U.S. Department
of Transportation

**Federal Railroad
Administration**

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

JUL 14 2008

The Honorable Robert C. Byrd
Chairman
Committee on Appropriations
U.S. Senate
Washington, DC 20510

Dear Mr. Chairman:

The Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2008 (Division K of Pub. L. 110-161) requires the Federal Railroad Administrator to "submit a report, and quarterly reports thereafter, to the House and Senate Committees on Appropriations detailing the Administrator's efforts at improving the on-time performance of Amtrak intercity rail service operating on non-Amtrak owned property. Such reports shall compare the most recent actual on-time performance data to pre-established on-time performance goals that the Administrator shall set for each rail service, identified by route. Such reports shall also include whatever other information and data regarding the on-time performance of Amtrak trains the Administrator deems to be appropriate."

This letter constitutes the second report under this mandate. Building upon our first report, it includes two sections: (1) an update on recent Federal Railroad Administration (FRA) efforts to improve Amtrak's on-time performance (OTP); and (2) a description of our initial approach to establishing OTP goals on a route-by-route basis, together with a table displaying current results for each route.

(1) Update: Recent OTP Improvement Actions

Southeast Corridor. Promising results continue to accrue from the Southeast (I-95) Corridor Performance Improvement Plan that the FRA required as part of our Fiscal Year (FY) 2007 Grant Agreement with Amtrak. In FY 2008 thus far, CSX freight train interference delays affecting the Southeast Corridor long distance trains have fallen to about three minutes per 100 train miles, thus contributing to an OTP improvement on this route. For example, the *Auto Train's* endpoint OTP is up to 80.5 percent from 52.1 percent a year ago, and the OTP of other long distance trains on this corridor has increased to 53.8 percent from 33 percent the previous year. Further OTP improvements on the Southeast Corridor will depend on CSX's ability to reduce slow order delays: at present, slow orders amount to 4.7 minutes per 100 train miles.

California Zephyr. Building on the encouraging Southeast Corridor results, the Union Pacific Railroad (UP) and Amtrak last year reached an agreement to decrease slow orders

on the *California Zephyr*. UP is following through on this commitment; however, performance against schedule remains below the agreed standard. The cause of this deficiency is attributed to freight interference in Colorado; Amtrak is in ongoing discussions with UP about this issue.

Additional Performance Improvement Programs. At the Pueblo, Colorado meeting on April 16, 2008 (described in our May 8, 2008 OTP report), Secretary of Transportation Mary E. Peters requested Amtrak and the major host freight railroads to identify one route on each respective railroad for improved OTP. Amtrak and the host railroads have commenced acting on the Secretary's initiative.

To date, agreements have been reached with host railroads as follows:

- CSX: Southeast Corridor (ongoing initiative, described above)
- NS: Chicago–Porter, Indiana
- CP: *Adirondack* (Schenectady, New York–Rouses Point, New York)
- CN: Chicago–Carbondale, Illinois
- BNSF: *California Zephyr* (the Chicago–Denver portion of the route[1])
- UP: Chicago–St. Louis (all trains), followed by the St. Louis–San Antonio *Texas Eagle* route.

(2) Goals and Route Performance

In evaluating route-by-route OTP, two questions arise:

- Has the route's performance improved?—and
- What is an appropriate set of longer-term and milestone targets?

Ascertaining Progress

For the purpose of ascertaining progress, no single measure captures long-term trends in train performance and the traveling public's current perception of that performance.[2] As a result, the FRA has adopted, as an interim approach, a two-step test based on percent on time and effective speed.

Test 1: Percent On Time

Percent on time is a straightforward statistic that indicates the proportion of each route's trains that arrive on time at their endpoint terminals. This simple measure requires no elaborate interpretation for the traveling public, which readily perceives whether arrivals are "on time" or "late."

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[1] On the segment of the *California Zephyr* between Denver and the San Francisco Bay Area, the UP is the host railroad; OTP efforts on the UP segment are described further above.

[2] Our prior report in this series contained a detailed review of the strengths and weaknesses of the available performance measures.

Tolerances. We intend to continue using the tolerances promulgated by the Interstate Commerce Commission (ICC) for lateness (see Annex A); these ICC tolerances already provide the basis for Amtrak's public OTP reports and align with procedures applied in other modes of transportation (e.g., the airlines[3]). At some future time, when intercity passenger rail becomes a consistently reliable mode of transportation in all corridors of the Nation, it would be desirable to consider imposing the higher standard of "zero tolerance" for lateness, which in today's circumstances would be an unrealistic, discouraging impediment to progress.

