United States Department of Transportation
Federal Aviation Administration (FAA)
William J. Hughes Technical Center
Aviation Research Grants Program Office
Atlantic City International Airport, NJ

Notice of Funding Opportunity 20-01

Table of Contents

Section I – FUNDING OPPORTUNITY DESCRIPTION 4

STATUTORY AUTHORITY 4

APPLICABLE REGULATIONS 4

FAA MISSION 4

CUSTOMER SERVICE STANDARDS 4

PROGRAM DESCRIPTION 5

Section II – AWARD INFORMATION 9

A. TYPE OF AWARD INSTRUMENT 9

B. ESTIMATED FUNDING 9

C. MAXIMUM AND MINIMUM AWARD SIZE 10

D. EXPECTED NUMBER OF AWARDS 10

E. ANTICIPATED AWARD SIZE 10

F. PERIOD OF PERFORMANCE 10

G. TYPE OF APPLICATION 10

Section III – ELIGIBILITY INFORMATION 11

A. ELIGIBLE APPLICANTS 11

B. COST SHARING 12

Section IV – APPLICATION AND SUBMISSION INFORMATION 13

A. ADDRESS TO REQUEST APPLICATION PACKAGE 13

B. WHITE PAPER/PRE-APPLICATION 14

C. CONTENT AND FORM OF APPLICATION SUBMISSION 14

D. APPLICATION AND SUBMISSION INFORMATION 18

E. SUBMISSION DATES AND TIMES 19

White Paper/Pre-Application Submission Schedule 19

Fiscal Year 2021 through Fiscal Year 2027 19

New Grant Application Submission Schedule **19**

Fiscal Year 2021 through Fiscal Year 2027 ..... **19**

F. INTERGOVERNMENTAL REVIEW **20**

G. FUNDING RESTRICTIONS **20**

Withdrawal **21**

H. OTHER SUBMISSION REQUIREMENTS **21**

Section V – APPLICATION REVIEW INFORMATION **22**

ELIGIBLE PROPOSALS **24**

SECTION VI. AWARD ADMINISTRATION INFORMATION **26**

SECTION VII. AGENCY CONTACTS **27**

AGENCY CONTACTS **27**

SECTION VIII. APPENDICES/REFERENCE MATERIAL **28**

SAMPLE BREAKDOWN OF TRAVEL COSTS – YEAR 1 ..... **28**

SAMPLE BREAKDOWN OF TRAVEL COSTS – YEAR 2 ..... **29**

TYPES OF GRANTS **30**

GRANT EXTENSIONS **30**

GRANT ADMINISTRATION **31**

GRANT CLOSEOUT **31**

GLOSSARY OF GRANT TERMS **32**

Section I – FUNDING OPPORTUNITY DESCRIPTION

STATUTORY AUTHORITY

Title 49 of United States Code 44511: Aviation Research Grants

Title 49 of United States Code 44512: Catastrophic Failure Prevention Research Grants

Federal Aviation Administration Research, Engineering, and Development Authorization Act of 1990 (Pub. L. No. 101-508, Subtitle C)

APPLICABLE REGULATIONS

Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, codified at 2 CFR Part 200

U.S. Department of Transportation, Federal Aviation Administration, National Policy Order 9550.7B

FAA MISSION

The FAA's continuing mission is to provide the safest, most efficient aviation system in the world. The corresponding Research and Development (R&D) objective is to encourage, coordinate, facilitate, and foster excellent research and development to enhance the safety, security, and performance of the nation's air transportation system.

The FAA Aviation Research Grants Program is one means by which the FAA supports its mission. Aviation research grant and cooperative agreements, which range from several thousand to several million dollars, support aviation related research on topics with the potential to gain further knowledge in emerging aviation technologies.

Grants under this program are awarded for the conduct of research for the long-term growth of civil aviation. Research topics may include, but are not limited to, air traffic control automation, aviation applications of artificial intelligence, aviation training technologies and techniques, human factors in highly automated environments, and aircraft safety. Further, grants are awarded under this program for the conduct of research relating to the development of technologies and methods to assess the risk and prevent defects, failures, and malfunctions of products, parts, processes, and articles manufactured for use in aircraft, aircraft engines, propellers, and appliances that could result in a catastrophic failure of an aircraft.

CUSTOMER SERVICE STANDARDS

As the leading authority in the international aviation community, the FAA is responsive to the dynamic nature of customer needs, economic conditions, and environmental concerns. The FAA, and members of other organizations within the Department of Transportation that

administer research grants, have made a commitment to excellence by identifying customer needs and setting customer service standards.

In response to our customers' major areas of concern, the FAA has implemented the following customer service standards:

Respond to inquiries about aviation research grants within one business day.

Inform applicants of available aviation research grant funding by posting notices of special announcements and our NOFO on the Grants.gov website at http://www.grants.gov and on the Aviation Research Grants Program website at http://www.tc.faa.gov/logistics/grants.

Provide access to the FAA's technical expertise during the research process by making the appropriate FAA Subject Matter Experts available to applicants.

We will exhibit our trust by not micromanaging your research grants.

We will require technical progress reports on aviation research grants no more frequently than semiannually; however, cooperative agreements may require more vigorous reporting.

Minimize burdensome paperwork during the aviation research grant process by requiring electronic submissions through the Grants.gov website.

Continually monitor our process for improvements while encouraging input from you, our customers.

PROGRAM DESCRIPTION

The FAA hereby announces its continuing interest in receiving applications for aviation research grants and cooperative agreements to pursue the long-term growth and short-term technical needs of civil aviation, under this funding opportunity. Eligibility of applicants for the award of an aviation research grant varies depending on the nature of the proposer's organization, as well as the character of the research being proposed. In general, colleges, universities, and other non-profit research institutions under Section 501(c)(3) of Title 26 of United States Code, are eligible to apply for an aviation research grant.

The FAA Aviation Research Grants Program encourages and supports innovative, advanced research of potential benefit to the long-term growth of civil aviation and commercial space transportation. The pursuit of basic and applied research in scientific and engineering disciplines that have the potential to further knowledge and understanding on a broad front of emerging technologies is crucial to the realization of this goal. The intent is to encourage applied research and development to enhance technology assimilation, transfer, and development in the FAA. The FAA Aviation Research Grants Program does not require the immediate application to Research and Development (R&D) programs, although this may occur in some cases. The FAA encourages the submission of proposals that embrace the entire spectrum of physical, chemical, biological, medical, psychological, mathematical, and engineering sciences.

The authorizing legislation that supports the FAA Aviation Research Grants Program covers two general categories: a) areas deemed by the Administrator to be required for the long-term growth of civil aviation; and b) areas related to research on the prevention of catastrophic failures. These specific areas of interest may be found within the broad program areas identified in the FAA R&D Plan, which comprises the Agency's research and development initiatives.

Areas that contribute to the FAA mission of improving aviation safety, capacity, efficiency, and security are:

1. Capacity and Air Traffic Control Technology
2. Communications, Navigation, and Surveillance
3. Aviation Weather
4. Airports
5. Aircraft Safety Technology
6. Human Factors and Aviation Medicine
7. Systems Science/Operations Research
8. Unmanned Aircraft System (UAS) Unmanned Traffic Management (UTM), Class E Upper Airspace Traffic Management (ETM), and Urban Air Mobility (UAM)

The following more detailed descriptions of these program areas illustrates topics of interest to those who may consider applying for a grant:

1. **Capacity and Air Traffic Control Technology -** This area represents the FAA's effort to improve the capacity of the airspace while maintaining high safety standards. The primary goal is to increase the capacity and use of airspace and airport resources in a safe manner through automation of enroute and terminal Air Traffic Control (ATC) and flow management. Successful implementation of the results of this research will reduce delays and enable as many aircraft as possible to operate on their preferred flight trajectories. Major areas of interest include research in advanced cockpit technologies and the development of automation tools for ATC in enroute and terminal airspace, and on the airport surface.

