

Federal Aviation Administration
Center of Excellence
for
General Aviation
Final Solicitation

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Issued by the:

FAA Centers of Excellence Program Office

and the

Aviation Research Division

FAA William J. Hughes Technical Center

Atlantic City International Airport, NJ 08405

OVERVIEW

The Federal Aviation Administration (FAA) intends to establish an Air Transportation Center of Excellence (COE) for General Aviation (GA) in fiscal year 2012. The goal of this endeavor is to create a cost sharing partnership between academia, industry, and government that will focus on general aviation safety related topics.

To enhance its research efforts, in 2010, the FAA proposed the establishment of a new COE for GA designed to advance general aviation technology to meet the needs of the U.S. general aviation industry in the short- and long-term. Over the next decade, the COE for GA is expected to forge a union between the public and private sectors and to create a world-class consortium that will identify solutions to existing and anticipated issues. The FAA expects the COE to perform various types of general aviation related research, ranging from basic to applied, through a variety of analyses, development, and prototyping activities.

To this end, the FAA is soliciting proposals from accredited institutions of higher education with partners and affiliates positioned to join the FAA in supporting a new COE for GA. Upon completion of the competitive process, the FAA will enter into cooperative agreements with core university members and award matching grants to establish, operate and conduct general aviation research.

As a result of the COE competitive process, the FAA also plans to award indefinite delivery indefinite quantity contracts (IDIQ) to the successful COE team. The FAA intends to fund the COE through a combination of matching grants for public purpose and, as appropriate, issue contract delivery orders on a cost reimbursement and/or fixed price basis.

The Office of Primary Interest (OPI) for this Center of Excellence is the Aviation Research Division located at the William. J. Hughes Technical Center (WJHTC). This organization intends to invest a minimum of \$500,000 per year during the first five years of the COE agreement.

1. FAA CENTERS OF EXCELLENCE PROGRAM

The FAA has long had a successful partnership with the nation's academic research community, working with more than 75 U.S. colleges and universities to foster important research conducted by faculty and students. These efforts have contributed significantly to the advancement of aviation science and technology while providing the agency and the industry a high return on investments for almost two decades.

The FAA establishes Air Transportation Centers of Excellence under the authority of Public Law 101-508 (49 USC 44513). The FAA has established COEs to focus on mission-critical topics that include: Computational Modeling of Aircraft Structures, Airport Pavement and Airport Technology Research, Operations Research, Airworthiness Assurance, General Aviation, Aircraft Noise and Aviation Emissions Mitigation, Advanced Materials, Airliner Cabin and Intermodal Research, and Commercial Space Transportation.

1.1 Background

Through the COE business strategy and structure, the FAA enhances internal research efforts by partnering with nationally recognized industry and academic research scientists and institutions. By establishing major research centers throughout the country, the agency proactively assists in: creating a pool of technical professionals trained in areas related to the aviation industry; helps finance graduate education; fosters cooperative FAA, university, industry research and development (R&D) efforts; and improves the standing of the U.S. aviation industry.

The FAA COEs are required by Congress to match grant funds to establish, operate and conduct related research, thus solidifying a significant partnership between the COE academic members, industry affiliates, and the FAA. Through these partnerships, the government, academic institutions, and industry leverage the resources available for aviation research while maximizing technological competence for public purpose.

Researchers may be drawn from faculty and students at academic institutions, industry, the FAA, and other public and private organizations. They may conduct work at an academic institution, an FAA location, an industry location, or other facility as agreed upon by all parties.

The FAA enters into a cooperative agreement with each selected educational institution to enable scientists to perform long-term research, education and training in specific areas of interest to the aviation industry and to the FAA's mission and vision. To foster the terms of the agreement, researchers provide technical expertise to relevant FAA projects and may participate on major planning and investigative committees. They are required to conduct annual research reviews, actively participate in joint COE conferences, and host seminars and outreach activities to disseminate research results.

The FAA also may award contracts to successful applicants following a COE competition. This authority gives the COE the latitude to take basic research successes and develop multiple forms of analyses, applications, and prototyping activities, thus providing products for the benefit of the agency as needed.

In response to this solicitation, qualified institutions of higher education must submit proposals for consideration. Applicants are required to show the facilities, equipment, and matching funds commitments from affiliates, state and local governments, and other entities. Applicants must show financial and other resources that are available to meet FAA and statutory requirements.

