

STARBASE Hill ACADEMY

(Science and Technology Academies Reinforcing Basic Aviation and Space Exploration)

STATEMENT OF OBJECTIVES

This Statement of Objectives (herein referred to as the SOO), is made in reference to the STARBASE Hill Academy Cooperative Agreement which will be made between the Engineering Directorate located at Hill Air Force Base (Hill AFB), UT (AFSC/EN OL-Hill), sponsor of the STARBASE Hill Academy Youth Program, and the recipient

1.0 INTRODUCTION

WHEREAS, the Secretary of Defense in coordination with the Secretary of Education, may establish programs for the purpose of improving the mathematics and scientific knowledge and skills of elementary and secondary school students and faculty members (10 U.S.C. 21930); and

WHEREAS, Congress authorized the Secretary of Defense, acting through the Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs (OASD/M&RA), to conduct a youth program to be known as STARBASE (Department of Defense Instruction ((DoDI)) 1025.7); and

WHEREAS, The OASD/M&RA has authorized a STARBASE program at Hill AFB, Utah, to be known as STARBASE Hill Academy.

2.0 PURPOSE

2.1 Purpose. The purpose of this SOO is to outline the services and expertise necessary for the operation and management of the STARBASE Hill Academy at Hill AFB, Utah. The recipient shall operate the program by contracting with required staff, providing payroll, purchasing materials, and paying for Department of Defense (DoD) STARBASE required training and travel for STARBASE Hill Academy staff before being reimbursed with STARBASE funds.

2.2 Background. Title 10, U.S.C. section 2913b(c) directs the Secretary of Defense to provide for the establishment of the STARBASE program. The goal of the program is to raise the interest and improve the knowledge and skills of at-risk youth in the areas of science, technology, engineering, and math (STEM) by exposing them to the technological environment and positive role models found on military installations. A STARBASE Program was established at Hill AFB, Utah on 29 September 2011. The Assistant Secretary of Defense for Manpower and Reserve Affairs, reporting to the Under Secretary of Defense for Personnel and Readiness shall monitor compliance with this instruction and ensure that information on STARBASE issues, research, and academies are exchanged among relevant offices within the DoD components.

3.0 DEFINITIONS

3.1 At-Risk Youth. Students at risk are those who have characteristics that increase their chances of dropping out or falling behind in school. These characteristics may include: being from a single parent household, having an older sibling who dropped out of high school, changing schools two or more times other than the normal progression (ex. elementary to middle school), having C's or lower grades, being from a low socio-economic status family, or repeating an earlier grade.

3.2 OASD/M&RA. Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs. A Major Command (MAJCOM) of the United State Air Force that supports the Air Force mission. The DoD

STARBASE Program Office is located in OASD/M&RA and provides the DoD STARBASE Program Manager (PM).

3.3 Class. A grouping of students. This group may not necessarily have been a homogenous entity prior to STARBASE instruction; it may be a temporary grouping for the purposes of assembling for the 25 hr. period of STARBASE instruction.

3.4 Classroom Contact Hour. A period of 60 minutes, plus or minus five (5) minutes, in which STARBASE Academy Teacher(s) is actively involved with the students or in which a military member is demonstrating, displaying or teaching students about an application of a STEM concept.

3.5 Disability. Physical, mental or sensory impairments that render major life activities more difficult.

3.6 Socio-Economic Disadvantaged or Economically Disadvantaged. Used for economically deprived, poor, poverty stricken or disadvantaged individuals or groups who have low status in a particular society for reasons of race, sex, ethnicity, economics, language, geographic location, environment, education, disabilities, etc.

3.7 STARBASE Hill Academy. This term includes the on-site STARBASE program for 5th grade students and the STARBASE 2.0 extension program.

3.8 STARBASE 2.0. STARBASE 2.0 is an extension of the STARBASE on-site program and is designed to create in school or afterschool STEM opportunities for students up through 12th grade and uses mentors from DoD, industry, and universities. This program is to keep students motivated and participating in STEM activities and competitions throughout junior and senior high school.