2. **Communications, Navigation, and Surveillance -** The principal initiatives of these areas are the development, standardization, and application of equipment required for air traffic services. The FAA’s goals are to exploit emerging technologies in order to provide cost-effective services and equipment that have high levels of reliability, availability, and coverage. In particular, satellite based applications are paramount for the continuing modernization of the National Airspace System (NAS).

3. **Aviation Weather -** Weather service users encompass the entire spectrum of the aviation community, from general aviation to large air transport operators. Weather is frequently cited as a primary or secondary cause for accidents and injuries with 29 percent of all general aviation accidents and 40 percent of fatalities classified as being weather related. While air-carrier-delay-hours have been reduced by more than 55 percent over the last ten years, significant delay costs still occur. Improved forecasting algorithms and systems are still needed in order to achieve higher aviation safety and capacity during hazardous weather. These algorithms and systems, along with high quality weather observations and forecasts, must be uniquely developed to allow for rapid and effective decision making by Air Traffic

Management (ATM), dispatchers, and pilots to proactively select safe and optimal routes. In addition, new techniques and weather information, especially in the boundary layer, are needed for control and operations of Unmanned Aircraft Systems. Activities in the weather area include improved detection, analysis and forecasts of wind, turbulence, convective activity, icing, and restricted cloud ceiling and visibility. Other shortfalls include weather information latency, limitations of flight planning tools to enable three-dimensional planning, difficulties for pilots to estimate visibility, and pilot weather training that does not provide experience in adverse weather conditions.

4. **Airports -** Agency efforts in this area target a multiplicity of issues comprising the physical and environmental aspects of airports. Efforts in airport standards and guidelines address the design, construction, operation, and maintenance of airports. Specific considerations are: airport layout and geometrics; pavements, airport pavement design, construction, evaluation and assessment of pavement roughness, terminal buildings, and heliports; firefighting and rescue equipment; runway friction; snow and ice control; surface lighting and visual guidance aids; bird and wildlife control; runway surface contamination detection and removal; and environmental impacts of aircraft operations. Landside capacity is also addressed through such considerations as highway systems, pedestrian systems, parking, and mass transit access.

5. **Aircraft Safety Technology -** One of the primary responsibilities of the FAA is to provide safety and regulatory oversight in the certification, manufacture, maintenance and operation of the United States civil aircraft. Changes in technology, aircraft fleet composition, and aircraft operational profiles, along with increased commercial traffic, result in corresponding needs for new or updated safety enhancements and requirements. In collaboration with industry and academia, the research goal of the Aircraft Safety Technology Program is to develop and transfer new technologies, and determine its application for improving aviation and aircraft safety, and provide the data to support the improved safety standards. These technologies in turn can be applied to improving safety standards that govern civil aircraft airworthiness and operational performance. Major safety research activities include fire research and cabin safety, structural safety/advanced materials, propulsion systems research, flight/atmospheric hazards, aging aircraft/continued airworthiness (structural integrity; maintenance and inspection), aircraft catastrophic failure prevention, aviation safety risk analysis, and Unmanned Aircraft Systems (UAS) Research. UAS research could include UAS Command, Control, and Communication (C3) research; UAS Detect, Sense, and Avoid (DSA) Technology Research; and UAS Flight Termination/Recovery Research.

6. **Human Factors and Aviation Medicine -** Human factors research develops scientific and technical information for both the flight deck, and ATC domains. Human factors research for the flight deck addresses safety oversight, regulation, policy, and includes the areas of flight deck operations and procedures, aircraft maintenance, aircrew training, and applications of aviation technologies. Human factors research for ATC supports acquisition of ATC systems and technologies, operations, maintenance, personnel selection, and ATC training. Research in this area also leads to standards and recommendations for crew and passenger protective equipment and procedures and identifies crew and passenger limitations that may jeopardize the safety of the occupants and the aircraft. Areas of research include

human tolerance and behavior under decelerated stresses, hypoxia, visual degradation, and various medicinal and non-medicinal chemicals, as well as human factors such as human to machine interface in aviation technology; occupant behavior is evaluated under both secondary and emergency evacuation conditions.

7. **Systems Science/Operations Research -** The importance of Systems Science and Operations Research to the National Airspace System has been magnified in recent years. The macroscopic tools of mathematical modeling, simulation, decision support systems and prototyping, as well as optimization, are playing a greater role in research related to the NAS. In some cases, this will involve new paradigms implemented as novel algorithms and software packages. In other cases, innovative computational platforms and architectures may emerge as major contributors. The goal of research in all facets of this technical area are common, emphasizing the improvement of safety, security, capacity, and efficiency of the NAS.

8. **Unmanned Aircraft System Unmanned Traffic Management, Class E Upper Airspace Traffic Management, and Urban Air Mobility -** The Agency's vision for UAS, UAM and ETM operations engenders a common desire to realize innovative solutions through public-private partnerships in support of emerging opportunities while ensuring safety, security, efficiency, and equity of the NAS. To enable safe management of the expected rapid influx of operations in these historically underutilized sectors, solutions that scale beyond the current Air Traffic Management (ATM) infrastructure are necessary. Areas of interest include research to ensure efficient sequencing of highly automated air vehicles in congested locations, improve interoperability among newly developed traffic management systems and legacy systems, and develop technologies for communication and cooperative surveillance via distributed network topologies.

   Integration of low-altitude UAS operations into the NAS presents a variety of issues and novel challenges. The predicted volume of small UAS (sUAS) operations across both controlled and uncontrolled airspace, which could be on a scale comparable to that of present-day manned air traffic, compounds these challenges. UTM will provide a set of federated services and an all-encompassing framework for managing multiple UAS operations at low altitudes, generally below 400 feet. Additionally, the integration of future unmanned vehicle operations with passengers to travel within an urban and metropolis environment at lower altitudes will leverage the UTM framework where applicable while, ensuring de-confliction with traditional air traffic services. The FAA is also evaluating the feasibility of effectively utilizing Class E airspace above FL600. Traditionally used for military operations, there are currently no specific regulations and mechanisms that exist for expanded commercial applications in Class E above FL600. Many potential ETM applications are being developed by industry, such as weather monitors, Internet signal repeaters, pseudo-stationary UAS, pseudo space vehicles, hypersonic vehicles, etc. UTM, UAM and ETM services are separate, but complementary to those provided by the ATM system, and are based primarily on the sharing of information between operators on flight intent and airspace constraints.

Section II – AWARD INFORMATION

TYPE OF AWARD INSTRUMENT

The FAA anticipates awarding grants and cooperative agreement awards under this NOFO.

ESTIMATED FUNDING

Aviation research grants and cooperative agreements are funded primarily by program offices to support research targeted to their specific program areas.

Since various FAA R&D Program Managers (i.e., Aging Aircraft, Aviation Medicine, etc.) will review the proposal, and provide funds for award from their project accounts, it is in the interest of the proposer to make contact with the appropriate program manager in order to come to an understanding regarding the needed research. Applicants are strongly encouraged to participate in a two-way communication to define research goals and objectives, and the description of work. This can only enhance the likelihood of securing sponsorship, improve the probability of project success, and is strongly encouraged on the part of applicants.

