



U.S. Department
of Transportation

Federal Aviation
Administration

Seattle Airports District Office
1601 Lind Avenue, S. W., Ste 250
Renton, Washington 98055-4056

June 14, 2005

Ms. Lynn Rust
Columbia River Crossing Project
700 Washington Street
Suite 300
Vancouver, WA 98660

RECEIVED

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Columbia River Crossing

Dear Ms. Rust:

Portland, Oregon – Vancouver, Washington
Airspace Analysis Results for Feasibility Studies
Columbia River Crossing Project

The Federal Aviation Administration (FAA) has completed its review of your request for feasibility studies, per FAA Order 7200-2E, para. 6-1-6, on three conceptual alternatives for a new bridge near Pearson Field (VUO), Vancouver, Washington, and over the Columbia River between Vancouver and Portland, Oregon, as shown on the plans attached to your *Notice(s) of Proposed Construction or Alteration* (FAA Form 7460-1) dated May 1, 2006. The findings and comments from these studies are consolidated into one report below.

Aeronautical Study No. 2006-ANM-272-NRA – Downstream mid-level replacement bridge “RC-3”

It has been determined that the critical location of this proposal is Point 309, an existing tower (to be removed with proposed demolition of the existing bridge), which penetrates the Part 77 transitional surface for Runway 8-26 at VUO by 66.6 feet. The future critical location would be Point 304, which would penetrate the VUO horizontal surface by 26.46 feet. The proposal would not penetrate any existing or future Part 77 surface for Portland International Airport (PDX).

Air Traffic Division (AT) states: This lat/long has PART 77 busts: horizontal by 63 feet and transition by 72 feet - a bit more than 27 feet identified; a formal obstruction evaluation (OE) aeronautical study will need to be conducted after this feasibility study. (Robert van Haastert, 907-271-5863)

Airway Facility Division (AF) states: The bridge will penetrate the obstacle clear zone of Pearson's RW 08 visual approach slope indicator (VASI). (Peter Markus, 425-227-1450)

Seattle Flight Procedure Office (SEA-FPO) states: Current VUO RWY 26 instrument flight rules (IFR) departure procedure (DP) climb gradient is 650'/nautical mile (NM); and, is controlled by the existing I5 Bridge. If the existing I5 bridge were not present, the climb gradient would be 269'/NM with the 535' mean sea level (MSL) Columbia River Crossing transmission line tower @453557N/1224312W becoming controlling. Approximate Climb Gradients: 435'/NM for option RC-3 (191.49'MSL @ 2975' from 30' elev threshold height—TH). 460'/NM for option RC-4 (approx 180' MSL @ 2700' from 30' elv TH). 710'/NM for option RC-8 (251' MSL @

2500' from 30' elv TH) Even though RC-3 is higher than RC-4, it results in a lower climb gradient because it is further from VUO's TH. Suggest proponent explore the 180' msl design (ala RC-4) constructed on the West side of the existing I5 bridge. That gradient would be approximately 410'/NM (approx 180' MSL @ approx 2975' from 30' elv TH). (Vic Zembruski, 425-227-2224)

Aeronautical Study No. 2006-ANM-273-NRA – Upstream mid-level replacement bridge “RC-4”

It has been determined that the critical location of this proposal is Point 309, an existing tower (to be removed with proposed demolition of the existing bridge), which penetrates the Part 77 transitional surface for Runway 8-26 at VUO by 66.6 feet. After removal of the existing bridge, no part of the replacement bridge would penetrate any existing or future Part 77 surface for either VUO or PDX.

Air Traffic Division (AT) states: This lat/long and elevation has PART 77 bust: VUO RWY 08 transition by 72 feet - a bit more than identified; a formal OE aeronautical study will need to be conducted after this feasibility study. (Robert van Haastert, 907-271-5863)

Airway Facility Division (AF) states: Tech-Ops has no objection provided the associated traffic lights and freeway signs do not penetrate the obstacle clear zone of Pearson's RW 08 VASI. (Peter Markus, 425-227-1450)

Seattle Flight Procedure Office (SEA-FPO) states: Current VUO RWY 26 IFR DP climb gradient is 650'/NM; and, is controlled by the existing I5 Bridge. If the existing I5 bridge were not present, the climb gradient would be 269'/NM with the 535' MSL Columbia River Crossing transmission line tower @453557N/1224312W becoming controlling. Approximate Climb Gradients: 435'/NM for option RC-3 (191.49' MSL @ 2975' from 30' elv TH). 460'/NM for option RC-4 (approx 180' MSL @ 2700' from 30' elv TH). 710'/NM for option RC-8 (251' MSL @ 2500' from 30' elv TH) Even though RC-3 is higher than RC-4, it results in a lower climb gradient because it is further from VUO's TH. Suggest proponent explore the 180' msl design (ala RC-4) constructed on the West side of the existing I5 bridge. That gradient would be approximately 410'/NM (approx 180' MSL @ approx 2975' from 30' elv TH). (Vic Zembruski, 425-227-2224)

Aeronautical Study No. 2006-ANM-274-NRA – Upstream low-level supplemental bridge “RC-8”

It has been determined that the critical location of this proposal is Point 801, which would penetrate the VUO transitional surface by 72.3 feet. The proposal would not penetrate any existing or future Part 77 surface for PDX.

Air Traffic Division (AT) states: This lat/long has PART 77 busts: horizontal by 69 feet and transition by 72 feet - a bit more than identified; a formal OE aeronautical study will need to be conducted after this feasibility study. (Robert van Haastert, 907-271-5863)

Airway Facility Division (AF) states: When the bridge is open for marine traffic, it will penetrate the obstacle clear zone of Pearson's RW 08 VASI (Peter Markus, 425-227-1450)

Seattle Flight Procedure Office (SEA-FPO) states: Current VUO RWY 26 IFR DP climb gradient is 650'/NM; and, is controlled by the existing I5 Bridge. If the existing I5 bridge were not present, the climb gradient would be 269'/NM with the 535' MSL Columbia River Crossing transmission line tower @453557N/1224312W becoming controlling. Approximate Climb Gradients: 435'/NM for option RC-3 (191.49' MSL @ 2975' from 30' elv TH). 460'/NM for

option RC-4 (approx 180' MSL @ 2700' from 30' elv TH). 710'/NM for option RC-8 (251' MSL @ 2500' from 30' elv TH) Even though RC-3 is higher than RC-4, it results in a lower climb gradient because it is further from VUO's TH. Suggest proponent explore the 180' msl design (ala RC-4) constructed on the West side of the existing I5 bridge. That gradient would be approximately 410'/NM (approx 180' MSL @ approx 2975' from 30' elv TH). (Vic Zembruski, 425-227-2224)

The **Flight Standards Division** stated "no objection" on all three alternatives. If you have any questions on the foregoing comments, please contact the specialists at the numbers listed. Once a final plan has been decided upon for the bridge, a *Notice of Proposed Construction or Alteration* (FAA Form 7460-1) must be submitted to FAA for a formal OE aeronautical study, preferably not later than at a ten-percent design stage. If you have any other questions please contact me at (425) 227-2652.

Sincerely,



Don M. Larson
Airport Planner