A panel of subject matter experts and management officials will review and evaluate proposals on a competitive basis. Each proposal is evaluated to determine the extent to which institutions and team members and affiliates are able to provide a quality environment for research and to determine the extent to which the team meets the selection criteria established by Congress.

Institutions being considered for selection as a COE must demonstrate their ability to meet the following criteria stated in P.L 101-508:

- *The extent to which the needs of the State in which the applicant is located are representative of the needs of the region for improved air transportation services and facilities.*
- *The demonstrated research and extension resources available to the applicant to carry out this section.*
- *The ability of the applicant to provide leadership in making national and regional contributions to the solution of both long-range and immediate air transportation problems.*
- *The extent to which the applicant has an established air transportation program.*
- *The demonstrated ability of the applicant to disseminate results of air transportation research and educational programs through a statewide or region wide continuing education program.*
- *The projects the applicant proposes to carry out under the grant.*

1.2 Questions

Questions may be submitted in writing through March 1 to the COE Program Office and will be answered officially. A final document containing all questions submitted and answers will be made available on March 2. The COE Program Office will also post the same material on the COE website (www.faa.gov/go/coe)

2. STATEMENT OF WORK

2.1 SCOPE OF WORK

The successful applicant(s) shall be required to perform tasks within the scope of general aviation. The specific general aviation technology areas include, but are not limited to:

2.1.1 Flight Safety

- Conduct studies, analyses, investigations, and flight tests on advanced aircraft avionic and control systems to support development of certification criteria and procedures for new generation general aviation aircraft.
- Research into general aviation aircraft safety and certification including instrument flight rule requirements and flight into icing conditions.
- Development of technology, simulation methods, reliability prediction and procedures to maintain general aviation aircraft safety of flight with introduction of new technology systems, materials, and expanded flight envelopes.
- Research in atmospheric analysis to characterize all icing environments and lightning pertinent to general aviation aircraft.
- Development of new analytical techniques applicable to aircraft icing prediction and lightning effects on general aviation aircraft systems and airframe as well as their use in lieu of actual flight testing.
- Conduct of accident analysis to identify areas requiring research and development for improved general aviation aircraft safety.

2.1.2 Communications, Navigation, Surveillance

- Research to develop policies and standards for ADS-B applications.
- Develop and analyze strategies to equip GA aircraft with ADS-B related avionics.
- Ability to conduct flight test in support of ADS-B evaluation and certification.
- Ability to collect and analyze data to support communications, navigation, and surveillance related research.

2.1.3 Human Factors

- Research that improves task performance and training for aircrew, inspectors, and maintenance technicians.
- Develop and apply error management strategies to flight and maintenance operation.
- Research that leads to certifying new aircraft and in designing and modifying equipment.

2.1.4 Weather

- Research in development of airborne decision-support tools to exploit the common weather picture, exchange weather information automatically with surrounding aircraft and ground systems.
- Research to facilitate the integration of weather information into the cockpit to support NextGen capabilities.
- Research to develop policies and standards on hardware and software requirements.
- Research to develop policies, standards, and guidance with respect to human factors issues including training, procedures, and error management.

2.1.5 Airport Technology

- Visual guidance lighting and marking systems intended to support general aviation airport operations such as approach, landing, and departure operations and all airport-related surface operations such as taxiing and surface movement traffic control.
- General aviation airport pavement technology related to runway surface friction under the adverse weather conditions of rain, snow, and ice.
- Research and development analyses in the evaluation of techniques and facilities, that will help eliminate general aviation runway incursions.
- Research relating to control of wildlife at general aviation airports.
- Research related to general aviation aircraft fire fighting and rescue.

2.1.6 Propulsion and Structures

- Research relating to advanced material (metallic/nonmetallic) applications in general aviation aircraft propulsion and airframe structural components and systems.
- Accident analyses, risk assessments, and failure prevention technologies and methods to eliminate general aviation aircraft engine and structural failures that could result in a catastrophic aircraft accident.
- Analysis of program results and aircraft accident data to establish future propulsion and structural safety R&D requirements, and to identify propulsion and structural refinements that would enhance general aviation aircraft.
- Research to aid in the development of certification criteria for advanced general aviation propulsion and airframe systems and subsystems.
- Research in nondestructive evaluation techniques for advanced materials, structural, and engine systems, including smart structures and automated techniques.
- Crashworthiness research relative to airframes, cabin interiors, fuel containment, and occupant egress for general aviation.

