

WINGS TEST FACILITY REQUEST FOR INFORMATION

ATTACHMENT 1 – CONCEPT OF OPERATIONS

Concept of Operations		
Key Tasks	Customer Responsibility	Facility Responsibility
Establish Schedule, Cost, Test Plan, Test Procedures	Provide test plan with description of test article and requirements for loads, sensors, etc. Coordinate test procedures with facility.	Develop test procedures for aerodynamic loading and wing bending in coordination with customer. Provide test quote to customer and schedule for testing.
Define Interface Requirements	Design test article to interface requirements negotiated with facility. Design for interfacing with test rig and installation/removal equipment.	Develop interface requirements document in coordination with customer. Modify test rig per requirements if necessary.
Plan for Installation / Removal of Test Article	Deliver test article to facility and aid as consultant for installation / removal.	Develop installation and removal plan in coordination with customer. Perform installation / removal of test article.
Safety Plan	Test Article Safety Plan (pinch hazards, stored energy, etc.)	Facility Safety Plan (crane operation, safety equipment, etc.)
Wing Box Plan	Provides for test article wing box, or can use facility generic wing box.	Offers a generic wing box to customer if desired.
Actuators Plan	Provides for test article (control effector) actuation.	Provides for all aerodynamic loading, wing bending actuation, and load reaction structures and mechanisms.
Sensor Data Plan	Provides sensors for feedback and control of test article.	Provides sensors for feedback and control of aerodynamic loading and wing bending actuators. Also provides up to 2000 channels for recording test article performance (loads, deflections, rates, etc.) and camera data.
Controls Plan	Provides controls for test article actuation. Can provide flight control hardware or can use facility flight control hardware.	Provides controls for aerodynamic loading and wing bending. Can also provide flight control hardware if requested by customer.