Cooperative agreement awards will require substantial involvement between the FAA and the awardee. A cooperative agreement is distinguished from a grant in that it provides for substantial involvement between the FAA and the awardee, in carrying out the activity contemplated by the federal award. Substantial involvement may encompass, but may not be limited to, FAA collaboration in the performance of research objectives; FAA providing research guidance; FAA collaborating on key areas of research; FAA facilitation, coordination, and participation in project meetings; FAA review and approval of each research phase prior to the start of subsequent phases.

Aviation research grant awards range from a minimum of 12 months to a maximum of 60 months in duration, and range from several thousand to several million dollars. There is no minimum or maximum award amount.

It is anticipated that approximately $6,000,000 will be available in each Fiscal Year for new, and continuing grant awards, subject to the availability of appropriated funds. The amount, duration, and size of awards will depend on the number of applications selected for award, and the actual amount of funds available in each Fiscal Year.

Applications for continuing grants or supplementation of existing projects are not eligible to compete with applications for new Federal awards.

Applications for continuing grants or supplementation of existing projects require applications be submitted through the www.grants.gov website, and are subject to administrative and merit review.

Proposals for new and continuing grant awards may be submitted at any time during the open NOFO period. If the due date falls on a Saturday, Sunday, or Federal holiday, the package is due the next business day.

MAXIMUM AND MINIMUM AWARD SIZE

The award size will depend on the number of meritorious applications and the availability of appropriated funds in each Fiscal Year.

EXPECTED NUMBER OF AWARDS

The number of awards will depend on the number of meritorious applications and the availability of appropriated funds in each Fiscal Year.

ANTICIPATED AWARD SIZE

The number of awards will depend on the number of meritorious applications and the availability of appropriated funds in each Fiscal Year. In general, award size ranges from several thousand to several million dollars.

PERIOD OF PERFORMANCE

The estimated period of performance for an award will range from a minimum of 12 months to a maximum of 60 months.

TYPE OF APPLICATION

The FAA will accept new and continuation applications under this NOFO. The following material will assist in determining which type of application is appropriate:

New Application - An application must be submitted as "new" in the following circumstances:

- When applying for funding to create a new research award that has not previously received FAA funding, including any funding for the current year.
- When applying for funding to support continued research from the same applicant institution as the current grant, but with a significant change in the fundamental nature of the research.
- When applying for funding to support continued research supported by an existing FAA award, but at a new applicant institution.

Continuation Application - A continuation application must be submitted as a "continuation," and is appropriate when funds are requested for an award that has no changes in the following items:

- The recipient/applicant institution

– The fundamental nature of the award

Applications for continuation of existing projects are not eligible to compete with applications for new Federal awards.

Applications for continuation of existing projects require applications to be submitted through the www.grants.gov website, and are subject to administrative and merit review.

Continuation applications compete for funds with all other peer-reviewed applications and must be developed as fully as though the applicant is applying for the first time. Continuation applications must be submitted by the same sponsoring institution as that holding the current grant award for which renewal funding is requested, and the proposed research topic must be logical scientific extensions of the research that has been performed in the current award.

Section III – ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

Eligibility of applicants for the award of an aviation research grant varies depending on the nature of the proposer's organization, as well as the character of the research being proposed. In general, colleges, universities, and other non-profit research institutions eligible under 26 U.S.C. (501(c)(3)) are eligible to qualify for an aviation research grant. Scientists, engineers, mathematicians, psychologists, physicians, educators and other faculty members usually initiate research proposals that are submitted by their employing organizations.

The categories of applicants are:

a. Colleges and universities desiring to conduct research in any of the program areas described in this NOFO, and

b. Other nonprofit organizations such as independent museums; observatories; research laboratories; hospitals; consortia; professional, scientific and educational associations or societies; and similar organizations.

The FAA will not provide a profit with the award of a grant to institutions that are subject to the following requirements:

1. A Defense Contract Audit Agency (DCAA) audit of their Cost Accounting System.

2. AMS T3.3.2 - Contract Cost Principles.

The FAA will not provide an individual with the award of a grant.

Under this NOFO the FAA is seeking to ensure an equitable geographic distribution of grant funds and the inclusion of Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and other Minority Serving Institutions (MSIs) for funding consideration.

All applicants submitting proposals in response to this NOFO must be registered in the System for Award Management (SAM) at www.sam.gov prior to submitting an application, provide a unique entity identifier in the application, and maintain currency on the registration while the Federal award is active. Registration is free for application and detailed instructions are available at SAM.gov. If a SAM review indicates that your organization is suspended, debarred, or proposed for debarment under the FAR (48 CFR Subpart 9.4) or voluntarily excluded under 2 CFR 180.940, the FAA Grants Officer must determine whether the exclusion time precludes you from a grant award.

The FAA, prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold of $150,000, is required to review and consider any information about the applicant that is in the Federal Awardee Performance and Integrity Information System (FAPIIS) at www.fapiis.gov. The applicant, at its option, may review information in the FAPIIS and comment on any information about itself that a Federal awarding agency previously entered, and is currently in the designated integrity and performance system accessible through SAM.

The FAA will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, when making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205 Federal awarding agency review of risk posed by applicants.

Failure to meet any of the specified applicant eligibility criteria described above will result in the FAA returning the application without further review.

B. COST SHARING

Cost sharing is not required, and is not an eligibility criterion. However, the FAA expects that grant recipients will share in the costs at a level that reflects their interest in the research, the potential benefits they may derive, and their ability to share in the cost of the project.

A cost share offer by an applicant may be a significant factor in the FAA's funding decision. If a proposal is submitted without a cost sharing intent, the FAA Grants Officer may contact the institution to negotiate a level of cost share.

Any shared costs or matching funds and all contributions, including cash and third party in-kind contributions, will be accepted as part of the applicant's cost sharing or matching when such contributions meet all of the following criteria:

1. Are verifiable from the non-Federal entity's records;
2. Are not included as contributions for any other Federal award;
3. Are necessary and reasonable for accomplishment of project or program objectives;
4. Are allowable under Subpart E - Cost Principles of this part;
5. Are not paid by the Federal Government under another Federal award, except where the Federal statute authorizing a program specifically provides that Federal funds made

available for such program can be applied to matching or cost sharing requirements of other Federal programs;
6. Are provided for in the approved budget when required by the Federal awarding agency; and
7. Conform to other provisions of this part, as applicable.

Examples of cost sharing include, but are not limited to the following:

1. The provision of space, facilities, equipment, or resources at no or reduced charge;
2. The provision of release time for faculty;
3. The provision of scholarship support for students; or
4. The waiver of facilities and administrative costs, in whole or in part.

Cost sharing responsibilities are assumed by the grant recipient upon acceptance of the grant.

Although cost sharing is not an eligibility criterion, or a requirement for a grant award, it allows the FAA an opportunity to maximize program funds when budget cuts abound.

Section IV – APPLICATION AND SUBMISSION INFORMATION

ADDRESS TO REQUEST APPLICATION PACKAGE

Paper copies of application material may be requested by mail to:

Federal Aviation Administration
William J. Hughes Technical Center, Building 300
Attn: NextGen Grants Management Branch, ANG-Fourth Floor
Atlantic City International Airport, NJ 08405

The outside of each mailed package must be clearly marked:

Aviation Research Grants Program – Request for Application Material – Time Sensitive.

Application forms and instructions are available on the Grants.gov website. To access these materials go to https://www.grants.gov, select "Apply for Grants," select "Download Application Package," enter CFDA number 20.108 and/or Opportunity Number 20-01 as shown on the cover of this NOFO, then follow the prompts to download the application package.

Applications must be submitted electronically through Grants.gov, otherwise they will not be accepted.

Grants.gov provides applicants 24/7 support via the toll-free number 1-800-518-4726 and through email at support@Grants.gov.

