toll).

Back-up occurs as entering (red) and exiting (green) traffic cause congestion in right lane.

Close entrance ramp.

Close exit ramp.

Frankford Rd Overpass.

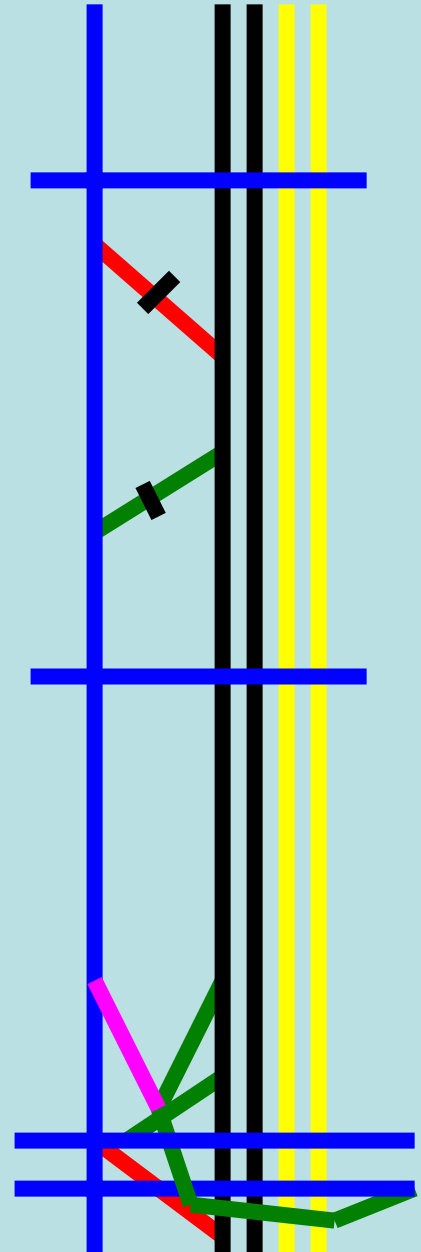
Re-direct entering traffic to next ramp (red line).

Re-direct exiting traffic to previous ramp (Diagram #1).

Build new ramp.

SH 190 (PGBT).

Express lanes continue south.



Analysis of Diagrams #3 & 4

- From south of PGBT to Valwood Pkwy
 - Each major crossing thoroughfare from PGBT to Valwood Pkwy has an entrance and exit ramp with the exception of Crosby Rd (shared with Beltline Rd)
 - Traffic is introduced to southbound freeway BEFORE traffic is removed from the freeway
 - Right lanes are inundated with drivers seeking to merge with drivers seeking to exit...result is undue congestion and tie-up
 - Each tie-up, or delay, results in a back up that extends during morning inbound rush hour traffic back to the previous tie-up
 - Result is that I-35 E southbound is completely backed up mornings, sometimes to a point of stop-and-go ON freeway

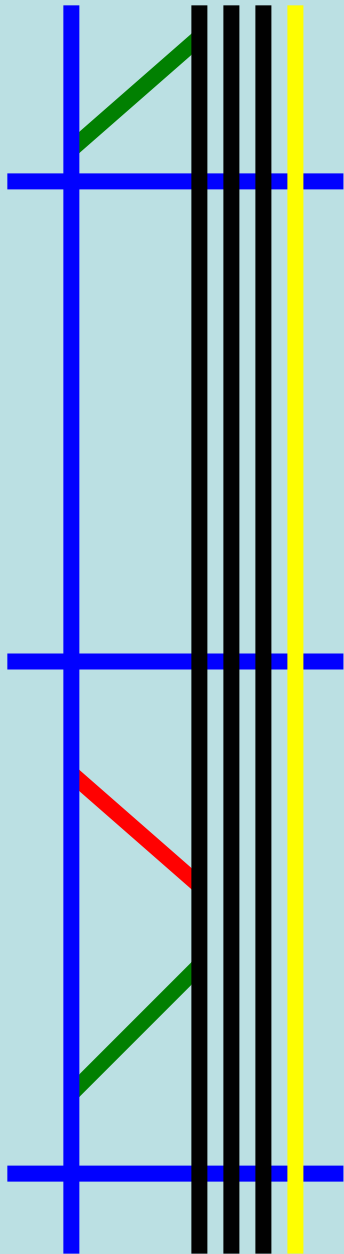


Diagram #4

Beltline Rd.

