

04/16/08

## **DLIG Recommendation to VDOT / Loudoun County / Fairfax County for design considerations along US 50 from Route 28 to Poland Road**

### **Background**

- 1) The Dulles Loop Implementation Group (DLIG) has undertaken an engineering / planning study to identify appropriate intermediate-term and long-term roadway improvements to US 50 and Route 606 in the area immediately surrounding Dulles Airport that will sufficiently accommodate projected traffic volumes to the year 2030.
- 2) Concurrently Loudoun County has commissioned a preliminary design project to convert the US 50 / Route 606 signalized intersection to a grade-separated, uninterrupted flow interchange to accommodate future traffic volumes.
- 3) Concurrently VDOT has commissioned a preliminary design project to improve US 50 to a 6-lane urban principal arterial from Route 28 to Poland Road. Once the preliminary design is complete, VDOT plans to let a Design/Build contract in 2009 for this work. The VDOT project will stop short of designing US 50 to free-flowing (grade separated) conditions.
- 4) It is the desire of the DLIG to provide VDOT with recommendations to consider to protect future options to convert US 50 to a 6-lane free-flowing facility in the future from Route 28 to Route 606. DLIG desires that VDOT include / allow for these considerations in their design work described in #3 above.
- 5) Additional recommendations for the long-term concept for Route 50 will be documented as part of the Dulles Loop Implementation Plan.

### **DLIG Overall Recommendations for US 50**

- 1) That VDOT embrace the DLIG long-term vision for US 50 in their decision processes
- 2) That US 50 have an ultimate design of a principal arterial with controlled access that is visually attractive and has minimal environmental impact. This is interpreted as uninterrupted flow (free-flowing movements) along Route 50 with no crossovers, no signalized intersections or impediments to free-flow. All crossings of Route 50 would be grade-separated.
- 3) That VDOT adopt a long-term typical section of US 50 that is consistent with the ultimate design described above in Recommendation #2. One such typical section is that for Route 50 at the Route 50/Route 606 interchange being proposed by Wilbur Smith & Associates for Loudoun County.
- 4) That ample right-of-way be preserved and obtained for the long-term typical section of US 50 and for providing transit within the corridor.
- 5) That Fairfax and Loudoun Counties add the DLIG's recommended long-term concept for Route 50 to their respective Comprehensive Plan updates.
- 6) Key components of the long-term concept for Route 50 are parallel collector roads to Route 50 connected with a series of grade separations over Route 50. The collector roads should be as continuous as possible connecting both Loudoun and Fairfax Counties within this corridor.

## **DLIG Specific Recommendations for the current VDOT 6-lane arterial design effort**

- 1) Preserve the maximum median possible for US 50 that provides ample space for the conversion of the corridor to an uninterrupted flow facility.

As an example: For a 55mph design speed, a minimum median width of 42 to 46 feet for the intermediate-term design of the 6-lane arterial street would allow for conversion of the corridor to free-flow status by reducing the median width, shifting the travel lanes inward to provide for an outside shoulder between the curb and gutter and outside travel lane. A higher design speed will require a greater median width and clear zones. The outside curb and gutter and storm drain system may not be impacted if the shoulders are accounted for in the intermediate design. (Please see the attached figure for illustration of the conversion of US 50 from the intermediate-term design to the long-term design).

- 2) Apply VDOT's new access management guidelines to US 50 in order to:
  - A) Create a design for US 50 that can evolve into an uninterrupted flow corridor in the future.
  - B) Conserve the capacity gains on US 50 from adding a third lane in each direction.