Endpoint Versus All-Station Percent On Time. As we mentioned in our first OTP report, percent on time reflects only the performance of a route at its endpoints. In the typical train schedule, Amtrak adds most of the "recovery time" toward the endpoint; this scheduling practice sometimes allows trains that are late at intermediate stops to arrive on time at their terminus and thus to be considered "on time" overall. Most passengers on a typical Amtrak route are not traveling exclusively between the route's endpoints; for example, the *Southwest Chief* serves 33 stations that can be combined into over 500 city-pairs. Thus, the endpoint percent on time statistic is not necessarily representative of the punctuality or tardiness actually experienced by most of a route's passengers.

One option for providing greater insight on train performance over the course of an entire route is to calculate the percent on time based on arrivals and departures at all stations, not just the endpoints. We are currently assessing the feasibility of adopting this all-station approach in future reports of this series, either as the principal or as a supplementary reporting mechanism.

Making use of the *Southwest Chief* as an example, Table 1 illustrates the significant difference that can exist between endpoint and all-station percent on time.

Table 1: Comparison of All Stations and Endpoint OTP
***Southwest Chief* for Example**

	Jun 2006 - May 2007	June 2007 - May 2008
All Stations Percent On Time	45%	44%
Endpoint Percent On Time	67%	66%

Test 2: Effective Speed

An improvement in simple OTP does not confirm whether a route's performance has actually improved, because better OTP may result from a lengthened train schedule that may effectively represent a deterioration in the transportation product offered to the passenger.

[3] The Federal Aviation Administration (FAA) considers a flight "on time" if it is less than 15 minutes late to the arrival gate according to the scheduled time shown in the carriers' Computerized Reservations Systems (CRS). Cancelled and diverted flights are not considered on-time arrivals.

Example A (Hypothetical):

In 2007, a given train was scheduled to travel from City A to City B (1,000 miles) in 15 hours and had an OTP of 50 percent. The average train was 30 minutes late, so that the effective running time was 15 hours 30 minutes.

In 2008, one hour was added to the schedule (now 16 hours), and OTP attained 75 percent. The average train was now 15 minutes late, so that the effective running time was now 16 hours, 15 minutes.

The effective trip time experienced by the public has deteriorated by 45 minutes, while the OTP improved by 15 points.

Thus the cost of the OTP improvement was a degradation in travel time. The lengthened schedule provides a more realistic representation of the train's trip time; however, because riders now face a longer effective trip time, OTP has not progressed in this situation.

To control for the possibility cited in Example A, we propose to introduce a new measure—change in effective speed—into the assessment of a route's progress or regress over time. Effective speed is the route's mileage divided by the effective travel time, which in turn is the scheduled travel time plus the average minutes of endpoint terminal lateness per train operation. **A finding of progress, then, requires a route's OTP to have improved and its effective speed to have improved or stayed constant.**

In Example A above, the effective speeds were:
In 2007, 15 hours 30 minutes divided into 1,000 miles = 64.5 mph
In 2008, 16 hours 15 minutes divided into 1,000 miles = 61.5 mph
Effective speed declined 3 mph, hence no finding of progress in OTP

Under this approach, it will still be possible for Amtrak and the freight railroads to improve OTP while increasing scheduled running times, as long as the effective running times are held constant or reduced. This in fact occurred in the case of the Auto Train, which from FY 2006 to FY 2008 improved its OTP and reduced its effective running times, thus scoring tangible progress in OTP:

Example B (Actual—Auto Train):

In FY 2006, the Auto Train was scheduled to travel its 855 mile route between Lorton, Virginia and Sanford, Florida in 16 hours 30 minutes. The average train was 2 hours and 13 minutes late, so the effective running time was 18 hours 43 minutes (producing an effective speed of 46 MPH). In FY 2006 the Auto Train's OTP was 17 percent.

By FY 2008, Amtrak and CSX had cooperated in adding an hour to the Auto Train's schedule (now 17 hours 30 minutes), and OTP was 83 percent (through April). The average train is now only 20 minutes late, so the effective running time is now 17 hours 50 minutes (producing an effective speed of 48 MPH).

Thus, in the case of the Auto Train in FY 2008 versus FY 2006, OTP tangibly improved: Percent on time rose by 66 points and the effective speed increased by 2 MPH. With discipline, judiciously lengthened schedules can benefit OTP while improving overall train performance.