3.9 STEM. Science, Technology, Engineering, and Mathematics

3.10 AFSC/EN OL-Hill. The Engineering Directorate located at Hill AFB, UT where the STEM Outreach Program resides. This organization will oversee the STARBASE Hill Academy Program for Hill AFB and provides a PM and a Budget Analyst (BA).

3.11 THE COOPERATIVE AGREEMENT RECIPIENT. Must be a not-for-profit organization that will manage and operate the STARBASE Hill Academy program and must be within 25 miles of Hill AFB.

3.12 Hill AFB. Hill Air Force Base, UT

3.13 Hill AFB Program Manager. Liaison between the recipient, STARBASE Hill Academy staff, DoD STARBASE program office and Hill AFB. Oversees facilities, security issues, and required Hill AFB training. Is the AFSC/EN OL-Hill representative.

3.14 Hill AFB Budget Analyst. Directs the distribution of funds from DoD STARBASE to the recipient. Is the AFSC/EN OL-H BA representative.

3.15 Fiscal Year (FY). FY for the Federal Government is from 1 Oct to 30 Sep. This is different than the Period of Performance (POP) for the Cooperative Agreement.

3.16 Federal Government. Refers to the United States of America and any government agencies working under it.

3.17 Hill AFB Grants Officer. Represents the government to ensure all laws, executive orders, regulations, and other applicable procedures are satisfied to ensure proper funds distribution and execution of the Cooperative Agreement.

4.0 RESPONSIBILITIES OF THE PARTIES

4.1 Responsibilities of Hill AFB, AFSC/EN OL-Hill

4.1.1 Hill AFB shall provide a BA and a PM to work with the recipient on STARBASE Hill Academy matters.

4.1.2 Responsibilities of the Hill AFB BA.

The Hill AFB BA is Michele Dean, office phone: 801-775-2769, email: michele.dean@us.af.mil. She will manage DoD STARBASE funds for the Cooperative Agreement. The recipient will make all required payments to operate the STARBASE Hill Academy and will submit invoices to the Hill AFB PM and the Hill AFB BA for reimbursement upon completion of performance for the amount of time indicated on the invoice.

- a. Funding for the STARBASE Hill Academy is dependent upon the availability of funds provided to AFSC/EN OL-Hill through the DoD STARBASE PM.
- b. The available funding estimated for the POP is \$524,000. Expenses incurred during the POP shall not exceed \$524,000. The recipient shall budget accordingly. In the event that end-of-FY funds or other additional funds become available, optional expenses may be incurred when pre-approved by the Hill AFB PM, (see paragraph 4.1.3). In this case total funding would exceed \$524,000.
- c. Hill AFB BA will provide guidance to the Hill AFB PM and the STARBASE Hill Academy Director with regards to appropriate funds dispersal and budgetary concerns.
- d. Appropriated funds used for STARBASE Hill Academy refers to congressional approved funds and are subject to all federal laws, as well as DoD and AF regulatory guidance dealing with the use and expenditure of federal appropriated funds.
- e. All funds received by Hill AFB from the DoD STARBASE Program Office will be obligated by the Hill AFB BA using a Miscellaneous Obligation/Reimbursement Document (MORD) Form 406. (For Hill AFB use: MORD guidance, 7.3. AF Form 406, Miscellaneous Obligation/Reimbursement Document (MORD) page 61.)

4.1.3 Responsibilities of the Hill AFB PM

- a. The Hill AFB PM is the liaison between the recipient, STARBASE Hill Academy staff, DoD STARBASE program office, and Hill AFB.
- b. Hill AFB shall provide STARBASE Hill Academy staff office and classroom space, utilities, building maintenance, limited housekeeping, fire protection, security protection, mail and telephone service for building 460, Hill AFB.

- c. The Hill AFB PM will work with the recipient and STARBASE Hill Academy staff with respect to Hill AFB security, facilities, transportation, getting base access cards (DBiDS) or Common Access Cards (CAC) and other Hill AFB issues as needed for the proper execution of STARBASE Hill Academy.
- d. The Hill AFB PM shall not participate in any fundraising activity nor will DoD funds be used for fundraising activities. The Hill AFB PM may seek legal counsel from OASD/M&RA Judge Advocate General to ensure compliance with the Joint Ethics Regulation, and other applicable legal requirements.