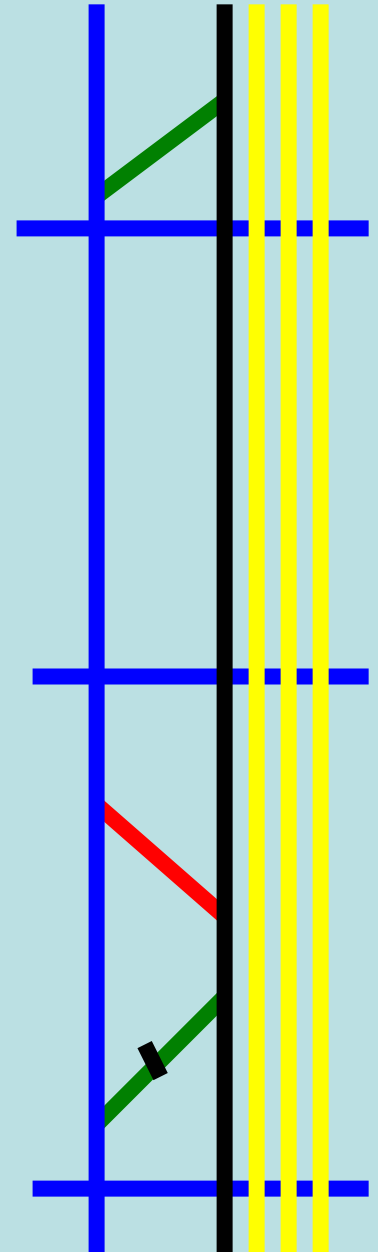
Entrance ramps precede exit ramps between each pair of cross streets in Carrollton and Farmers Branch; also, hills over cross streets cause back-up's.

Crosby Rd.

Three express lanes continue.

Close exit to Valwood; re-direct traffic to Beltline exit to north to remove traffic from freeway earlier.

Valwood Pkwy.



Analysis of Diagram #5

- From Valwood Pkwy to I-635
 - Tie-up's due to entrance / exit ramp situation described in Analysis of Diagram #1b resolved after Valwood Pkwy
 - Due to longer distance between Valwood and Valley View (which allows for disbursement of congestion) not present between Carrollton's major thoroughfares
 - Delay south of Valwood due to traffic being introduced to freeway before AND AFTER Valley View prior to traffic exiting freeway to I-635 E and W

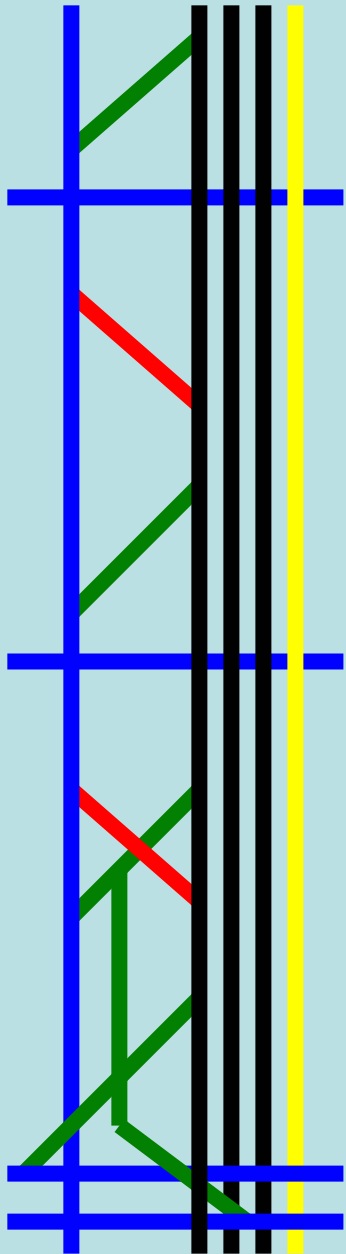


Diagram #5

Valwood Pkwy.

There is more space between Valwood and Valley View than between other cross streets.

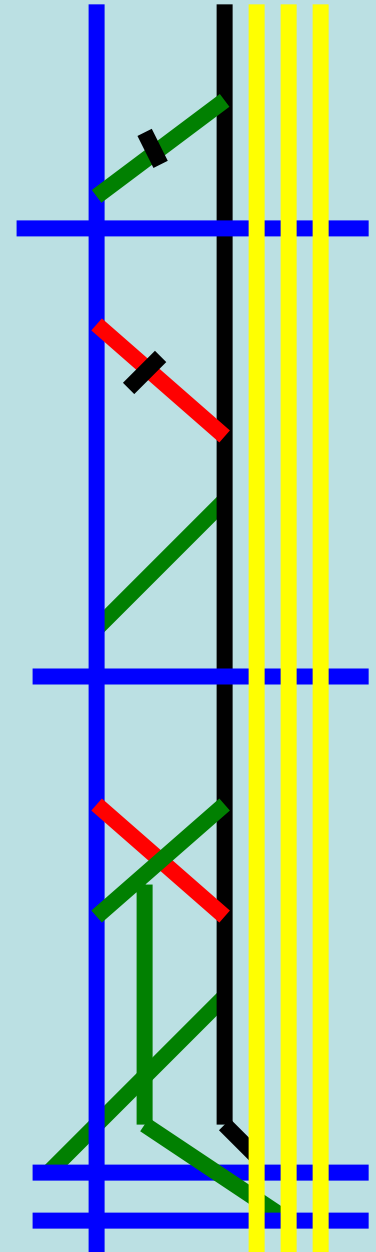
Close entrance ramp; redirect traffic south to next entrance.