- Development and testing of analytical methods and models to predict the response of general aviation aircraft structures, seat/occupant/restraint systems, and interior structural members to crash impacts.
- Development of methods and techniques for improved aircraft crash resistance to dynamic crash loads experienced by the general aviation aircraft occupants, structure, and equipment.
- Development and evaluation of fuels and methods for the prevention of fuel fires in general aviation aircraft crashes and conduct of tests and analysis to determine the compatibility with general aviation aircraft and propulsion systems.
- Conduct studies and tests of the effects of alternative and replacement fuels on aircraft engine and fuel system performance and flight safety.
- Development and evaluation of advanced materials and methods to improve engine reliability and integrity against non-containment of failed engine components.
- Development and test of analytical methods to predict degradation of engine safety and performance due to weather, icing, bird or water/hail ingestion, sand, gravel, and other foreign objects.
- Development of methods for predicting, measuring, and controlling noise and exhaust emissions from general aviation engines and for determining the impact of GA engine emissions on the environment.

2.1.7 Continued Airworthiness

- Research to evaluate and develop improved corrosion control products and procedures, training material on corrosion protection, and handbooks on corrosion design and maintenance for general aviation operations.
- Research in the flight loads area that provides for the collection and analysis of general aviation flight load data that can be used to characterize typical usage and compare predicted and design loading spectra.

2.1.8 System Safety Management

- Research to develop risk management methodologies, prototype tools, technical information, and safety management system procedures and practices that will improve aviation safety.
- Research to develop an infrastructure that enables the free sharing of de-identified, aggregate safety information that is derived from various government and industry sources in a protected, aggregated manner.
- Operational research to leverage proposed new technologies and procedures that may enhance pilot and aircraft safety during terminal operations.

It is envisioned that the scope of the COE may include other general aviation areas of interest to the FAA such as: NextGen technologies and activities; air traffic control; fire safety; safety data; accident investigation; the supply of trained air transportation personnel, including pilots and mechanics, etc. It is also envisioned that new areas of general aviation related research will develop over the existence of the COE for GA and that this COE will mature to provide research capabilities for these yet unknown areas. The proposals should reflect capabilities that would support general aviation related FAA requirements as a whole.

3. EVALUATION CRITERIA

Members of this Center of Excellence will be selected based on the formal evaluation criteria set forth in Public Law 101-508. Applicants must address each of the individual evaluation factors mandated by Congress. The italicized text used in this section is quoted from Public Law 101-508; therefore, wherever the phrase "Air Transportation" is used, assume the meaning to pertain to general aviation as appropriate within the scope of FAA responsibilities.

3.1 CRITERION 1: THE EXTENT TO WHICH THE NEEDS OF THE STATE IN WHICH THE APPLICANT IS LOCATED ARE REPRESENTATIVE OF THE NEEDS OF THE REGION FOR IMPROVED AIR TRANSPORTATION SERVICES AND FACILITIES.

The applicant must demonstrate the following:

- The state and regional general aviation capabilities, resources, and the commitment to general aviation development, services, and facilities, including relevance to next generation general aviation transportation planning, as well as environmental concerns.

3.2 CRITERION 2: THE DEMONSTRATED RESEARCH AND EXTENSION RESOURCES AVAILABLE TO THE APPLICANT TO CARRY OUT THIS SECTION. [RELATING TO Public Law 101-508]

The applicant must demonstrate the following:

- Relevant partnerships with members of the general aviation industry.
- Recent grants and contracts awarded to the applicant focusing on general aviation topics of research.
- The availability of laboratory, test and evaluation facilities, located on-campus and off-campus.

3.3 CRITERION 3: THE ABILITY OF THE APPLICANT TO PROVIDE LEADERSHIP IN MAKING NATIONAL AND REGIONAL CONTRIBUTIONS TO THE SOLUTION OF LONG-RANGE AND IMMEDIATE AIR TRANSPORTATION PROBLEMS.

The applicant must demonstrate the following:

- Significant experience with industry and government agencies related to general aviation. A proposed plan might include the establishment of an advisory board comprised of leaders in the field and written commitments from their organizations to be actively engaged in the COE.
- The extent to which the members have achieved high standing within the national and international arena of general aviation research as evidenced by presentations at national and international conferences, publications in popular and peer-reviewed periodicals, etc.
- Evidence of ability to obtain matching funds and potential sources, such as letters of commitment.