WHITE PAPER/PRE-APPLICATION

A white paper (also called a pre-application) is recommended, but optional. Absence of a white paper will not negatively affect a thorough evaluation of a responsive full application with proposal package submitted in a timely fashion.

Prior to submitting a white paper, carefully read the eight (8) FAA program area research topics research to ensure your idea is responsive, and select the topic most relevant to your idea. The white paper should be no more than three (3) pages, and include: (1) a technical summary of the proposed research, (2) a list of proposed collaborators/co-investigators/consultants with their institutions, (3) brief biographical information of the Principal Investigator (PI), (4) an estimate of the proposed total project cost.

The Grants Officer for the FAA Aviation Research Grants Program will notify the PI, by letter, whether or not the FAA intends to pursue the proposed research.

The white paper must include, at the top of the first page, the following information:

Title of White Paper
PI Name, Job Title
Institution Name and Address
Title of Applicable FAA Program Area
NOFO Number: FAA-20-01

It is important that the white paper be a single file with extension .pdf, .docx, or .doc. The filename must not exceed 50 characters. The white paper must be submitted to the FAA Grants Officer through our program website at http://www.tc.faa.gov/logistics/grants.

CONTENT AND FORM OF APPLICATION SUBMISSION

The FAA welcomes submission of applications with proposals that support fields of science, engineering, aviation medicine, human factors, and UAS, with potential relevance to the long- term growth of civil aviation. Proposals for education, training, or specific airport development are not supported under this program.

Prior to preparing your proposal, you must determine if it is appropriate to be considered for award as a research grant, cooperative agreement, or if it is more appropriate to be awarded as a contract. A grant is used when the principal purpose of the research is to assist in accomplishing public purposes. A cooperative agreement is used if the purpose of the research is to assist in accomplishing public purposes, and the institution and the FAA determine that a high degree of involvement by the FAA would benefit the research objective. A contract award is used when the principal purpose is to make procurements for direct use by the FAA. In this case, the method of funding will be a procurement contract and must not be submitted to this office for consideration.

Submission of a proposal is the starting point for formally requesting grant assistance on the part of the institution. It must present the merits of the proposed project clearly and must be prepared with the care and thoroughness of a paper submitted for publication. Sufficient information must be provided so that reviewers will be able to evaluate the proposal in accordance with the merit review criteria specified in the section titled "Proposal Processing and Review". The responsibility for proper attribution and citation rests with authors of a research proposal. Failure to adhere to such standards can result in disqualification of the proposal. You must submit the application through Grants.gov at https://www.Grants.gov/, using either the online web forms or downloaded forms.

You are required to use the compatible version of Adobe Reader software to complete a Grants.gov Adobe application package. To ensure you have the Grants.gov compatible version of Adobe Reader, visit the software compatibility page at https://www.Grants.gov/web/grants/applicants/adobe-software-compatibility.html.

You must complete the mandatory forms and any applicable optional forms (e.g., Disclosure of Lobbying Activities (SF-LLL)) in accordance with the instructions on the forms and the additional instructions below.

Files that are attached to the forms must be in Portable Document File (PDF) format unless otherwise specified in this NOFO. Attached PDF files must be plain files consisting of text, numbers, and images without editable fields, signatures, passwords, redactions, or other advanced features available in some PDF compatible software. Do not use PDF portfolios or binders.

Please note the following restrictions that apply to the names of all files attached to your application:

Please limit file names to 50 or fewer characters.

Do not attach any documents with the same name. All attachments must have a unique name.

Please use only the following characters when naming your attachments: A-Z, a-z, 0-9, underscore, hyphen, space, period, parenthesis, curly braces, square brackets, ampersand, tilde, exclamation point, comma, semi colon, apostrophe, at sign, number sign, dollar sign, percent sign, plus sign, and equal sign. Attachments that do not follow this rule may cause the entire application to be rejected or cause issues during processing.

When applying through Grants.gov you will be required to submit information on various forms that make up a template. Following is a detailed description of the required forms:

SF 424 R&R - This is the Application for Federal Assistance. It includes specific applicant information, proposed project information, estimate of project funding and duration, and an electronic signature by the Authorizing Organizational Representative certifying that all statements are true and complete.

Research and Related Budget – Use this form to itemize your proposed budget including information about the senior/key person and other personnel, as well as direct and indirect costs. The information must be detailed and sufficient to allow an analysis by appropriate FAA personnel to make a determination that the budgeted costs are necessary to perform the work, reasonable, and not specifically precluded by program guidelines, law, or regulation. All applicable line items must be completed. Each budget period requires a completed research and related budget form. A research and related budget - cumulative budget is also required. This section of the form must reflect what is requested for the full term of FAA support. A budget narrative that explains and clarifies items included on the budget forms (i.e., travel, equipment, personnel costs, tuition remission, etc.) must be attached. Cost sharing intent must not be reflected on the budget forms. Please include cost sharing information in the attached budget narrative.

Research and Related Senior/Key Person Profile – Use this form to provide biographical information about the Principal Investigator (PI) and Co-Investigator(s). A short biographical sketch of senior personnel and a list of their principal publications during the past five years, including those in pre-publication, must be provided. Information pertaining to current and pending support may also be attached. This information may include FAA funding that the PI has received during the past five years. The information may include (1) the project title; (2) the amount of funding; (3) the period of support; (4) a summary of the project; and (5) results obtained.

Applicants must identify all current project support from whatever source(s) (i.e., Federal, State, or local Government agencies, private foundations, industrial or other commercial organizations). Proposed project, and all other projects requiring a portion of the PI and all other senior personnel time, even if they receive no salary support from the project(s), must be included. The number of person-months or percentage of effort to be devoted to the projects must be stated regardless of source of support. Similar information must be provided for all proposals that are being considered or soon to be submitted to other possible sponsors, including the FAA.

If the project being submitted has been funded previously by a source other than the FAA, the information requested in the paragraph above must be furnished for the preceding funding period.

Proposals being submitted to multiple sponsors simultaneously must list all potential sponsors. Concurrent submission of a proposal to other organizations will not prejudice its review by the FAA.

Research and Related Other Project Information – Use this form to provide information about human subjects, vertebrate animals, etc. You may also attach your bibliography and project summary/abstract. Please notate in the Summary, those person(s) contacted at the FAA Program Office. The proposal must contain a 200-300 word summary of the proposed activity suitable for publication, and must include a self-contained description of the activity that would result if the FAA were to fund the proposal. Include a statement of objectives, methods to be employed, and the significance of the proposed activity to the advancement of knowledge and

FAA research areas. It must be informative to individuals working in the same or related fields and, as much as possible, be understandable to a scientifically literate reader. Please refrain from using contract terminology such as *statement of work*, and *deliverables*. To minimize confusion, use terms such as *description of work, results*, etc.

The proposal must contain a detailed description of the work and must include:

(1) Objectives for the period of the proposed work and expected significance;
(2) Relation to the longer term goals of the investigator's project; and
(3) Relation to the present state of knowledge in the field, to work in progress by the investigator under other support, and to work in progress elsewhere.

The description of work must outline the general plan of work, including the broad design of activities, an adequate description of experimental methods and procedures and, if appropriate, plans for preservation, documentation, and sharing of data, samples, physical collections, and other related research products. The proposal must provide a full description of the proposed program supported by calculations, if appropriate. The main field of investigation and its relevance to the needs of the FAA must be identified.

The proposal must be specific and not simply address the language of the NOFO. A scientifically valid plan addressing the goals of the effort and their significance to the safety and security of the flying public, along with checkpoints for intermediate success, is highly recommended. A description of how the work being proposed applies to current state-of-the-art aviation research must be included. The quality of work must meet the same standards that are expected for publication in scientific or technical journals.