4.2 Responsibilities of the Recipient

- 4.2.1 The recipient shall operate and manage the STARBASE Hill Academy in accordance with (IAW) the Cooperative Agreement, the SOO, and DoDI 1025.7.
- 4.2.2 The recipient shall provide an employee as their STARBASE PM, who will work with the STARBASE Hill Academy staff and the Hill AFB PM.
- 4.2.3 The recipient shall provide an employee as their financial resource advisor, who will work with the Hill AFB BA, the STARBASE Hill Academy staff and the Hill AFB PM.
- 4.2.4 The frequency of submitting invoices to the Hill AFB PM and BA will be determined by the recipient but shall not be more frequent than monthly. This must include a list of hours each contractor worked for that period of time, materials purchased, training and travel expenses, etc. This shall be emailed to the Hill AFB BA and the Hill AFB PM. In addition, the Hill AFB PM requires an emailed copy of itemized receipts for any expenses incurred other than salary.
- 4.2.5 The recipient shall contract with, evaluate and, if need, dismiss underperforming STARBASE Hill Academy staff. See 7.5 for probation requirements. Staff shall be chosen through a competitive process.
- 4.2.6 The recipient shall provide a method for the STARBASE Hill Academy Director and/or other STARBASE Hill Academy staff to purchase or acquire needed materials.
- 4.2.7 The recipient is required to initially pay all payroll and expenses incurred by the STARBASE Hill Academy and submit invoices to the Hill AFB PM and BA for reimbursement.
- 4.2.8 An account balance for the disbursed funds shall be provided on a quarterly basis to the Hill AFB PM and the Hill AFB BA. (See Services Summary 15.0)
- 4.2.9 Within 30 days of the end of each POP, and within two weeks of a separate request by the Hill AFB PM, and upon termination of the Cooperative Agreement, the recipient will make available an accounting of all fund transactions for payroll and other expenses.

- 4.2.10 The recipient's designated foundation has the authority under their non-profit IRS 501 (c)(3) to request grants and raise funds in support of the STARBASE Hill Academy to enhance the program.
- 4.2.11 All travel made by STARBASE Hill Academy staff must be pre-approved in writing by the Hill AFB PM. This requires a detailed list of all expected expenses. The traveler will submit a travel voucher to the recipient with actual expenses. This will be used to submit to the Hill AFB PM and BA to reimburse the recipient.
- 4.2.12 All training taken by STARBASE Hill Academy staff requiring payment must be pre-approved in writing by the Hill AFB PM.
- 4.2.13 The recipient shall determine what training, background checks, etc. is required for their contracted employees.
- 4.2.14 The recipient shall keep an inventory of all materials and equipment and provide that inventory at the end of each POP to the Hill AFB PM or within 10 days upon request. (See Services Summary 15.0)

5.0 STARBASE HILL ACADEMY PARTICIPANTS

5.1 STARBASE Hill Academy on-sight participation offers the majority of its assistance to youth-at-risk in the 5th grade through coordination between the recipient PM, the STARBASE Hill Academy Director, local school administrators or other alternative education providers. All participants that are not part of the Davis School District must provide their own transportation to the STARBASE Hill Academy facility on Hill AFB, UT. The participants may be selected on the basis of:

- 1. Racial or ethnic minority status
- 2. Disability
- 3. Socio-economic disadvantage
- 4. Limited English proficiency
- 5. Historic under-representation in STEM fields
- 6. Low academic performance
- 7. Military dependents

5.2 The Davis School District schools with a majority of at-risk youth shall have the priority to attend STARBASE Hill Academy as they are providing a bus route for students at no cost. Other district schools, charter schools, home schools, private schools, etc. may apply for STARBASE Hill Academy but must provide their own transportation. Final approval of STARBASE Hill Academy participants shall be made by the STARBASE Hill Academy Director and the Hill AFB PM. Summer Open Enrollment class(s) are based on submission of application on a first come first served basis.

