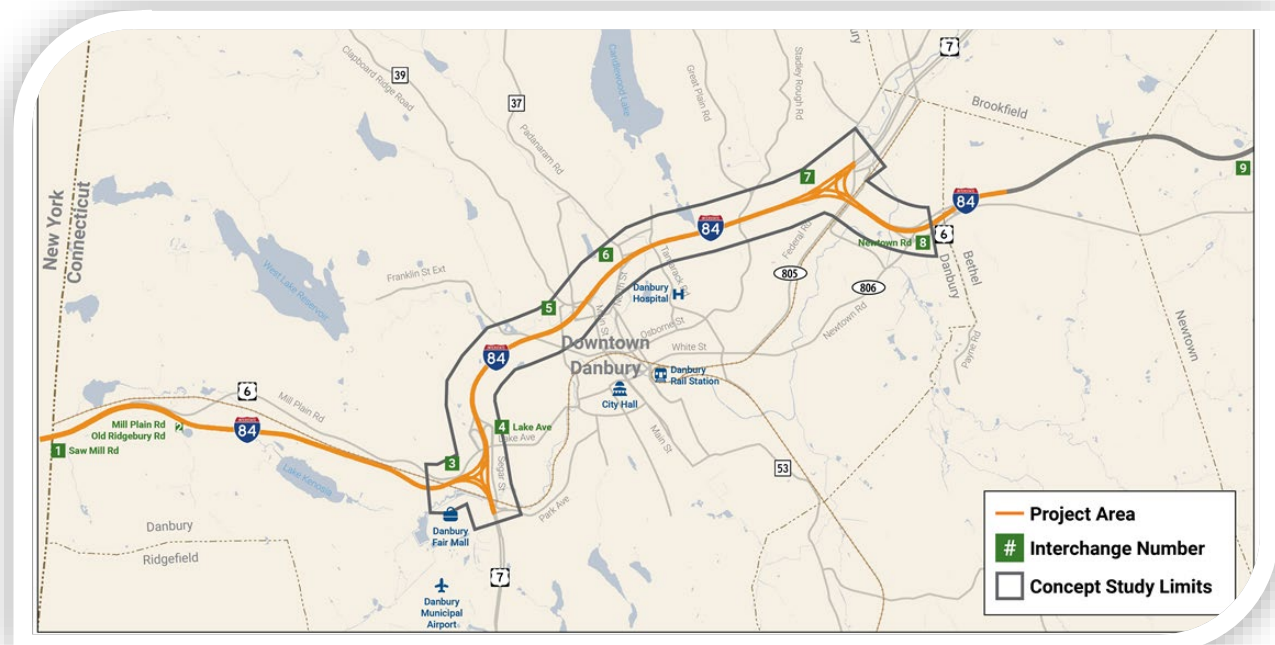


# Concept 9 Summary: Route 7 Median - Mainline

## DESCRIPTION

Concept 9 seeks to create lane continuity, eliminate left-hand ramps, and, where possible, improve horizontal curvature. This concept maintains the current alignment of I-84 and separates Route 7 vehicles from those on I-84. The primary component of this concept is that Route 7 will be shifted into the median section of I-84 and will be an express facility with no local connections between Interchanges 3 and 7. Improvements are only proposed at I-84 Interchanges 3, 4, 7, and 8. No improvements are proposed at the remaining interchanges on I-84. Elements of Concept 9 include:

- I-84 will be on the right-side of the corridor in both directions providing access to local streets and Route 7 will be in the median section as an express facility.
- I-84 will be three lanes in each direction (same as existing) between Interchanges 3 and 7.
- Route 7 will be two lanes in each direction in the median section.
- Existing left-hand ramps will be removed to/from Route 7 at Interchanges 3 and 7 and replaced with right-hand ramps.
- Acceleration and deceleration lanes will be extended for all on and off ramps.
- Provides lane continuity on I-84.
- The sharp horizontal curves on I-84 at Interchanges 3 and 7 will be improved to increase design speed.
- Stopping sight distance for drivers will be increased.
- Shoulder improvements will be made along the mainline between Interchanges 3 and 8 (i.e. widen shoulder and upgrade guide rails).
- Concept will construct 13 new bridges, replace 24 existing bridges, and remove 4 bridges.



## PROS

- Lane continuity is maintained within the study limits.
- Left-hand ramps are replaced with right-hand ramps.
- Peak hour delay is reduced.
- Addresses traffic weaving between Interchanges 3/4 and 7/8.
- I-84 curve at Interchange 3 is increased from a 50 to 60 miles per hour design speed in the eastbound direction and meets design standards.
- I-84 curve at Interchange 7 is increased from a 65 to 70 miles per hour design speed in the westbound direction.
- Stopping sight distance is improved on the horizontal curves at Interchange 3 in the eastbound direction and at Interchange 7 in the westbound direction.
- Acceleration and deceleration lane lengths are improved at all interchanges.
- Typical construction methods could be used.
- There are no impacts to known historic resources.
- There are no impacts to known 4(f) properties.

## CONS

- Route 7 has no access to Interchanges 4, 5, and 6.
- Lacks consistent design speed throughout the I-84 corridor.
- Does not propose improvements at interchanges 1, 2, 5, and 6.
- Interchange 6 remains a partial interchange.
- Does not improve access to the Danbury Hospital.
- Significant property impacts.
- Modest increase in noise levels at some adjacent properties are anticipated.
- The highway will be closer to certain residential properties as compared to existing conditions, thus potentially impacting aesthetics.
- Disruption in community cohesion between north and south side of highway would occur by creating longer highway crossing distances.
- The improvements in this concept have the potential to disturb the natural gas transmission pipeline between interchanges 6 and 7.
- The widened highway profile would disturb a large hydrologic area including the streams and drainage features that parallel or cross the highway such as Kohanza Brook, Boggs Pond Brook, and Padanaram Brook.

## RECOMMENDATION

This concept provides a partial solution. It improves congestion and mobility on the highway, but it does not address mobility adjacent to the highway. This concept is feasible from an engineering and constructability standpoint. This concept results in moderate impacts to the human and natural environment, with numerous mitigation alternatives to offset impacts.

It is recommended that this concept be combined with a concept that addresses mobility adjacent to the highway.