Brevity will assist reviewers and the FAA staff in dealing effectively with proposals; therefore, the project description shall not exceed 15 single spaced pages. The font must be Times New Roman 12 point. Appended information may not be used to circumvent the page limit on the length of the proposal's project description. Extraneous appendices will not be sent to reviewers.

Regarding the bibliography, pertinent literature shall be provided. Proper attribution practice requires that all citations be complete.

Research and Related Project/Performance Site Location(s) - This form requests information pertaining to sites where the actual work will be performed.

Research and Related Personal Data - This form requests information, which is voluntary, in order to identify and address inequities based on gender, race, etc.

Disclosure of Lobbying Activities - This form requests information pertaining to lobbying activities, if any.

Indirect Cost Agreement - A copy of the latest institutional Negotiated Indirect Cost Rate Agreement, negotiated with the institution’s cognizant Federal audit agency (i.e., Health and Human Services, Department of Defense or other) currently in force must be attached. The applicant must assure that the costs the FAA is being asked to support are allowable 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.

The organization's contribution to the cost of equipment, or its willingness to support the cost of construction or renovation of needed facilities may be considered by the FAA as an indication of the organization's commitment to the project. The FAA does not entertain proposals that are submitted solely for the purchase of equipment or construction of facilities. If the purchase of equipment is part of the proposed costs, the proposal must specify the name of the manufacturer, and the part/model number.

APPLICATION AND SUBMISSION INFORMATION

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 and cooperative agreements submitted to the FAA are required to use the metric system of weights and measures. Likewise, reports, publications, and communiques regarding proposals will be required to use metric units.

Unique entity identifier and System for Award Management (SAM) - Required. The Federal awarding agency may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant. SAM registrations must be completed prior to submitting a proposal in response to this NOFO. An active SAM registration must be maintained for the duration of any active Federal award. Registration can be completed through the SAM.gov website at www.sam.gov. If SAM.gov review indicates that your organization is suspended, debarred, or proposed for debarment under the FAR (48 CFR Subpart 9.4) or voluntarily excluded under 2 CFR 180.940, the Grants Officer must determine whether the exclusion time precludes you from a grant award.

The FAA may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the FAA is ready to make a Federal award, the FAA may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

The FAA, prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold of $150,000, is required to review and consider any information about the applicant that is in the Federal Awardee Performance and Integrity Information System (FAPIIS) at www.fapiis.gov. The applicant, at its option, may review information in the FAPIIS and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.

The FAA will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205 Federal awarding agency review of risk posed by applicants.

SUBMISSION DATES AND TIMES

White Papers/Pre-Applications, and Applications for new grant awards may be submitted at any time, 24/7, during the open NOFO period, with strict adherence to the submission schedule shown below.

White Paper/Pre-Application Submission Schedule
Fiscal Year 2021 through Fiscal Year 2027

Fiscal Year 2021	**Fiscal Year 2022**
N/A	June 3, 2021
August 2, 2020	August 2, 2021
November 1, 2020	November 1, 2021
January 2, 2021	January 2, 2022
Fiscal Year (FY) 2023	**Fiscal Year 2024**
June 3, 2022	June 3, 2023
August 2, 2022	August 2, 2023
November 1, 2022	November 1, 2023
January 2, 2023	January 2, 2024
Fiscal Year 2025	**Fiscal Year 2026**
June 3, 2024	June 3, 2025
August 2, 2024	August 2, 2025
November 1, 2024	November 1, 2025
January 2, 2025	January 2, 2026
Fiscal Year 2027	
June 3, 2026	
August 2, 2026	
November 1, 2026	
January 2, 2027	

New Grant Application Submission Schedule
Fiscal Year 2021 through Fiscal Year 2027

Fiscal Year 2021	**Fiscal Year 2022**
N/A	July 3, 2021
September 3, 2020	September 3, 2021
December 1, 2020	December 1, 2021
January 2, 2021	January 2, 2022

Fiscal Year (FY) 2023	**Fiscal Year 2024**
July 3, 2022	July 3, 2023
September 2, 2022	September 3, 2023
December 1, 2022	December 1, 2023
January 2, 2023	January 2, 2024
Fiscal Year 2025	**Fiscal Year 2026**
July 3, 2024	July 3, 2025
September 2, 2024	September 3, 2025
December 1, 2024	December 1, 2025
January 2, 2025	January 2, 2026
Fiscal Year 2027	
July 3, 2026	
September 2, 2026	
December 1, 2026	
January 2, 2027	

If any of the submission due dates fall on a Saturday, Sunday, or Federal holiday, the package is due the next business day.

Late Submissions

Proposals submitted after the NOFO expiration date will not be considered. Applicants are responsible for beginning the submission process in sufficient time to accommodate reasonably foreseeable incidents, contingencies, and disruptions.

Applicants must allow at least 120 days for review and processing of applications for new grant and continuation grant awards by the FAA.

INTERGOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372 Intergovernmental Review of Federal Programs.

FUNDING RESTRICTIONS

Funding for all awards and future budget periods are contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

Cost Principles

Costs must be allowable, allocable and reasonable in accordance with the applicable Federal cost principles referenced in 2 CFR § 200.400 - 200.411.

Pre-award Costs

In general, all costs incurred before the FAA makes the award are the responsibility of the applicant. The FAA is under no obligation to reimburse such costs if for any reason the applicant does not receive a Federal award, or if the Federal award is less than anticipated and inadequate to cover such costs. However, the FAA may approve the costs with written approval where such costs are necessary for efficient and timely performance of the scope of work, and such costs would be allowable if incurred after the date of the Federal award (2 CFR § 200.458, 2 CFR § 200.407).

Withdrawal

A proposal may be withdrawn by the submitting organization at any time before an award is made. The request for withdrawal must state the reason and be signed by the Principal Investigator. This information can also be e-mailed to the Aviation Research Grant Program Office.

The e-mail address of the Grants Officer is located at http://www.tc.faa.gov/logistics/grants.

OTHER SUBMISSION REQUIREMENTS

Applicants must complete a series of registrations and enrollments to submit applications in response to this NOFO.

Applicants not currently registered in SAM and Grants.gov should allow at least 4 weeks to complete these requirements.

Applicants are encouraged to start the process as soon as possible.
Applicants must obtain a DUNS number at https://fedgov.dnb.com/webform.

Applicants must register in SAM at https://www.sam.gov/.

Applicants must provide a Taxpayer Identification Number (TIN) to complete their registration in httys://www.SAM.gov. An applicant's TIN is an EIN as assigned by the Internal Revenue Service (IRS).

Proposals must be submitted electronically through http://www.Grants.gov. The FAA NOFO mentioned above can be located by entering Opportunity Number 20-01 under the "SEARCH GRANTS" section of the Grants.gov home page. The application package on the site contains all of the forms required to be included in your submission.

Prior to using Grants.gov for the first time, each organization must register and create an institutional profile at the Grants.gov Website. Once registered, the applicant's organization can apply for any Federal grant listed on Grants.gov.

Questions relating to the Grants.gov registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@Grants.gov. The FAA cannot answer these questions.

Proposals submitted in response to the FAA via Grants.gov must be prepared and submitted in accordance with the guidance contained in this NOFO and FAA Order 9550.7B, located at http://www.tc.faa.gov/logistics/grants.

Once the proposal is submitted through Grants.gov, the FAA Aviation Research Grant Program Office will download it for processing.

