

APPENDIX G:
TRAFFIC TECHNICAL MEMORANDUM

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To: DFW International Airport

Project: Terminal F Phase 2: Ticketing, Processing, Garage & Roadways Project

Date: September 04, 2026

Background

Dallas-Fort Worth Airport's Terminal F aims to deliver an all-new experience for customers featuring a signature concourse, a state-of-the-art baggage handling system (BHS), served by a new Skylink station. DFW is preparing a Supplemental Environmental Assessment (SEA) due to design changes associated with the Terminal F program under the Central Terminal Area Expansion (CTA/CTAE) Project Environmental Assessment (EA). A Finding of No Significant Impact was issued by the Federal Aviation Administration (FAA) on April 2, 2024. Phase 2 of the Terminal F program includes construction of a new ticketing and passenger processing parking garage with associated roadway improvements. HNTB was tasked with reviewing DFW's Terminal F Phase-2 Ticketing, Processing, Garage and Roadways Design Criteria Package (DCP) 10% design and VISSIM models provided for traffic operations for opportunities for refinement and enhancements. Furthermore, the HNTB team proposed improvements to the design and analyzed their impact and some of these have been included in the design.

Objectives

Evaluate the impact of the addition of Terminal F Phase 2 Ticketing, Processing, Garage and Roadways project on the Level of Service (LOS) on the International Parkway (IP).

Previous Analysis

The original CTA EA utilized the International Parkway Modernization Program (IPMP) Traffic Impact Analysis (TIA). The IPMP TIA established the baseline for the approved International Parkway improvements and evaluated future roadway operations within the Central Terminal Area. Using the DCP and associated VISSIM models, HNTB was able to assess the operational performance of the roadway modifications specific to Terminal F Phase 2. This memorandum should be used in conjunction with the previously completed IPMP transportation analysis.

Proposed design

Multiple alternatives were analyzed and the proposed alternative was selected with improvements providing access between IP and the Terminal F Garage and Ticketing Facility. As shown in Figure A, these improvements include the addition of:

1. Right-hand exit from SB IP, allowing customers traveling SB to access Terminal F parking on Garage building Level 1 and the curbside on Level 4
2. Three successive right-hand ramp merges into NB IP for customers entering from Terminal E egress to north airport exit, followed by customers exiting the Terminal F Garage building Level 1, followed by customers entering NB IP from the Level 3 Garage Exit
3. Right-hand merge into SB IP for customers exiting the Garage building from Level 1, combined with customers from Level 3 Garage Exit, combined with customers from Terminal E egress to south airport exit
4. Allowance for East exit customers from Level 1 to join Terminal E egressing customers through the North U-turn for recirculation and to the South airport exit via SB IP

Moreover, proposed IP Right enhancement project will add

1. South U-turn from SB IP to NB IP
2. Right-hand exit from NB IP elevated road to Terminal E and Terminal F Ingress

3. Recirculation road for Terminal E
4. North U-turn from NB to SB for Terminal F NB IP Ingress and Terminal E SB IP Egress routed around the north end of the Terminal F Garage Building.