6.0 PERFORMANCE OBJECTIVES

The recipient shall contract with the staff needed for the operation of STARBASE Hill Academy and STARBASE 2.0 IAW the requirements set forth herein. Services provided shall include coordinating with

participating schools, classroom instruction, purchasing of equipment and materials for STARBASE Hill Academy and STARBASE 2.0, paying for required staff training, travel expenses, IT support, submitting required reports, and management required to ensure successful accomplishment of the overall STARBASE Hill Academy program. Transition of the STARBASE Hill Academy Program from one school year to the next must be accomplished by STARBASE Hill Academy personnel as part of their duties during the current POP. As part of the transition, STARBASE Hill Academy personnel shall prepare and send to all participating schools, all schedules and documentation needed to complete the current school year and following school year for STARBASE Hill Academy. STARBASE Hill Academy staff shall accommodate facility tours when requested by the Hill AFB PM or Hill AFB protocol office. Performance of the Cooperative Agreement shall be evaluated based upon the SOO, DoDI 1025.7, and the objectives and standards set forth in the Services Summary 15.0.

6.1 Classroom Size and Instruction Time

6.1.1 STARBASE Hill Academy on-sight 5th grade participants shall be provided a minimum of 700 hours of classroom contact per year; give 25 classroom contact hours of instruction over 4 or 5 days, and must complete 28 classes of instruction per year.

6.1.2 All STARBASE Hill Academy 5th grade classroom contact hours shall take place at Hill AFB, Utah or a satellite site on a DoD facility approved on a case-by case basis by the OASD/M&RA.

6.1.3 STARBASE Hill Academy may offer additional periods of special instruction, summer sessions, one-day workshops, and community outreach or teacher training periods.

6.1.4 STARBASE Hill Academy class size may range from 20-35 pupils. Exceptions to this policy may be approved on a case-by case basis by the OASD/M&RA.

6.2 STARBASE 2.0

6.2.1 Expands to either in-school or after school programs focused on STEM subjects for junior high and high school students.

6.2.2 STARBASE 2.0 participant(s) may be selected IAW local school administrators and sites based on the feeder pattern of the 5th grade participants in STARBASE Hill Academy.

6.2.3 Provide mentors for the activity chosen for each site. This activity is chosen by the school/teacher and coordinated with Hill AFB PM and STARBASE Hill Academy STARBASE 2.0 Coordinator.

6.2.4 Each STARBASE 2.0 program is an average of 1 hr. per week for 4 – 12 weeks each school year. The time frame and hours will vary based on specific project needs, individual school support, and available funding. STARBASE 2.0 projects and topics must be STEM related. Schools will be chosen to participate in STARBASE 2.0 based on available school support and consensus between the Hill AFB PM, the STARBASE Hill Academy Director and the STARBASE 2.0 Coordinator.

6.3 TOPICS OF INSTRUCTION AND CURRICULUM

6.3.1 The STARBASE Hill Academy shall provide instruction that complies with DoD STARBASE approved curriculum and direction given in DODI 1025.7. Subject areas include:

1. Math to include number relations, measurement, geometry, and data analysis
2. Sciences to include earth science, chemistry and physics
3. Technology to include innovations, navigating, and mapping
4. Engineering to include the engineering design process and computer aided design (CAD)
5. STEM Careers, both civilian and military, and personal investigations
6. Social Sciences, team building and goal setting

6.3.2 The STARBASE Hill Academy core curriculum shall include the following mandatory areas of classroom contact instruction: At the end of the instruction period, the student will know:

1. Physics & Chemistry

- a. Newton's Three Laws of Motion
 - i. The learner will recognize examples of Newton's Laws in the physical world.
- b. Fluid Mechanics and Aerodynamics
 - i. The learner will specify the expected change in motion caused by unbalanced forces acting on an object.
 - ii. The learner will determine the faster fluids move, the less pressure they exert.
- c. Building Blocks of Matter
 - i. The learner will conclude there are more than 100 known elements that combine in a multitude of ways to produce compounds, which account for all living and non-living substances.
 - ii. The learner will recognize a substance has characteristics, such as density, viscosity, boiling point, and solubility, all of which are independent of the amount of the sample.
- d. Physical and Chemical Changes
 - i. The learner will differentiate between a physical change in which matter changes state or form and a chemical change in which one or more new substances are formed.