Section V – APPLICATION REVIEW INFORMATION

A. CRITERIA

The FAA has established four criteria for evaluating each proposal in order to determine an applicant's eligibility for funding. Each of the criteria is weighted equally. However, failure to meet any one of the criteria may result in the proposal being judged ineligible.

The criteria and a brief explanation of each are listed below.

1. Intrinsic Value

The likelihood that the proposed research will lead to new discoveries or fundamental advances within a specific field of science or engineering, or have substantial impact on progress in that field or in other scientific or engineering fields pertinent to FAA research.

2. Relevance to FAA Mission

The establishment of a logical connection and probable application to the long-term growth of civil aviation.

3. Technical Soundness of the Proposal

The quality of the overall approach proposed to verify concepts or apply new technologies. The proposal must be formulated in a clear and logical fashion, utilizing known scientific principles and their extensions to reach a definable, substantial, and relevant goal.

4. Research Performance Competence

The capability of the organization (personnel and resources) to carry on successful work. The grant recipient must identify specific resources that are required and note whether adequate access to these exist or whether they will be acquired in the course of the proposed activity. Achievements will be considered in evaluating performance competence. The Principal Investigator must demonstrate an established reputation in the relevant field. Such reputation may be shown by publications, patents, conference contributions, or any other relevant information that demonstrates his or her capability to advance the state of knowledge in the proposed area.

Applicants will receive a rating summary of Undistinguished or With Distinction, which will determine eligibility.

Undistinguished: The proposal does not feature any distinguishing characteristics such as: novel/unique approaches to tackling the research question(s), new methods of analyzing data or information, or domain knowledge/expertise that would lead to a higher probability of a successful outcome of the proposed research topic(s). An undistinguished proposal contains nothing that indicates that the proposing institution or its team members possess any specific skills/capabilities that could lead to success in the research area.

With Distinction: The proposal features distinguishing characteristics such as: novel/unique approaches to tackling the research question(s), new methods of analyzing data or information, or domain knowledge/expertise that would lead to a higher probability of a successful outcome of the proposed research topic(s). A proposal with distinction indicates that the proposing institution or its team members possess certain specific skills/capabilities that could lead to success in the research area.

COST SHARING

Cost sharing is not required, and is not a weighted criteria, or an eligibility criterion; however, the FAA expects that grant recipients will share in the costs at a level that reflects their interest in the research, the potential benefits they may derive, and their ability to share in the cost of the project.

A cost share offer by an applicant may be a significant factor in the FAA's funding decision. If a proposal is submitted without a cost sharing intent, the Grants Officer may contact the institution to negotiate a level of cost share.

Any shared costs or matching funds and all contributions, including cash and third party in-kind contributions, will be accepted as part of the applicant's cost sharing or matching when such contributions meet all of the following criteria:

- Are verifiable from the non-Federal entity's records;
- Are not included as contributions for any other Federal award;
- Are necessary and reasonable for accomplishment of project or program objectives;
- Are allowable under Subpart E - Cost Principles of this part;
- Are not paid by the Federal Government under another Federal award, except where the Federal statute authorizing a program specifically provides that Federal funds made available for such program can be applied to matching or cost sharing requirements of other Federal programs;
- Are provided for in the approved budget when required by the Federal awarding agency; and
- Conform to other provisions of this part, as applicable.
- Examples of cost sharing include, but are not limited to the following:
    - The provision of space, facilities, equipment, or resources as no or reduced charge;
    - The provision of release time for faculty;

- The provision of scholarship support for students; or
- The waiver of facilities and administrative costs, in whole or in part.

Cost sharing responsibilities are assumed by the grant recipient upon acceptance of the grant.

Although cost sharing is not an eligibility criterion, or a requirement for a grant award, it provides the FAA an opportunity to maximize program funds when budget cuts are abound.

B. REVIEW AND SELECTION PROCESS

INITIAL PROPOSAL REVIEW

Proposals received will be assigned an FAA proposal number, which the Grants Officer will email to the institution with an acknowledgment of receipt. Each proposal will be reviewed by the Grants Officer to ensure that it is in the required format, that all relevant information has been submitted, that it satisfies the conditions of a grant, and that the proposed research falls under FAA research grant authority. After an initial administrative review, the proposal will be carefully reviewed for technical merit by an FAA technical evaluation team. The team will consist of three or more technically qualified people, some of whom may be reviewers from outside the Government. Non-disclosure forms will be signed by reviewers. An FAA Lead Technical Monitor will be designated as the team leader and will be responsible for developing an overall rating based on the ratings of the team members. Subsequent to the technical evaluation, an award determination will be made at the appropriate FAA management level.

ELIGIBLE PROPOSALS

Each eligible proposal will be rated as either a category A, B, or C. These categories will be used to distinguish the proposals according to technical merit.

Category A proposals will have met the review criteria with no distinction.

Category B proposals will have met the review criteria with distinction in one or more of the criteria.

Category C proposals will have met each of the review criteria with distinction and present a strong, well-constructed program in all respects.

Key to Overall Rating

A = No criteria distinguished
B = At least one criteria distinguished
C = All criteria distinguished

REVISIONS TO PROPOSALS

The FAA technical evaluators may determine that a proposal is eligible for grant award but that certain changes would need to be made to support technical areas of research critical to the FAA mission. These changes are not intended to alter the basic direction or scope of the proposal. Changes may be made to remove, add, or redirect specific areas of research in the proposal. They may conclude certain proposed activities in the application are unnecessary and will recommend deleting them and their associated costs prior to the award. The Grants Officer will contact the applicant's Principal Investigator, or appropriate Grants Officer depending on the type of issues that need to be negotiated. If costs appear excessive in the applicant's budget submission, recommended additions or deletions in the proposal will be negotiated. If such changes occur, an appropriate proposal modification (which may include a revised proposal budget) must be submitted to the Grants Officer to incorporate in the proposal file.

The Grants Officer who negotiates your award will encourage you to share in the cost of the research. This could be a percentage of the overall costs or overhead rates, providing facilities, not charging for key personnel salaries or other direct costs.

DECLINED PROPOSALS

A proposal may be declined for a variety of reasons. The proposal may be incomplete, inappropriate for FAA consideration, not meet the criteria established for technical merit, or funds may not be available. The Grants Officer will notify the applicant in writing advising why the proposal was not accepted for award.

FAA, prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold of $150,000, is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS) (see 41 U.S.C. 2313).

The applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.

The FAA will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205, Federal awarding agency review of risk posed by applicants.

SECTION VI. AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. SELECTION NOTIFICATION

The FAA Grants Officer will notify applicants selected for award in writing upon selection. This notice of selection is not an authorization to begin performance. The period of performance will be indicated on the award document.

A grant or cooperative agreement issued by the FAA Grants Officer is the authorizing award document. It normally includes, either as an attachment or by reference: Special Terms and Conditions, Intellectual Property Provisions, Reporting Requirements and Instructions.

Awards made under this program are subject to the following:

FAA Aviation Research Grants Order 9550.7B and Regulations and Executive Orders referenced in Appendix 1 of FAA Aviation Research Grants Order 9550.7B

This Order can be found under the Orders & Notices section of the FAA Regulation Policies Orders and Notices website located at http://www.faa.gov/regulations_policies/orders_notices/

2 CFR 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for https://www.ecfr.gov/

These Terms and Conditions will be incorporated in the award by reference.

2. NON-SELECTED NOTIFICATION

The FAA Grants Officer will notify applicants that have not been selected, in writing, as promptly as possible after the determination has been made. This notice will explain the reasons for non-selection.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

ADMINISTRATIVE REQUIREMENTS

Administrative requirements for FAA aviation research grants and cooperative agreements are contained in FAA Aviation Research Grants Order 9550.7B, the FAA's established policies and procedures for the award and administration of aviation research and development grants.