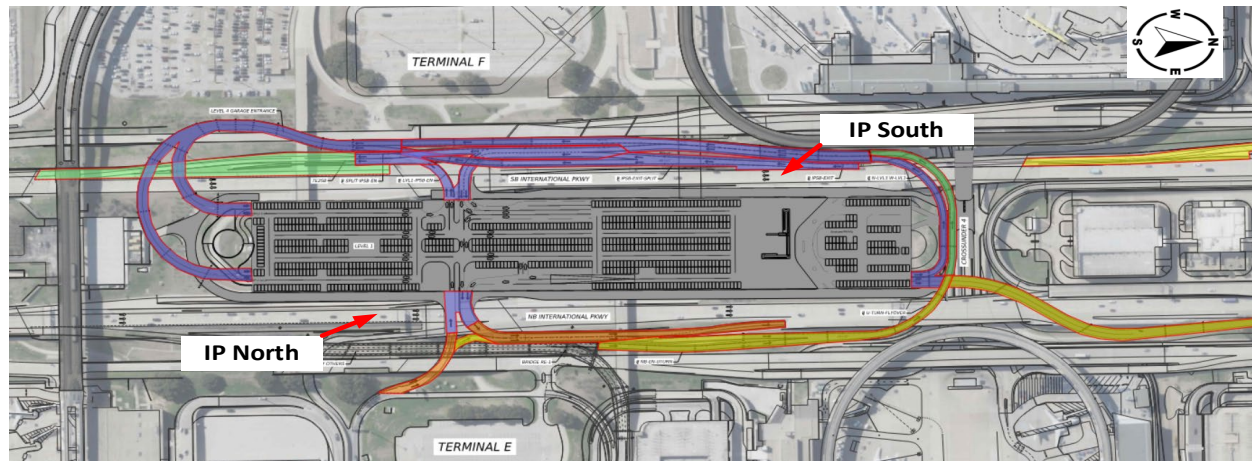


Figure A: Illustration of the Proposed Improvements

Assumptions

1. No changes were made to Terminal A, B, C and D modeling inputs and assumptions in DCP 10%. Egress to Southbound IP through new North U-turn is the only change to Terminal E traffic.
2. The only change to Terminal F Garage internal geometry is removal of through-traffic at Level 1 from Terminal E egress. All other internal traffic operations stay the same (i.e., open toll and passenger side loading at L2) as in DCP 10%.
3. Volumes calculation from the Pickup-Dropoff (PU-DO) data provided by DFW Airport assumes vehicles originate outside the airport for a worst-case scenario analysis.
4. Roadway corridors are sub-divided into segments to generally correlate with HCM protocol.

Methodology

The developed model operates with vehicles entering DFW Airport through the North and South Control Plazas. They travel through the airport terminal network depending on vehicle type and trip purpose including transportation network company (TNC) vehicles, private passenger vehicles (POVs), employee shuttles, and other vehicle types. Depending on their trip purpose, vehicles may access terminal curbside areas, enter parking facilities, and circulate within the terminal roadway system. After completing their trips, they exit the airport either by using the NB or by using SB IP following a pre-determined proportion.

The Terminal F roadway system is designed to provide clear and intuitive travel paths, efficient access to terminal and parking facilities, and reliable connectivity to the surrounding airport roadway network. The circulation system is planned as a multi-level roadway network that efficiently accommodates passenger vehicles, parking garage users, and airport operational traffic while maintaining direct connections to International Parkway (IP). The overall layout is intended to separate different traffic types and reduce interaction points to support safe and efficient vehicle movement throughout the terminal area.

Passenger vehicles access Terminal F primarily through the Level 1 roadway system. This roadway accommodates passenger pick-up and drop-off activities, provides access to the parking garage, and supports movements between the north and south sides of the terminal complex.

Access to the Terminal F Garage is provided through dedicated entry ramps that direct vehicles to the upper parking levels. Vehicles exiting the garage use separate ramps and are routed either directly to northbound International Parkway or to a recirculation roadway that allows drivers to return to the terminal roadway system when needed. This arrangement helps maintain efficient traffic flow by separating inbound and outbound garage movements.

The circulation network also includes a recirculation roadway that provides flexibility for vehicles returning to terminal frontage roads or accessing other parts of the roadway system. In addition, airport operational and maintenance vehicles are accommodated through the Tug Road and basement-level roadway network, which provides access to support areas while remaining separated from public traffic.

For the purposes of the analysis performed for this memorandum, Existing, No Build and Build scenarios were evaluated. The existing scenario represents the 90 Million Annual Passengers (MAP) Build condition documented in the IPMP TIA and serves as the baseline. The No Build and Build scenarios are based on DFW Airport's VISSIM model with 110 MAP planning demand. The No-Build scenario represents future roadway operations without the roadway improvements associated with Terminal F; the Build scenario includes the proposed garage access and roadway changes pursuant to the Terminal F development.

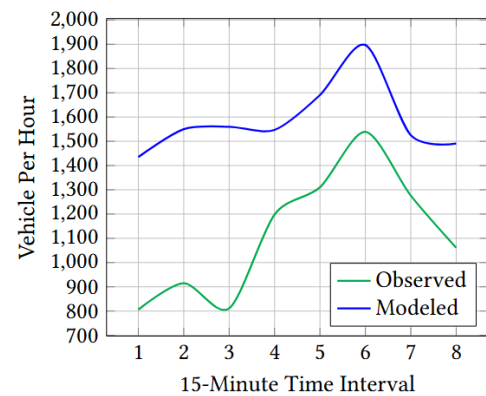


Figure B: Terminal F Observed vs. Modeled Demand

Analyses and Results

Figure C shows the comparison between the modeled demand and observed demand. The modeled demand was comparatively higher than observed to perform a more robust analysis.

After verifying the modeled demand, roadway throughput was evaluated. Figure C compares between Terminal F Modeled Demand vs. Simulated Throughput volumes during simulation. It can be observed that the proposed scenario has throughput that closely matches the demand.

The Highway Capacity Manual's (HCM) freeway Level of Service (LOS) criteria are not fully applicable to International Parkway (IP). Because, unlike a conventional freeway, IP operates with a lower posted speed limit (55 mph), narrower shoulders, frequent on- and off-ramps, and, in some locations, narrower travel lanes. As a result, IP is better classified as an urban arterial for LOS evaluation purposes.

Table 1 represents HCM's LOS thresholds for urban streets based on travel speed and volume-to-capacity (V/C) ratio. It provides the criteria used to determine the applicable LOS (A–F) for the roadway segment. Table 2 summarizes the simulated traffic volume, speed, and corresponding LOS for both southbound (SB) and northbound (NB) traffic on IP near Terminal F under the Existing, No-Build, and Build scenarios. Note that the Existing scenario results were obtained from the International Parkway Modernization Program Traffic Impact Analysis (TIA) report.