If the applicant proposes as a lead member of a team of universities, it must provide a comprehensive strategic management plan. The FAA is interested in how the applicant will organize and manage the core team members within the COE. This plan should also articulate: proposed management and oversight of fiscal and technical activities; detail how the universities will coordinate research efforts; how research teams will be selected and evaluated, and how the costs of administering the Center will be apportioned and funded.

3.4 CRITERION 4: THE EXTENT TO WHICH THE APPLICANT HAS AN ESTABLISHED AIR TRANSPORTATION PROGRAM.

The applicant must demonstrate the following:

- A history of training personnel in general aviation research and related academic fields, e.g., scientists, engineers, planners, economists, etc.
- Research experience related to general aviation issues.
- Curricula in academic fields relevant and related to the hierarchy of technology areas listed in Section 2. Statement of Work, above.
- The number of graduates and placement of students in industry, academia, and government in jobs related to general aviation, and methods used to collect data on placement of graduates.
- Credible academic standards.

3.5 CRITERION 5: THE DEMONSTRATED ABILITY OF THE APPLICANT TO DISSEMINATE RESULTS OF THE AIR TRANSPORTATION RESEARCH AND EDUCATIONAL PROGRAMS THROUGH A STATEWIDE OR REGIONWIDE CONTINUING EDUCATION PROGRAM.

The applicant must demonstrate:

- Academic programs, such as continuing education, distance learning, etc., that address general aviation needs.
- Experience conducting seminars, symposia, and workshops related to general aviation topics.
- Experience using the Internet and other media to disseminate results of research and enhance educational programs.
- Facilities and resources available to provide for information dissemination activities.

3.6 CRITERION 6: THE PROJECTS THE APPLICANT PROPOSES TO CARRY OUT UNDER THE GRANT.

The FAA is interested in how the applicant will approach, conduct, evaluate and manage the research and related initiatives within the COE. The applicant shall submit a concise program plan that reflects the needs for research in the general aviation technology areas as defined in the scope of work. The plan shall not exceed 10 pages of the 50-page limit (See Page 14, Solicitation Sec. 6.3. What To Submit, C. Volume I).

It is expected that the plan will contain between 10-20 projects that are evenly distributed across the entire spectrum of technology areas listed in Section 2, Statement of Work. Descriptions of each project should be no more than typical abstracts of 300-400 words each. The final number of project descriptions may be determined by the proposal page limit. If an applicant emphasizes one or more of the technology areas over the others, a rationale for doing must be included.

Please note: *these projects will not necessarily be funded if the applicant is selected.*

Once a university team has been selected to serve as an Air Transportation Center of Excellence, the FAA sponsor develops a research agenda based on the specific resources and skills provided by the team. Thereafter, university members submit research proposals in their area(s) of expertise and projects will be defined, evaluated, and supported in accordance with FAA needs on an ongoing basis throughout the life of the COE.

In keeping with the selection criteria provided by Congress, COE proposals will be evaluated on the following factors:

- Ability to team with relevant state and local general aviation-related organizations and industry affiliates.
- Overhead and other management/business cost minimization.
- A disciplined strategic COE management plan.
- A plan to implement special emphasis outreach efforts and collaborate with under represented groups.

Based on feedback provided during the evaluation and review processes, revisions to the initially proposed plan may be developed.

4. CENTER OPERATIONS

The COE members must maintain close working relationships with the FAA COE Program Office, the OPI, and other sponsoring research program office(s). This active relationship extends to participation in conferences, meetings, joint research efforts, and submission of required activity reports to the FAA on a routine basis. The COE is required to track, prepare and submit semiannual reports and a fully inclusive annual report on research projects, other accomplishments, matching contributions, fiscal expenditures, placement of graduates, etc.

During the first year, the COE is required to submit required reports and conduct on-site meetings on a quarterly basis. Thereafter, the COE is required to submit reports as specified in the cooperative agreement and conduct meetings on a semiannual basis.

The FAA will require the COE to hold an annual meeting with agency representatives on topics relating to the status and results of the designated research. The COE members will host a major symposium prior to the end of the initial five-year phase and thereafter as agreed upon. The Center is also required to actively participate in FAA Joint COE meetings as scheduled.