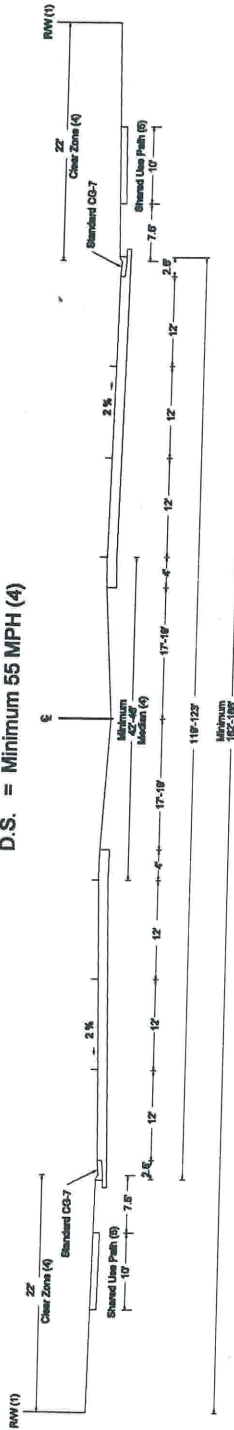
For this purpose the applicable guidelines should include but not be limited to:

- Identifying the appropriate location for all future signalized intersections along US 50 and design/preserve the corridor accordingly; maximizing signal spacing along the corridor. The location of future interchanges and grade-separations should be considered when locating signals.
- Closing unsignalized crossovers wherever possible.
- Closing or consolidating driveways wherever possible. No direct access to Route 50 should be eliminated prior to adequate alternative access such as parallel collector roads being in place.
- Looking for opportunities for interparcel access between parcels and opportunities to limit ingress and egress movements to right-in and right-out movements.
- Looking for opportunities to eliminate left turn movements or provide innovative left-turn movements.

- 3) Provide for the maximize amount of landscaping to achieve a parkway like appearance while balancing this desire with the need to minimize the property impacts along the corridor.
- 4) During the procurement of a design-build contractor establish definitive design parameters that ensure the above goals and recommendations are met.

Potential Intermediate-Term US 50 Typical Section  
 Principle Arterial

D.S. = Minimum 55 MPH (4)

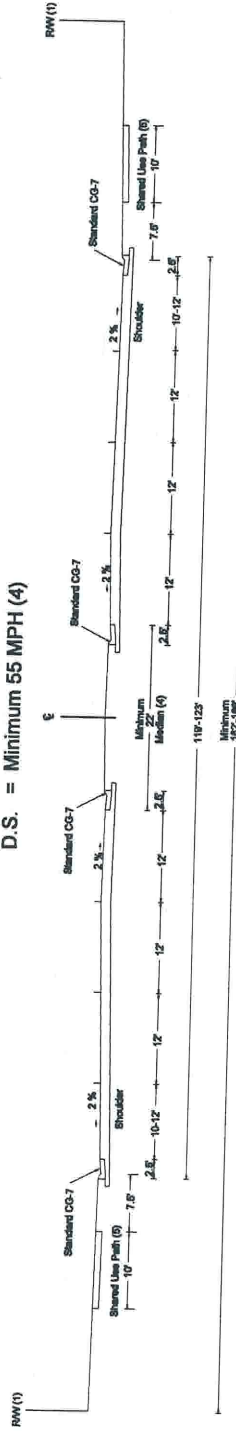


Notes:

- (1) Minimum right-of-way for 55 mph design speed and straight section of road. Additional right-of-way (4-12 feet on each side) will be needed at intersections where exclusive right turn lanes are warranted, increasing the minimum right-of-way to between 180 feet and 190 feet depending on clear zone requirements.

Potential Long-Term US 50 Typical Section  
 Principle Arterial with Controlled Access

D.S. = Minimum 55 MPH (4)



Notes:

- (2) This is interpreted as free-flowing movements along Route 50 with no crossovers, no signalized intersections or impediments to free-flow. All crossings of Route 50 would be grade-separated.
- (3) The outside curb and gutter and storm drain system may not be significantly impacted in the conversion to an uninterrupted flow facility thus minimizing construction costs.
- (4) A higher design speed will require wider medians and clear zones.
- (5) If provided the shared use path will not require additional right-of-way. Right-of-way is set by required clear zone from outside road travel lane.

DULLES LOOP HIGHWAY PLAN



TYPICAL SECTIONS  
 US 50

SCALE	PROJECT NO.
HORIZ. NONE	11252B
VERT. NONE	CIP NO.
DATE: APRIL, 2008	CAD FILE
DRAWN BY: JPH	APPROVED BY:
CHECKED BY: BEG	