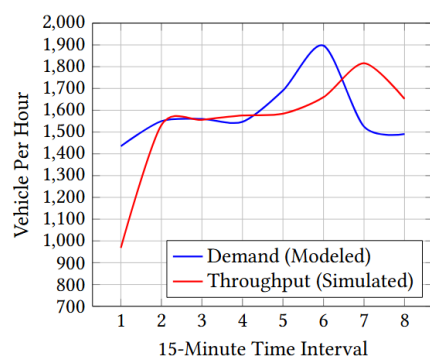


Figure C: Terminal F Demand vs. Throughput

LOS	Travel Speed Threshold (mph)							V/C Ratio
	55	50	45	40	35	30	25	
A	>44	>40	>36	>32	>28	>24	>20	≤1.0
B	>37	>34	>30	>27	>23	>20	>17	
C	>28	>25	>23	>20	>18	>15	>13	
D	>22	>20	>18	>16	>14	>12	>10	
E	>17	>15	>14	>12	>11	>9	>8	
F	≤17	≤15	≤14	≤12	≤11	≤9	≤8	
F	Any							>1.0

Table 1: HCM's LOS Criteria for Urban Streets: Motorized Vehicle

In the Existing scenario, IP performs at LOS A due to lower volumes compared to the other scenarios.

Moreover, in the No-Build scenario, NB IP performs well with LOS A. SB IP generally performs at LOS A, with LOS B and LOS C near the Terminal F and Terminal D area respectively, due to higher volumes and interweaving traffic.

Comparatively, in the Build scenario, the NB IP performance is similar. SB IP performs within LOS C near Terminal D and Terminal F area. Terminal F performs relatively worse compared to the No-Build scenario. This LOS is however within LOS C (which is the required threshold for airport design). This drop in LOS is attributed to the more complex roadway geometry of Terminal F Garage and a higher volume diverted to it.

Thus, IP remains at or above LOS C after construction. Moreover, based on engineering judgement, it can also be inferred that adding lanes to IP would improve capacity and LOS.

Conclusion

One objective of the proposed design was to achieve IP operations at LOS C or better to facilitate a smooth and comfortable experience for the drivers. As evident by the simulation, the proposed design achieves this with minimal disruption.

Segment	Existing (90 MAP)				No-Build (110 MAP)				Build (110 MAP)			
	Volume (vph)	Posted Speed (mph)	Observed Speed (mph)	LOS	Volume (vph)	Posted Speed (mph)	Observed Speed (mph)	LOS	Volume (vph)	Posted Speed (mph)	Observed Speed (mph)	LOS
Terminal B Exit Ramp	2,359	55	53	A	4,511	55	47	A	4,485	55	42	B
Terminal B Exit Ramp to Terminal C Entrance Ramp	2,359	55	53	A	4,757	55	41	B	4,831	55	35	C
Terminal C Circulation Road Entrance Ramp	2,174	55	55	A	4,491	55	34	C	4,553	55	30	C
Terminal D Entrance Ramp	2,174	55	55	A	2,940	55	49	A	3,003	55	45	A
Terminal D Exit Ramp	2,241	55	59	A	3,459	55	48	A	3,511	55	39	B
Terminal F Garage Entrance Ramp	2,754	55	56	A	3,892	55	51	A	3,850	55	50	A
West of Terminal F Garage	2,754	55	56	A	4,291	55	40	B	2,758	55	54	A
Terminal F Exit Ramp	2,754	55	56	A	4,613	55	48	A	3,604	55	44	A
North of Cross under #5	2,752	55	58	A	4,464	55	43	B	3,479	55	50	A
Southside Parking Lot Exit Ramp	2,752	55	58	A	3,579	55	54	A	2,560	55	54	A
SB-SR Entrance Ramp	2,752	55	58	A	3,578	55	53	A	2,554	55	54	A
Southside Parking Lot Entrance Ramp	2,262	55	59	A	2,592	55	54	A	2,618	55	54	A
Southside Parking Lot Exit Ramp	2,262	55	59	A	2,591	55	54	A	2,616	55	54	A
NB-SR Exit Ramp	2,262	55	59	A	3,900	55	54	A	3,947	55	54	A
Terminal E Entrance Ramp	2,262	55	59	A	3,912	55	53	A	3,961	55	53	A
Terminal E Exit Ramp	2,262	55	59	A	3,918	55	54	A	3,971	55	53	A
Terminal F Level 1 Exit Ramp	-	-	-	-	2,607	55	53	A	2,247	55	52	A
Terminal F Level 3 Exit Ramp	2,336	55	51	A	3,249	55	48	A	2,705	55	46	A

Table 2: Speed and LOS Value of IP SB and NB Direction

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