

Altitude Wind Tunnel Demolition Justification

This Project at the Glenn Research Center is proposed for demolishing the bulk of the existing Altitude Wind Tunnel (AWT) circuit and adjacent AWT facilities and utilities currently part of the Building No. 7 and No. 8 complex.

NASA Headquarters has concurred with and advocated the proposed demolition of AWT. The facility, as configured, has been out of service for more than 30 years. The tunnel underwent major modifications to support specific test goals for the Centaur Program. No significant research work has been done in the tunnel circuit since Centaur.

The Government completed a preliminary engineering study in the mid-1980's to substantially modify the AWT circuit for use as a new Icing Research Tunnel Facility. NASA Headquarters rejected the proposal based on cost.

There are no current proposals for either near-term or long-term use of the tunnel circuit other than as a potential Visitor's Center Tour stop. Although the AWT is unique based on its sheer size alone, the maintenance costs for the facility are now so high as to be justified only by the largest of research programs. A recently completed cost estimate to do minor exterior repairs and repaint the tunnel circuit and utilities was in excess of \$4.0M.

The current NASA GRC proposal is to remove the entire AWT circuit except for the Test Section within the High Bay Building as part of the Bldg. 7 complex. The only major costs involved with retaining the Test Section would be for closures on both sides of the High Bay and residing the High Bay after existing asbestos panels are removed.

Historical preservation: All major or minor demolition projects at GRC or Plum Brook facilities require formal notification to the State Preservation Office for beginning the process of negotiating a level of effort with respect to preservation and/or documentation.

AWT has substantial historical significance because of the critical aeronautical work done during and immediately after WWII and for critical support of the Centaur Program after major facility modifications. The SHPO will most likely make strong recommendations or request that NASA save some remnants of this facility for long-term retention and complete a thorough documentation of the AWT and its legacy as a National Test Facility and contributor to America's space initiatives.

The above brief comments form part of the basis for currently proposing the retention of the original remaining Test Section as historical memorabilia and advocating the funding (from the Project) for a comprehensive historical review and formal documentation package to satisfy both anticipated SHPO and NASA GRC future planning requirements.