

# Concept 22 Summary: Route I-84 Express Lanes - Mainline

## DESCRIPTION

Concept 22 seeks to improve congestion and mobility by creating I-84 has express lanes in both directions in the median section between Interchanges 3 and 8. Other elements of Concept 22 include:

- I-84 has no direct access to Route 7 and the local interchanges.
- In the eastbound direction, an exit ramp is located on I-84 west of Interchange 3 to provide access to Route 7 and the local interchanges.
- In the westbound direction, an exit ramp is located east of Interchange 8 to provide access to Route 7 and the local interchanges.
- Route 7 provides local connections and is on the right separated by a barrier with I-84.
- I-84 will consist of two travel lanes in each direction.
- Route 7 will consist of three travel lanes in each direction.
- Existing left-hand ramps will be removed to/from Route 7 at Interchanges 3 and 7 and replaced with right-hand ramps.
- The Lake Avenue eastbound off-ramp is eliminated at Interchange 4.
- A new off-ramp will be provided to Segar Street at Interchange 3 on I-84 in the eastbound direction.
- A new off-ramp from Route 7 northbound will meet with the I-84 eastbound off-ramp at Interchange 3 and connect with Segar Street.
- The westbound on-ramp to I-84 from Lake Avenue is relocated opposite the existing westbound off-ramp at Interchange 4.
- A Collector-Distributor (CD) Road is provided between Interchanges 7 and 8.
- Acceleration and deceleration lanes will meet design standards at Interchanges 3, 4, 5, 6, and 7.
- The sharp horizontal curves on I-84 at Interchanges 3 and 7 will be improved to increase design speed.
- Stopping sight distance will be increased at Interchanges 3 and 7.
- Shoulder improvements will be made along the mainline between Interchanges 3 and 8 (i.e. widen shoulder and upgrade guide rails).
- 13 new bridges, replace 24 existing bridges, and remove 5 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 within the concept limits.
- Typical construction methods could be used.
- There are no impacts to known historic resources.
- There are no impacts to known 4(f) properties.

## Cons

- I-84 has no direct access to Interchanges 3, 4, 5, 6, 7, and 8.
- Lacks consistent design speed throughout the I-84 corridor.
- Interchange 6 remains a partial interchange.
- Does not improve access to the Danbury Hospital.
- Significant property impacts.
- Modest increases 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 the 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.
- A large hydrologic area would be disrupted, 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.