Proposed FY 2012 Goals and Nearer-Term Targets

FRA has met with the senior management of each of the Class I freight railroads and Amtrak to discuss the challenges and opportunities to improve OTP. In addition, in

response to the Congressional mandate for this report, the FRA has set interim route-by-route goals for OTP, based on a five-year time horizon. These interim goals reflect our independent staff appraisal of what would constitute a challenging yet potentially achievable increment over actual FY 2007 performance.

For each of the three basic types of service that Amtrak operates,[4] these goals would establish a percent on time to be met by FY 2012 on all routes. (This five-year time horizon reflects the realities that OTP improvements in a capacity- constrained system take time, and that the imposition of unachievable goals for FY 2008 or FY 2009 would most likely be counterproductive.) Then, for each route, the percent on time actually achieved in FY 2007 is subtracted from the FY 2012 goal for the applicable service type. The difference, divided by five (i.e., the five years from FY 2008 through FY 2012), is the annual progress in percent on time to be achieved on each route.

The proposed FY 2012 goal and FY 2007 actual percent on time for each of the three service types are shown below:

Service Type	FY 2007 Percent On Time	Interim FY 2012 Goal
Northeast Corridor	81%	95%
Other Corridors	68%	90%
Long Distance	42%	85%

Example C summarizes the process that is proposed for establishing targets for each of the intermediate years for progress on individual routes.

Example C: Goal Development by Route

The Illinois Zephyr falls within the "Other Corridors" service type, which has an OTP goal of 90 percent for FY 2012.
In FY 2007, the Illinois Zephyr had OTP of 65.2 percent.
The difference between the FY 2012 goal and the FY 2007 performance is 24.8 percent.
The expected yearly improvement would then be 24.8 percent divided by 5 years, or 5.0 percent.
Thus, the target for FY 2008 would be 65.2 percent plus 5.0 percent, or 70.2 percent; for FY 2009, 70.2 plus 5.0 percent, or 75.1 percent (slight discrepancies are due to rounding); and so forth for subsequent years until the FY 2012 goal is reached.

The report that results from the above interim methodology is appended as Annex B. In this example, a 60 percent minimum target for FY 2008 is assumed for Long Distance trains, and a 70 percent minimum target is assumed for State Corridor/Short Distance

[4] Amtrak operates three basic types of service:

- **Northeast Corridor main line services:** High-speed, high-frequency services, some of which reach top speeds of 125 mph and more, between Boston, New York, Philadelphia, and Washington (Acela and Regional trains).
- **Other corridor services:** Short-distance services—mostly under 500 miles—in heavily populated regions of the country such as the West Coast, the Chicago region, extensions of the NEC main line, and certain other high-volume corridors; most of these routes are State-subsidized.
- **Long-distance services:** Fifteen routes, of which all but one involve overnight and two-night trips. Most routes radiate from Chicago; others serve the West and East Coasts, or link New Orleans with Los Angeles and the Northeast.

trains. In future reports, we intend to expand Annex B to include information that we believe would afford the Committee a more comprehensive picture of Amtrak's OTP—for example, the minutes of delay per 10,000 train-miles, categorized as "host railroad-caused" versus "Amtrak-caused"; and (as described above) a more inclusive OTP measure that would capture lateness at intermediate stations.

The accurate measurement and steady improvement of intercity passenger trains' OTP is an important and current topic, as the Congressional requirement for the present report makes clear. OTP has long-term effects on both passenger revenues and operating expenses, not to mention Amtrak's reputation with the traveling public. For these reasons, the FRA will continue to refine its methodologies and data presentations, in cooperation with Amtrak and other stakeholders to the extent possible. We will also continue vigorously to pursue our efforts to catalyze OTP improvements through joint actions by the freight railroads and Amtrak.

I hope that the information contained in this report will assist the Committee in its work, and look forward to providing follow-on reports on OTP as specified in the 2008 Appropriations Act.

Identical letters have been sent to the Ranking Member of the Senate Committee on Appropriations, and to the Chairman and Ranking Member of the House Committee on Appropriations.

Sincerely,

Joseph H. Boardman 7/14/08
Administrator

Attachments

Annex A:
ICC-Issued On-Time Performance Tolerances

ICC On-Time Performance Tolerances	
Trip Length (Miles)	Tolerances (Minutes)
0 - 250	10
251 - 350	15
351 - 450	20
451 - 550	25
551 or more miles	30

Please Note: Amtrak continues to apply the ICC tolerances shown above, except that all Acela trains have a 10-minute tolerance regardless of run length.