2. Energy

- a. Energy Explorations
 - i. The learner will understand that energy transfers in many ways, such as heat, light, electricity, mechanical motion, sound, and the nature of a chemical.
 - ii. The learner will conclude a change in the state of matter of a substance is the result of a change in kinetic energy.
 - iii. The learner will differentiate between a physical change in which matter changes state or form and a chemical change in which one or more new substances are formed.

- iv. The learner will understand all energy can be classified as potential energy (such as chemical, mechanical, nuclear, and gravitational energy) or kinetic energy (such as radiant, thermal, motion, sound, and electrical energy).
- b. States of Matter Experiments
 - i. The learner will conclude that energy in a system is conserved and may change from one form to another.
 - ii. The learner will conclude a change in the state of matter of a substance is the result of a change in kinetic energy.
 - iii. The learner will differentiate between a physical change in which matter changes state or form and a chemical change in which one or more new substances are formed.
 - iv. The learner will understand all energy can be classified as potential energy (such as chemical, mechanical, nuclear, and gravitational energy) or kinetic energy (such as radiant, thermal, motion, sound, and electrical energy).
- c. Chemical and Physical Change Experiments
 - i. The learner will understand that energy transfers in many ways, such as heat, light, electricity, mechanical motion, sound, and the nature of a chemical.
 - ii. The learner will conclude a change in the state of matter of a substance is the result of a change in kinetic energy.
 - iii. The learner will differentiate between a physical change in which matter changes state or form and a chemical change in which one or more new substances are formed.
 - iv. The learner will understand all energy can be classified as potential energy (such as chemical, mechanical, nuclear, and gravitational energy) or kinetic energy (such as radiant, thermal, motion, sound, and electrical energy).

3. Technology

- a. Innovations
 - i. The learner will identify and define authentic problems and significant questions for investigation.
 - ii. The learner will use multiple processes and diverse perspectives to explore alternative solutions.
- b. Navigation and Mapping
 - i. The learner will use technological tools to gather, evaluate, and use information.
 - ii. The learner will use coordinate points of latitude and longitude to specify locations and navigate from one point to another.

4. Engineering

- a. Engineering Design Process (EDP)
 - i. The learner will recognize the engineering design process is a method of problem solving used to create a system, a product, or a process that meets an identified need.
- b. 3-D Computer-Aided Design
 - i. The learner will construct a 3-D scale model based on geometric relationships using engineering design software and computer technology as required by the DoD STARBASE PM.

- ii. The learner will apply basic computer skills such as mouse dexterity, keyboarding, data entry, and folder navigation.

5. Mathematic Operations and Applications

- a. Numbers and Number Relationships
 - i. The learner will solve problems using fractions, decimals, and percentages.
- b. Measurement
 - i. The learner will select and apply appropriate standard units and tools to measure length, area, volume, mass, and degree of angles.
- c. Geometry
 - i. The learner will recognize geometric properties and relationships and apply them to other disciplines and to problems that arise in the classroom or in everyday life.
- d. Data Analysis
 - i. The learner will collect data using observations and experiments.
 - ii. The learner will represent data using tables and graphs.

6. STEM Careers

- a. Civilian and Military STEM Careers on Military Facilities
 - i. The learner will develop an awareness that scientists, technicians, engineers and mathematicians work on military facilities.
- b. Personal Investigations
 - i. The learner will correlate their academic endeavors in STEM areas to real-world applications in career fields.

7. Social Sciences

- a. Teamwork
 - i. Working in pairs (wingman), groups of 4 (crews), and as a class to accomplish lesson
- b. Goal Setting
 - i. Understanding the importance of goal setting

6.4 POSSIBLE ADDITIONAL FUNDS

STARBASE Hill Academy personnel shall keep a list of additional materials and/or equipment that could be purchased to enhance the STARBASE Hill Academy program in an amount up to \$60,000. This would be used if additional end-of-FY funds become available from the DoD STARBASE Program Office.