REGISTRATION REQUIREMENTS

Additional administrative requirements for FAA grants and cooperative agreements are contained in 2 CFR 25 (See: www.eCFR.gov). Prime awardees must keep their data in SAM current at https://www.sam.gov/. The SAM is the government-wide system that replaced the Central Contractor Registry (CCR). If you had an active registration in the CCR, you have an active registration in SAM. Subawardees at all tiers must obtain DUNS numbers and provide the DUNS to the prime awardee before the subaward can be issued.

NATIONAL POLICY ASSURANCES

The National Policy Assurances to be incorporated as award terms is located at http://www.faa.gov/regulations_policies/orders_notices/. FAA Order 9550.7B.

C. REPORTING

Reporting requirements are identified FAA Order 9550.7B, which will be incorporated in the award document by reference. Reporting requirements are available at http://www.faa.gov/regulations_policies/orders_notices/.

Reporting requirements will be explicitly outlined in the award document.

SECTION VII. AGENCY CONTACTS

AGENCY CONTACTS

Administrative questions of a non-technical nature, including program rules, can be directed to the FAA Grants Officer at http://www.tc.faa.gov/logistics/grants.

Technical questions about a specific program area and/or technical requirements can be directed to the Program Manager at http://www.tc.faa.gov/logistics/grants

SECTION VIII. APPENDICES/REFERENCE MATERIAL

SAMPLE BREAKDOWN OF TRAVEL COSTS – YEAR 1

YEAR 1			
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Auburn, AL		
# of trips:	10 Trips		
# of travelers:	2 Travelers		
Duration:	2 Days		
Mileage:	500 miles @ $0.28 per mile	$140.00	
Per Diem:	$71.00 per day x 2d x2p	$284.00	Trip Total: $4,240.00
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Auburn, AL		
# of trips:	10 Trips		
# of travelers:	1 Travelers		
Duration:	2 Days		
Mileage:	500 miles @ $0.28 per mile	$140.00	
Per Diem:	$71.00 per day x 2d	$142.00	Trip Total: $2,820.00
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Atlantic City, NJ		
# of trips:	4 Trips		
# of travelers:	1 Travelers		
Duration:	2 Days		
Air Fare:	$672.00	$672.00	
Car Rental:	$50.00 per day x 2d	$100.00	
Per Diem:	$145.00 per day x 2d	$290.00	Trip Total: $4,048.00
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL /Atlantic City, NJ		
# of trips:	4 Trips		
# of travelers:	2 Travelers		
Duration:	2 Days		
Air Fare:	$672.00 per day x 2p	$1,344.00	
Car Rental:	$50.00 per day x 2d x2p	$100.00	
Per Diem:	$145.00 per day x 2d x 2p	$580.00	Trip Total: $8,096.00
			Total Year 1: $19,204.00

SAMPLE BREAKDOWN OF TRAVEL COSTS – YEAR 2

YEAR 2			
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Auburn, AL		
# of trips:	10 Trips		
# of travelers:	2 Travelers		
Duration:	2 Days		
Mileage:	500 miles @ $0.28 per mile	$140.00	
Per Diem:	$75.00 per day x 2d x2p	$300.00	Trip Total: $4,400.00
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Auburn, AL		
# of trips:	10 Trips		
# of travelers:	1 Travelers		
Duration:	2 Days		
Mileage:	500 miles @ $0.28 per mile	$140.00	
Per Diem:	$75.00 per day x 2d	$150.00	Trip Total: $2,900.00
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Atlantic City, NJ		
# of trips:	4 Trips		
# of travelers:	1 Travelers		
Duration:	2 Days		
Air Fare:	$672.00	$672.00	
Car Rental:	$53.00 per day x 2d	$106.00	
Per Diem:	$152.00 per day x 2d	$304.00	Trip Total: $4,328.00
Purpose of Trip:	Project Meeting		
From / To:	Huntsville, AL / Atlantic City, NJ		
# of trips:	4 Trips		
# of travelers:	2 Travelers		
Duration:	2 Days		
Air Fare:	$672.00 per day x 2p	$1,344.00	
Car Rental:	$53.00 per day x 2d x2p	$106.00	
Per Diem:	$152.00 per day x 2d x 2p	$304.00	Trip Total: $7,016.00
			Total Year 2: $18,644.00

TYPES OF GRANTS

Standard Grant - A standard grant is a grant in which the FAA agrees to support a level of research for a specified period of time, usually for a minimum of 1 year. The grant award instrument will contain all documentation applicable to the award and administration of the grant.

Continuation Grant - A continuation grant is an extension of existing program funding for one or more additional budget period(s) that would otherwise expire. Continuation grants are for a specified period of time, usually for a minimum of 1 year, with a statement of intent to provide additional project support for additional period(s), provided funds are available and the results achieved warrant further support.

Cooperative Agreement - A cooperative agreement is a variant of either of the above vehicles in which there is substantial involvement between the Federal awarding agency and the non-Federal entity carrying out the activity contemplated by the Federal award.

GRANT EXTENSIONS

No-Cost Extension (NCE) – No-cost extensions are requested to complete activities of the grant in the final year of the project period:

1. Request are not approved merely for the purpose of using unobligated balances.
2. Requests should be made 45 days prior to the end of the project period and are one-time extension of the expiration date up to 12 months.
3. The no-cost extension does not authorize additional spending on any new activities beyond the purposes consistent with the original grant award.

A request for a no-cost extension must be submitted in the form of a cover letter on letterhead, signed by the authorizing official requesting the NCE, and must encompass the following elements:

1. Length of time being requested.
2. New project period end date.
3. Reason the NCE is needed.
4. Description of activities that were not completed.
5. Plan for completing the incomplete activities.
6. Description of how un-obligated funds from the budget in the NCE period will be used, and if so how much.
7. Application for Federal Assistance SF-424 signed by the authorizing official noting the revised project period end date.
8. Federal Financial Report SF-425 that reflects the most recent quarter.
9. Project Narrative that includes a clear and concise description of the current status of the project. It should also include a very brief overview of accomplishments

and challenges encountered to date and reflect on the progress made towards the achievement of results and benefits.

10. An Objective Work Plan (OWP) which reflects the activities to be accomplished during the NCE. The OWP should include an additional column with the heading status. The status column should state either that the activity is completed or state the percentage of the activity that is completed and the expected completion date (assuming the NCE is approved). This must be done for the entire project period.

Requests for NCE's must be received by the FAA Grants Officer, by email, a minimum of 45 days prior to the grant expiration date. After review of the request, the grant recipient will be notified in writing, of the FAA Grant Officer's decision. If an approval is granted, an amendment will be initiated in accordance with the NCE request.

GRANT ADMINISTRATION

The conditions and provisions of the grant award instrument govern the administration of FAA aviation research grants. The FAA Aviation Research Grant Program Order 9550.7B sets forth these and other administrative requirements.

The grant recipient has full responsibility for the project or activity supported under an FAA award and for adherence to the award conditions. The grant recipient is in the best position to determine the means by which the activity or project can be performed most effectively. Grant recipients are encouraged to seek advice and opinions on technical issues and problems that may arise. This advice and opinion does not imply that the responsibility for the conduct of the project has been shifted to the FAA.

GRANT CLOSEOUT

At completion of the grant, an Initial Closeout Letter will be emailed to the grant recipient requesting completion of documents required by the FAA in order to close the grant.