Annex B

Amtrak On-Time Performance: FY 2008

Year to Date Totals through May 2008

Service Type/Route	Both Tests Met for OTP Progress? Yes	No	Test 1: Higher Percent On Time YTD - May 2008 vs. YTD - May 2007 FY 2008 Percent On Time	Change from FY 2007	Proposed Target for FY 2008	Variance from FY 2008 Target	Test 2: Constant or Better Effective Speed Change in MPH from Baseline
Northeast Corridor Service *(Goal proposed for FY 2012: 95%)*							
Acela		X	84.5%	(3.7%)	89.2%	(4.8%)	(0.4)
Regional Service		X	77.2%	(1.4%)	81.4%	(4.1%)	(0.2)
Short Distance/Corridor Trains *(Goal proposed for FY 2012: 90%. Minimum target proposed for FY 2008: 70%)*							
Adirondack	X		47.5%	33.0%	70.0%	(22.5%)	1.8
Blue Water		X	30.3%	(2.0%)	70.0%	(39.7%)	0.1
Capitols	X		86.7%	15.0%	77.7%	9.1%	0.9
Carolinian	X		44.8%	13.7%	70.0%	(25.2%)	2.0
Cascades		X	65.8%	7.4%	70.0%	(4.2%)	(1.2)
Downeaster		X	74.0%	(11.5%)	80.4%	(6.3%)	(0.5)
Empire Service		X	73.7%	(0.9%)	75.4%	(1.6%)	(0.1)
Ethan Allen Express		X	32.6%	(12.8%)	70.0%	(37.4%)	0.4
Heartland Flyer	X		51.8%	18.2%	70.0%	(18.2%)	2.2
Hiawatha		X	86.3%	(0.7%)	89.3%	(3.0%)	(0.8)
Hoosier State	X		42.3%	5.5%	70.0%	(27.7%)	0.3
Illini		X	51.7%	(17.9%)	73.2%	(21.4%)	(1.8)
Illinois Zephyr	X		79.4%	20.0%	70.2%	9.3%	1.3
Keystone	X		87.8%	5.1%	86.3%	1.5%	0.5
Lincoln Service	X		47.5%	3.2%	70.0%	(22.5%)	0.2
Maple Leaf	X		45.9%	5.0%	70.0%	(24.1%)	1.1
Missouri Services		X	18.2%	(13.8%)	70.0%	(51.8%)	(0.3)
Pacific Surfliner	X		77.6%	1.4%	77.8%	(0.3%)	0.1
Pennsylvanian	X		89.8%	21.2%	75.2%	14.5%	1.0
Pere Marquette	X		26.0%	3.4%	70.0%	(44.0%)	0.2
Piedmont	X		78.2%	5.3%	77.5%	0.7%	0.5
San Joaquins	X		85.2%	16.9%	72.4%	12.9%	1.7
Vermonter		X	33.2%	(47.3%)	70.0%	(36.8%)	(1.0)
Wolverines		X	29.7%	(5.9%)	70.0%	(40.3%)	(0.3)
Long Distance Trains *(Goal proposed for FY 2012: 85%. Minimum target proposed for FY 2008: 60%)*							
Auto Train	X		80.5%	28.5%	66.7%	13.8%	1.2
California Zephyr	X		37.3%	37.3%	60.0%	(22.7%)	3.1
Capitol Limited	X		40.2%	25.0%	60.0%	(19.8%)	2.3
Cardinal		X	38.3%	(0.2%)	60.0%	(21.7%)	(0.7)
City of New Orleans		X	73.8%	(13.1%)	85.0%	(11.2%)	(0.6)
Coast Starlight	X		69.4%	49.0%	60.0%	9.4%	1.5
Crescent	X		72.1%	28.7%	60.0%	12.1%	1.0
Empire Builder		X	69.9%	(5.3%)	75.7%	(5.8%)	(0.2)
Lake Shore Limited	X		58.0%	28.9%	60.0%	(2.0%)	2.7
Palmetto	X		57.2%	29.0%	60.0%	(2.8%)	3.6
Silver Meteor	X		68.0%	22.6%	60.0%	8.0%	1.9
Silver Star	X		45.3%	18.1%	60.0%	(14.7%)	0.6
Southwest Chief	X		74.1%	8.1%	65.1%	9.0%	0.4
Sunset Limited	X		22.6%	4.3%	60.0%	(37.4%)	1.3
Texas Eagle		X	23.8%	(8.7%)	60.0%	(36.2%)	(0.3)