Airport capacity profile estimates were created using a standard set of performance characteristics and do not take into account non-runway constraints, unless otherwise noted. The capacity estimates developed for this report are not intended to replace the results of any detailed analysis that would precede an environmental, investment, or policy decision.

The list of Future Improvements and their expected effects on capacity does not imply FAA commitment to, or approval of, any item on the list.
DENVER INTERNATIONAL

**Definition**
- The capacity profile shows the hourly throughput that an airport is able to sustain during periods of high demand, represented as the range between the model-estimated capacity and the ATC facility reported rate (called rate). Each weather condition has a unique capacity rate range.
- To maximize capacity in Visual conditions, DEN tends to operate in an arrival or departure priority mode, as opposed to a balanced operation. An arrival or departure priority operation is only feasible when the airport’s flight schedule is unbalanced for sustained periods of time.
- The following charts compare actual hourly traffic with the estimated capacity curves for DEN.

**Recent Capacity Improvements at DEN**
- In 2003 DEN commissioned a new runway, 16R/34L, which typically experiences mixed use.
- Implementation of Traffic Management Advisor (TMA) helps to improve the flow of arrivals to the runways.

**Future Improvements at DEN**
- *Same Runway Departure Fanning* is anticipated to be available at DEN by 2020 for departures from Runways 8, 17L, and 25. This improvement will allow reduced separation between successive departures due to the availability of new Standard Instrument Departure (SID) procedures which provide more precise guidance and control for departing aircraft.
- *Improved Runway Delivery Accuracy*: The combined effects of several new capabilities, including ADS-B Out, CDTI, and TBM in the terminal area, will improve the ability of controllers by 2020 to deliver aircraft to the runway with the desired separation from the preceding aircraft. This will reduce the average spacing between arrivals and boost arrival capacity.
- Additional information on these improvements may be found in this report under “Future Operation Assumptions.”

**Data Sources**
- Actual hourly DEN operations, weather and configuration data were obtained from the FAA ASPM database, and represent operational hours from 7am to 11pm local time for all of Fiscal Years 2009 and 2010. Actual configuration usage is determined by multiple operational factors, including weather conditions.
- Facility reported rates were provided by ATC personnel at DEN.
- Model-estimated rates are derived from operational information provided by ATC.
### CURRENT OPERATIONS

**Arrival Priority**
- Runways: 7, 16L, 16R, 17R

**Departure Priority**
- Runways: 8, 17L, 17R

**Procedures**
- Visual Approaches, Visual Separation

### FUTURE IMPROVEMENTS

**Same Runway Departure Fanning**

**Improved Runway Delivery Accuracy**

**Arrival Priority**
- Runways: 7, 16L, 16R, 17R

**Departure Priority**
- Runways: 16L, 16R, 17R

**Procedures**
- Visual Approaches, Visual Separation

### Visual Weather Conditions

- The capacity rate range in Visual conditions is currently 262-266 operations per hour in arrival priority and 266-298 in departure priority.
- DEN has two primary directional traffic flows. The airport operates in variations of this configuration approximately 39% of the time in Visual weather conditions (totaling 36% annually).
- Operations on Runways 17L and 17R are affected by surface interactions with the Runway Protection Zone (RPZ) of Runway 17R.
### Marginal Weather Conditions

<table>
<thead>
<tr>
<th>DEN Scenario</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Procedures</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Operations</strong></td>
<td>34R, 35L, 35R</td>
<td>8, 25, 34L, 34R</td>
<td>Triple Simultaneous Instrument Approaches, Visual Separation</td>
<td>224</td>
</tr>
<tr>
<td><strong>Future Improvements</strong></td>
<td>34R, 35L, 35R</td>
<td>8, 25, 34L, 34R</td>
<td>N/A</td>
<td>309</td>
</tr>
</tbody>
</table>

- The capacity rate range in Marginal conditions is currently 224-279 operations per hour.
- DEN has two primary directional traffic flows. The airport operates in variations of this configuration approximately 77% of the time in Marginal weather conditions (totaling 2% annually).
- Reduced separation (2.5 NM) between arrivals is authorized for approaches to Runways 35L and 35R at DEN.
<table>
<thead>
<tr>
<th>DEN Scenario</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Procedures</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT OPERATIONS</strong></td>
<td>34R, 35L, 35R</td>
<td>8, 25, 34L, 34R</td>
<td>Triple Simultaneous Instrument Approaches, Radar Separation</td>
<td>224 243</td>
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<tr>
<td><strong>FUTURE IMPROVEMENTS</strong></td>
<td>34R, 35L, 35R</td>
<td>8, 25, 34L, 34R</td>
<td></td>
<td>N/A 275</td>
</tr>
</tbody>
</table>

- The capacity rate range Instrument conditions is currently 224-243 operations per hour.
- DEN has two primary directional traffic flows. The airport operates in variations of this configuration approximately 90% of the time in Instrument weather conditions (totaling 4% annually).
- Reduced separation (2.5 NM) between arrivals is authorized for approaches to Runways 35L and 35R at DEN.