Documentation required to be completed by the grant recipient consists of the Federal Financial Report (Standard Form SF-425), Final Project Report (FAA Form 9550-5), Report of Inventions and Subcontracts (DD Form 882), Tangible Personal Property Report (SF-428), and Tangible Personal Property Report Final Report (SF-428-B). All required documents will be attached to the Initial Closeout Letter.

OMB Uniform Grants Guidance 200.343 mandates that grant recipients submit all financial performance, and other reports required under the grant within 90 days after the grant award expires or is terminated. During this 90-day period the grant recipient must not incur new costs, must liquidate all remaining obligations incurred during the award, and submit all required documentation to finalize the grant.

Failure to submit any of the required documentation within the specified 90-day period can place your institution in non-compliance with the terms and conditions of the grant award. Non-compliance can jeopardize your institution's chance for future funding from the FAA.

GLOSSARY OF GRANT TERMS

Acknowledgment - Notification by mail or e-mail sent to proposer notifying them that the proposal was received and is being processed.

Acquisition, Materiel and Grants Division - Federal Aviation Administration office delegated to administer the Aviation Research Grant Program for the agency.

Assistance - Government funding.

Audit - Auditor's examination of monetary and non-monetary matters relating to a particular grant, to identify problems, if applicable, and provide recommendations for corrective action in order to prevent future recurrence.

Authorizing Legislation - A law passed by Congress that establishes or continues a grant program.

Authorized Representative - Person designated by the entity receiving a grant to sign and commit them to all provisions set forth in the grant award instrument.

Bibliography - Listing of works produced.

Budget Narrative - Clarification to the Budget submission explaining requests for travel, equipment, personnel, costs, etc.

Continuing Grant - Additional funding awarded for budget periods following the initial budget period of a multi-year discretionary grant or cooperative agreement.

Contract - A transaction whose principle purpose is to make acquisitions for direct DOT use. The Aviation Research Grant Program Office does not administer this type of vehicle.

Cooperative Agreement - A type of Federal assistance; essentially, a variation on a grant awarded by the DOT when it anticipates having substantial involvement with the recipient during the performance of a funded project.

Cost Sharing - Represents a portion of project or program costs borne by the grant recipient, i.e., percentage of overall costs or overhead rates, providing facilities, not charging for key personnel salaries or other direct costs, etc.

Declined - When a proposal has been deemed not acceptable and the applicant is notified in writing advising why the proposal has not been accepted for award.

Defense Contract Audit Agency - Agency used by the Federal Aviation Administration to perform required audits of grant recipients.

Disclosure of Lobbying Activities - A required form that discloses lobbying activities.

Eligible Proposals - Three categories used to differentiate the proposals according to technical merit.

Evaluation Criteria - Four criteria against which each proposal is evaluated in order to determine technical merit and eligibility for funding.

FAA Aviation Research Grant Order 9550.7B - Official publication by the Aviation Research Grant Program that sets forth policies and procedures for the award and administration of FAA aviation research grants and cooperative agreements.

For-Profit - Research institutions that normally make a profit.

Grant - Funding document for transferring money, property, services, or anything of value to the recipient in order to accomplish a public purpose of support or stimulation; there will be no substantial involvement between the Federal agency and the recipient during performance of the activity.

Grants Analyst - An employee of the Acquisition, Materiel and Grants Division who receives direction from the grants officer and who negotiates research grants and cooperative agreements and handles the details of administering them.

Grant Award - Award instrument that contains all documentation applicable to the award and administration of the grant.

Grant Close-out - The process during which it is determined that the recipient has performed all required work of a grant or cooperative agreement and undertakes all necessary administrative actions to make any fiscal adjustments to a recipient's account.

Grant Extension - A written or E-mail request by the principal investigator to the grants analyst to extend the period of grant performance.

Grants.Gov - A Government website that lists Federal assistance opportunities and allows electronic submission of proposals for possible awards of grants and cooperative agreements.

Grants Officer - Awards, administers, modifies, and terminates grants as authorized under the enabling statutes and delegated authority.

Grant Recipient - Entity that has been awarded a grant.

HACU - Hispanic Association of Colleges and Universities (minority institutions with a high volume of Hispanic students).

HSI - Hispanic Serving Institution.

Indirect Costs - Costs of an organization incurred for common or joint objectives that cannot be readily and specifically identified with a particular grant or other institutional activity.

Indirect Cost Agreement - Document negotiated with the institution's cognizant Federal audit agency (Health and Human Services, Department of Defense, etc.), currently in force listing the most recent rates to be applied for indirect costs.

Institution - Colleges, universities, research institutions and facilities.

Minority Institutions - Those entities, such as Historically Black Colleges and Universities, Hispanic Association of Colleges and Universities, Indian Tribes, etc.

National Airspace System - A national aviation system managed and operated by the Federal Aviation Administration.

Noncompliance - Non-receipt of required reports or documentation, established as a condition of award, which could jeopardize an entities' chance for future funding from the Federal Aviation Administration.

Non-Disclosure Form - A form signed by technical employees who are evaluating and assessing proposals that states that these employees will not divulge knowledge of the content of the proposal.

Nonprofit Organizations - Independent museums; observatories; research laboratories; hospitals; consortia; professional, scientific and educational associations or societies; and similar organizations.

Office of Management and Budget Circulars - Administrative policy documents that give instruction to Federal agencies on a variety of topics, including the administration of Federal grants and cooperative agreements.

Omnibus Trade and Competitiveness Act of 1988 - Federal statute requiring Federal agencies to use the metric system, i.e., of weights and measures, in procurement, grants, and other business-related activities; and for use in reports, publications, and communiqués regarding proposals.

Pre-Award Costs - Any cost incurred by the applicant prior to the award date of the grant.

Principle Investigator - Institution representative who assumes responsibility for the scientific or technical direction of the project and for the preparation of required technical reports.

Program Funded - Funding provided by the Federal Aviation Administration technical program office who has evaluated and decided to fund the particular research proposal.

Project Description - A portion of the proposal that describes specifically, how the proposer intends to implement the project and what the objectives are.

Proposal - An application for a grant or cooperative agreement containing all the information and forms needed to comply with all relevant legislation.

RE&D - This acronym relates to the FAA Research, Engineering and Development Program. It is also used to denote the type of funding to be used.

Research & Related Budget - This is a required form in the proposal that describes both the direct and indirect costs associated with a particular project.

Research & Related Personal Data - This is a voluntary form in the proposal. If the proposer wishes to submit this data, the information is to be used only to identify and address inequities based on gender, race, etc.

Research & Related Project/Performance Site Location - This is a required form in the proposal that requests information concerning specific sites where the work will be performed.

Research & Related Senior/Key Person Profile - This is a required form in the proposal that requests specific information pertaining to the principal investigator assigned to the work and/or the co-investigators.

Research & Related Other Project Information - This is a required form in the proposal that contains information about human subjects, vertebrate animals, etc. Other information is also required, such as the project summary, project description, bibliography, etc.

Salary Schedule - A salary schedule pertaining to the PI or co-investigators may be requested prior to award.

SF-424 Research & Related - This is a required form in the proposal that acts as the initial application for Federal assistance. It requests information pertaining to the estimated amount of project funding, length of the project, applicant information, etc., and is electronically signed by the Authorizing Organizational Representative who certifies that all statements are true and complete.

Federal Financial Report Form 425 - Financial Status Report required by the Office of Management and Budget to periodically document financial progress. A final report is also required at the end of the grant.

Summary - This information is included on the Research & Related Other Project Information Form. It is a condensed narrative describing the proposed project and its objectives.

Technical Merit - Proposal has been evaluated and has met the required technical criteria.

Withdrawal - The Federal Aviation Administration receives a written notification by the principal investigator of the submitting organization describing why they have decided to withdraw their proposal submission.