In keeping with the Congressional requirement to disseminate information and the interest expressed by the agency to disseminate and utilize new knowledge, the COE will report on, and participate in, numerous informational activities. These activities may be accomplished in a variety of ways, such as through continuing education programs focused on the general aviation community, university technology transfer organizations, etc. They may include, but are not limited to:

- Site visits for representatives of key professional, industrial, academic, state or local associations or organizations, members of the media, etc.
- Preparation of COE related publications, various articles, pamphlets, manuals, books prepared or published, and papers delivered at conferences.

- Local, state, or regional meetings.
- Demonstrations of new or proposed technology.
- Development and presentation of courses, seminars, etc.

The Grantee will not make any presentations, issue news releases, conduct interviews, or engage in any other public interface or written publication that implies FAA involvement or support or attribute conclusions to the FAA without prior written permission of the FAA COE-GA Technical Program Manager and the FAA COE Program Director.

5. ANNUAL RESEARCH REVIEW

The COE shall host an annual review of the research completed and in progress. The annual review includes on-site meetings and briefings conducted by appropriate technical and administrative support personnel. The meeting must focus on the relevance, merit, direction, results, costs, and benefits of research and education efforts in the designated technology area, and include a discussion of potential future projects and plans.

5.1 Annual Report

The COE shall prepare and deliver to the FAA Centers of Excellence Program Director and the COE -GA Program Manager an annual report by project area. The report shall include: research results, benefits, and information dissemination efforts; matching contributions, the name and national origin of all research personnel and intended graduation dates of students; significant events that were sponsored or attended; journal articles and conference proceedings published throughout the past year; and a brief description of the research intended to be conducted during the following year. The use of graphics and photographs, in addition to the narrative descriptions, are highly encouraged. COE universities also report the placement of students upon completion of their studies.

5.2 Duration and Reassessment

The FAA intends to fully support the COE under the requirements set forth in P.L. 101-508, Section 9209, for a period up to ten years. The extent of this support is subject to the availability of funds. The needs of the agency are reviewed annually and the Center is reassessed within the first five years. As a result of changing needs, the agency reserves the right to expand scope, change direction, or terminate COE support for just cause. The FAA makes every attempt to provide COE members adequate time to respond to changes or to assure orderly close out of the COE at the time of termination.

The reassessment process focuses on the progress and results of research and related efforts conducted within the COE during the initial five-year period in relation to this solicitation, the final proposal, and the requirements of the agency. A reassessment team indicates FAA needs and expectations for on-going research and determines the

appropriate base funding level necessary to continue, expand, or change direction of research projects or COE scope. Consideration is also given to the strategic management plan, activities supporting information dissemination requirements, technology transfer, outreach efforts, legislative mandates and related activities.

The reassessment process includes an audit of the matching contributions and overall performance of the COE and concludes with a recommendation for continuation, suspension, or termination. A recommendation for continuation means:

- The reassessment team has found that the COE is advancing the state-of-the-art technological areas specified in this solicitation.
- The FAA continues to have a need for ongoing research that can be satisfied by this COE.
- The FAA is reasonably certain funding will be available to support the COE during the final five-year phase at the stated base funding level.

The reassessment team then recommends that the COE should continue to be funded for another five year period.

Each cooperative agreement is closed out at the end of the initial five-year period. When all members have satisfied matching requirements, and other changes as suggested by the reassessment team are made, a Phase II cooperative agreement will be negotiated with each core university member. Upon completion of the requirements set forth in the final Phase II COE agreement, individual core members in good standing may continue to receive grant funding from the FAA as appropriate.

The FAA Administrator is immediately notified if the reassessment team recommends suspension or termination for cause. The FAA COE Program follows the current version of FAA Order 9550.7A, the aviation Research Grants Program as the COE primary fiscal guidance. This Order provides general fiscal guidance relative to FAA aviation research grant awards. For additional information on grant administration requirements, suspension and termination for cause, etc., see (www.tc.faa.gov/logistics/grants/order.html). Due to the long-term nature and specific requirements of COE agreements, certain exceptions may apply. Should questions arise, contact the COE Program Director for clarification.