Valley View Rd.

Right lane backs up due to traffic exiting east I-635.

Right lane used for entrances and exits only through Carrollton and Farmers Branch merges with express lanes before I-635 overpass.

I-635 LBJ Fwy.



Analysis of Present Situation

- Freeway congestion is present because flow of traffic is not considered utmost importance
- HOV lanes are not being fully utilized
- Entrances introduce traffic to freeway before exits remove traffic
- Hills over crossing streets block line of sight for motorists, causing further delays
- One delay after the other contributes added time to commute, greater consumption of fuel, and increased emissions, plus stress, etc
- Decreasing delays would reduce travel time, increase worker productivity, reduce stress, reduce consumption of fuel, and contribute to economic growth since money presently spent on fuel would be spent elsewhere

Solution / Proposal

- There are presently 4 lanes on southbound I-35 E through Carrollton / Lewisville including the HOV lane
 - Two lanes at present have a significant number of drivers wishing to travel past I-635 on I-35 E southbound
 - One lane contains significant number of motorists exiting to eastbound PGBT ramp
- Deploy line of concrete barriers between present middle and left lane to separate express and entrance / exit lanes
- Two lanes for each allows through traffic a faster trip to and past I-635 and those entering / exiting I-35 E in Carrollton southbound lanes to do so
- Closing certain exits / entrances directs traffic to other ramps to further hasten the flow of traffic

Analysis of Express Lanes

- Three express lanes continue south past I-635
 - Once motorist enters express lane, they are committed to travel past I-635
 - *Significantly* reduces time to travel to I-635
 - Contrast with present benefit of HOV lanes
- Purpose is to hasten flow of freeway traffic
 - Move ALL congestion possible to right lane and service road
- After exit ramps to I-635, right lane merges with express lane before I-635
 - Only room for three lanes under I-635 at present

Analysis of Ramp Closures (1)

- **ONLY NEW CONSTRUCTION** is a new ramp directly from service road to right lane of eastbound ramp to PGBT
 - Re-direct entering traffic to the following ramps further south
 - All traffic desiring to enter eastbound PGBT to this ramp
 - All traffic desiring to enter south I-35 E to ramp under PGBT
- Justification for closure of entrance / exit ramps
 - Entrance between FM 3040 and SH 121
 - Ramp is unnecessary and contributes to congestion
 - Re-direct traffic to ramps further south
 - Entrance between SH 121 and PGBT
 - Ramp is unnecessary and contributes to congestion
 - Re-direct traffic to ramps further south
 - Exit to Frankford Overpass
 - Re-direct traffic to exit between FM 3040 and SH 121 in order to force traffic to exit freeway earlier

Analysis of Ramp Closures (2)

- Entrance between FM 3040 and SH 121
- Entrance between SH 121 and PGBT
 - Both ramps unnecessary and contribute to congestion
 - Re-direct traffic to ramps further south
- Exit ramp to Frankford Overpass
- Exit ramp to Sandy Lake Rd
 - Re-direct exiting traffic from both to exit south of FM 3040
 - Allows third freeway lane to transition to express lane
- Entrance ramp south of Crosby
 - Re-direct traffic south past Valwood to longer ramp on level ground
 - Hastens flow of traffic on freeway, specifically in right lane

Effect on Service Road Traffic

- Traffic on Freeway *and* Service Roads are both backed up at present
- Freeway can take more traffic if back-up's are relieved
- Increasing rate of flow on freeway will draw traffic from Service Road to Freeway
- Result will be a *decrease* in cars on Service Road (theory)
- Re-deploying entrances / exits does not *add* cars to Service Road, it only manages *where* they enter and leave the Freeway in a manner more conducive to increasing flow of Freeway

Wrap-Up

- Purpose of old state highways like SH 77 was to pave roads, not move traffic
- Purpose of Eisenhower Freeways like I-35 E is to move traffic (cars, delivery trucks, semis, etc)
 - Contrast path of state highways through courthouse squares with Freeway design
 - Stoplights on square vs. ***No Designed Stops!!***
- Problem since design of Eisenhower System has been emergence of automobile and commuter traffic
 - Necessary to re-consider design of Freeways to fully utilize space and fully deploy resources to minimize delays and travel times between points