Following a successful evaluation, COE members may be notified of pending termination as a result of completed research requirements, changing needs, or fiscal constraints. However, the FAA may continue to fund limited research at the member universities by awarding standard aviation research grants as requirements are generated and defined. The COE members in good standing may maintain the COE designation following notification of the need to terminate the COE partnership. During the final transition, all measures are taken to provide for project completion and orderly close out of tasks.

6. PROPOSAL PREPARATION AND SUBMISSION

The university begins the application process by submitting a proposal. The FAA expects adherence to the rules of proper scholarship and attribution. The responsibility for proper attribution rests with authors of a research proposal, all parts of which should be prepared with equal care for this concern. Failure to adhere to such standards can result in disqualification of the proposal. To avoid processing delays, the proposal should be reviewed carefully to include all essential data and required forms.

6.1 Who Is Eligible To Submit

- Accredited institutions of higher education are eligible to submit proposals to become a core member of the proposed Center of Excellence. When a team is proposing to serve as a COE, one member must serve as the administrative lead. This role may be rotated, changed or redefined during the life of the Center.
- Individuals are not eligible for a COE designation and do not qualify for any awards under this program. Graduate students cannot submit proposals, but they are encouraged to serve as research assistants to faculty members.

Prior to March 1, written questions may be submitted to the Centers of Excellence Program Director, Patricia Watts, email: patricia.watts@faa.gov.

Questions and answers will be distributed to all participants who request a solicitation package. Verbal questions will not be accepted after the Public Meeting; however, potential applicants may communicate directly with the COE Program Director during the application and selection process.

Please Note: Other than the COE Program Director, FAA employees may not discuss or take questions regarding technical issues, the competitive process, or related COE GA matters.

6.2. When to Submit

Proposals may be submitted after the FAA COE Program Office issues the Final Solicitation. The closing time and date for submission is 3:00 pm Eastern Time on March 5. The FAA COE Program Office will review all submissions received on or before the closing date.. Universities submitting a proposal in advance of the closing date will have an opportunity to provide further clarifications if needed prior to the final due date. The COE Program Director may request additional information at any time during the evaluation period and thereafter.

Proposals must be submitted through Grants.gov for receipt by 3:00 pm Eastern Time on the due date posted.

6.3. What To Submit

The applicant must submit two volumes: Volume I is the Technical Proposal and management plan, and Volume II contains the formal Certifications and Declarations.

Margins should be 1 inch (2.54 cm) at the top, bottom, and on each side, and text should be in type no smaller than 12 point. Pages must be numbered. Print the original signed copy single sided. Additional copies of the proposal may be printed on both sides.

Six copies of each proposal must be submitted in addition to the original. Applicants must also include an electronic copy of all submitted materials on a compact disc or flash drive. Attach reprints, appendices or other materials to be considered with the proposal to each individual copy of the proposal.

The FAA is not responsible for proposal preparation expenditures incurred by the proposing organization.

The Omnibus Trade and Competitiveness Act of 1988 requires federal agencies to use the metric system in procurement, grants, and other business-related activities. Proposals for grants submitted to the FAA are required to use the metric system of weights and measures. Likewise, reports, publications, and communiqués regarding proposals are required to use metric units.

Assemble proposals with tabs as outlined below in the following sequence:

A. **Cover Letter.** Affix a standard business format cover letter to the front of the proposal. The principal investigator/main technical contact, a senior level officer at the lead institution must sign the letter in addition to a grants or contracts official.

B. **Table of Contents**

C. **Volume I, Proposal.**- tabulated as follows:

(1) Section 1 (Limited to 50 pages) - The proposal consists of a narrative statement that addresses the evaluation factors and the six selection criteria established by Congress and set forth in the Final Solicitation.

(2) Section 2 (Limited to 25 pages), Long-Term Management Plan - The strategic business and financial plan should detail how the institution proposes to direct and manage the Center of Excellence team and generate matching funds and income from outside sources in order to achieve self-sufficiency within a 10-year period.

The plan should include, in this order: 1) an organization chart; 2) a narrative describing the roles and responsibilities of key personnel including industry affiliates; 3) projected activities to be undertaken during the life of the COE to satisfy Congressional mandates, achieve goals of the COE Program and provide oversight for overall technical requirements presented by public and private sponsors, 4) other items as appropriate.

If the proposal being submitted includes related work that has been funded previously, or is currently being funded by FAA or a source other than the FAA, the information should be declared. If the proposal is being submitted to other possible sponsors, include a listing of them. Concurrent submission of a proposal to other organizations for a similar purpose will not impact review by the FAA or other government entities.

(3) Section 3, Letters of Commitment - Letters should be included at the end of this volume and do not count against page limits. Letter may also be sent directly to the COE Program Director.

D. **Volume II, Certifications and Declarations.** This volume consists of the following items tabulated in this order:

(1) Standard Form 424, Application for Federal Assistance. The original must be signed by the authorized Organizational Representative.

(2) Research and Related Senior/Key Person Profile (Expanded). Curriculum vitae for Center Lead and key staff at member universities. Limited to two pages per individual.

(3) Research and Related Personnel Data

(4) Research and Related Budget

(5) RR Fed/NonFed Budget - include both FAA award and matching contributions anticipated.

(6) Project/Performance Site Locations and Major Capabilities

(7) Indirect Cost Agreement. Provide a copy of the latest institutional indirect cost agreement negotiated with the lead institution's cognizant Federal audit agency (Department of Health and Human Services, Department of Defense, or other) in force.

(8) A copy of the lead university team member's latest institutional audit report or letter. Include the name and telephone number of the cognizant federal audit agency representative. During the final proposal evaluation, each member of the COE team(s) under consideration will be asked to provide all required forms, audit reports and, where necessary, documentation of actions taken to address findings.

Applicants must ensure that the costs the FAA is being asked to support are allowable, necessary, and reasonable and that the treatment of direct or indirect costs in the budget is consistent with applicable federal cost principles and with the policies of the submitting organization.

6.4 Where to Submit

Send original proposal plus six copies to:

Patricia Watts, Ph.D.
Centers of Excellence Program Office, 4th floor
Federal Aviation Administration
William J. Hughes Technical Center, L-28
Atlantic City International Airport, NJ 08405

The outside of each package should be clearly marked "Center of Excellence Proposal." Every effort will be made to promptly reach a decision and to inform the applicants of a selection. Proposals must also be submitted through Grants.gov.

7. PROPOSAL PROCESSING AND EVALUATION

7.1 Acknowledgment/Review

Proposals to establish a COE are assigned a proposal number and the COE Program Office will acknowledge receipt in writing. Proposals are reviewed to assure that each one contains all elements required and all data are sufficient for the evaluation team to evaluate proposals in accordance with Public Law 101-508.

7.2 Evaluation/Selection

The COE Program Office performs an initial review of each proposal to assure it satisfies all congressionally defined criteria and meets FAA requirements. Each proposal is reviewed to assess the institutional resources being provided by the team, matching commitments from various sources, and overall compliance with COE requirements.

Thereafter, a team of subject matter experts will evaluate each proposal to assure that the FAA Technical Evaluation Factors are fully addressed and to determine the extent to which these have been satisfied. The evaluation team will consist of at least three government employees with expertise in general aviation subject matters. The team leader will be responsible for developing an overall rating based on evaluations of the team members.

During the evaluation process, the FAA Program Office will also conduct a Management and Fiscal review of each proposal. The review team will consist of at least three government employees with expertise in management and fiscal matters. The team leader will be responsible for developing an overall summary based on the input of the team members.

The FAA sponsoring organization and COE Program Office may conduct site visits to inspect available resources prior to finalizing the evaluation process.

The FAA COE Program Director may be contacted or may contact the proposing organizations to discuss the submission, or to request further information to assist in assessing a proposal.

During the selection process, discussions are not permitted between the proposing organizations, the sponsoring organization or others related to the competition.

7.3 Ineligible Proposals

Proposals determined to be ineligible for consideration under this solicitation will be returned to the applicant with a written explanation.

7.4 Withdrawal

A proposing institution, at any time before an award is made, may withdraw a proposal. The request for withdrawal must be made in writing, stating the reason for withdrawal, and be signed by the Principal Investigator, a grant or contract official, and a senior university official.

8. GRANT AWARD AND ADMINISTRATION

8.1 Types of Awards

Cooperative Agreement - This agreement supports close government involvement in the COE, specifies terms and conditions of the initial five-year period of award, and allows award of grants to individual universities or teams at a base funding level indicated by the sponsoring organization. A cooperative agreement will be prepared and signed by the FAA COE Program Director and fiscal officers at each core university. Grant funds will be awarded as amendments to this agreement over the life of the COE within each Phase.

COE Grant – A COE grant is awarded as an amendment to the COE cooperative agreement. The FAA agrees to support tasks at a specific level of effort for a period of time for research that is conducted by each member or teams. Following the competitive process, the FAA continues to support COE research, education and training for a period up to 10 years. The COE is subject to the requirements of P.L. 101-508 during this time. Funding is provided after the university member(s) submit a proposal defining the tasks, a required budget, sources of matching contributions, etc. Thereafter, the FAA evaluates each proposal. In keeping with statutory requirements, over the 10-year period, the COE must match 100% of federal funding through COE grants awarded *to establish, operate and conduct related research.*

The OPI establishes the annual level of effort for this Center of Excellence and provides long-term fiscal plans to support COE research, education, training and related activities and base funding.

Aviation Research Grant - Throughout the year, as requirements are generated and funds become available, the FAA awards standard aviation research grants to support specific research projects at a specified level of effort and period of time. There is no statement of FAA intent to commit annual base funding thereafter or to provide future support. (Note: All grant awards are made for public purpose.)

8.2 Grant Award

The award instruments will contain all documentation applicable to the award and administration of the grant(s).

8.3 Grant Administration

COE Program guidance is provided in the COE cooperative agreement, the COE Policy Guide, and FAA grant awards are governed by FAA Order 9550.7A. The conditions and provisions of the initial COE cooperative agreement and the subsequent award instrument(s) govern the administration of grant funds awarded through the COE Program Office. The COE Program Director also serves as the Grants Officer for grant awards.

The FAA COE Grants Officer may make direct awards at any time to universities, partners, and affiliates for the convenience of the government. The Grants Officer also has the authority to make grant awards directly to participating universities for information dissemination activities and COE Program related initiatives, and to support other activities as required by the Federal Government.

The grantee has full responsibility for the conduct of the projects and activities supported under an FAA award as proposed, and will follow terms of the award conditions. The COE relationship is a collaborative effort between the FAA and the award recipient, through the Principal Investigator, the FAA COE Program Director, the FAA COE GA Program Manager, the Technical Monitor, and the COE university members. Once a COE is established, grantees are encouraged to seek advice and opinions on technical issues, management and fiscal concerns, and related issues with the appropriate offices.

Note: Only the designated fiscal officer within the FAA is authorized to commit funds and to permit projects to be initiated with COE members.

8.4 Direct Awards

In the event that a team submits a proposal to establish a COE and is selected, the FAA will award direct grants to university partners and affiliates. Such awards will be made to each member without further competition.

9. CONTRACT DELIVERY ORDER

Where appropriate, an order for a specific deliverable may be placed under an indefinite delivery, indefinite quantity contract. (Note: Contract tasks requiring deliverables are awarded for the benefit of the FAA.)

10. REQUIRED FORMS

The attached forms are required when submitting grant proposals.

- Standard Form 424, Application for Federal Assistance
- Research and Related Budget
- Research and Related Personnel Data
- Research and Related Senior/Key Person Profile (Expanded)
- Research and Related Fed/NonFed Budget
- Project/Performance Site Locations
- Other Attachments

11. E-GRANTS AND ADDITIONAL INFORMATION

For information regarding FAA Air Transportation Centers of Excellence and the electronic grants application system, see the website at www.faa.gov/go/coe

APPENDIX

CHECKLIST FOR CENTER OF EXCELLENCE PROPOSAL SUBMISSION

Use this checklist to ensure that a complete proposal is submitted. Properly sequenced, tabulated, and complete proposals expedite processing and facilitate the review process. Details of these required elements are found within this solicitation.

- _____ Cover Letter

- Volume I, Proposal**
- _____ Statement in response to the Evaluation Factors
(Narrative limited to 50 pages)
- _____ Management Plan
(Narrative limited to 25 pages)
- _____ Letters of Commitment

- Volume II, Certifications and Declarations**
- _____ Cover Sheet for Proposals to the FAA (Application for Federal Assistance SF-424)

- _____ Research and Related Budget

- _____ Research and Related Personnel Data

- _____ Research and Related Senior/Key Person Profile (Expanded)

- _____ RR Fed/NonFed Budget

- _____ Project/Performance Site Locations

- _____ Other Attachments (For Proposal Narrative, Indirect Cost Agreement)

See Grants.gov for additional forms required at time of announcement.