6.5 TRAVEL

Travel can be expected in the following areas:

6.5.1 Annual trip for the STARBASE Hill Academy Director or designated representative to the DoD STARBASE Directors Meeting.

6.5.2 Travel needed for training STARBASE Hill Academy personnel when deemed necessary in areas such as new curriculum, SMARTBOARD operation and CAD instruction.

6.5.3 On rare occasions, travel for STARBASE 2.0 students and teachers to National or International competitions when their teams qualify and additional funds are available.

6.6 TRAINING

Training for STARBASE Hill Academy personnel can be expected in the areas of new curriculum, SMARTBOARD operation, CAD instruction, and CPR. In addition, yearly computer based training is required of all contractors that have access to Hill AFB. This will be directed by the Hill AFB PM.

7.0 PERSONNEL

The recipient is responsible to contract with all employees necessary to fully staff the STARBASE Hill Academy program as outlined in the Cooperative Agreement, SOO and DoDI 1025.7. The recipient will periodically evaluate, and if needed, dismiss STARBASE Hill Academy staff members that are determined to be underperforming. See 7.5 for probation requirements. The recipient shall provide periodic on-site supervision of all contract employees. All personnel must be able to pass the required background check to receive a base access card and stay current on required Hill AFB training as directed by the Hill AFB PM. Persons assigned to each position shall meet or exceed the qualification specifications for that position and shall be chosen using a competitive process determined by the recipient. Contract employees may be summarily and immediately removed from or denied access to any government property, facility, and installation at the sole discretion of competent government authority if that authority determines such action is necessary to protect or preserve government property, safety and security, or to maintain good order and discipline.

7.1 Director. The Director shall develop, supervise, direct, organize and manage the day-to-day operations of the STARBASE Hill Academy and STARBASE 2.0 and is responsible to create a positive and safe working environment. The director shall oversee personnel; curriculum design; fiscal planning; annual reports to DoD STARBASE, monthly reports to the Hill AFB PM, budget submission and execution; staff development; and all other activities of STARBASE Hill Academy and STARBASE 2.0. This individual shall be a liaison with military and civilian Hill AFB employees, local community and business leaders, and provide community relations. Maintain a current CPR/First Aid certification.

7.1.1. The Director shall meet the following qualification criteria:

- a. Master's degree and/or equivalent level of work/educational experience
- b. Experience understanding and implementing Science, Technology, Engineering, and Math methods
- c. Management experience
- d. Experience with developing and implementing new programs and initiatives
 - i. Experience in creating, developing, and implementing training workshops.
 - ii. Experience in organization, administrative problem-solving, conflict resolution and record keeping.

7.1.2 The Director shall possess the following knowledge, skills and abilities:

- a. Skills using Microsoft Office, email, and SMART technology or equivalent
- b. Knowledge of strategic planning, business plan development, marketing strategies and budgeting
- c. Knowledge of and experience in education, supervision, and management of educational programs
- d. Knowledge of program evaluation methods and development of outcome measures

- e. Ability to work with public officials, military leaders, influential citizens and corporate leads
 - f. Ability to travel locally on a regular basis. Approx. two times per year required to attend training and/or conferences in a location other than Utah.
- 7.1.3 Responsibilities of the STARBASE Hill Academy Director shall include:
- a. Overall supervision and management of the STARBASE Hill Academy programs at Hill AFB and designated Satellite facilities
 - b. Develop Standard Operating Procedures for the STARBASE Hill Academy programs and a Memorandum of Understanding among agencies
 - c. Coordinate, supervise and administer program development; marketing plan; business plan and budget; requesting donations for the program, and implementation of STARBASE Hill Academy and STARBASE 2.0
 - d. Work with the recipient in contracting with and recommending dismissal of staff, provide annual written evaluations of STARBASE Hill Academy staff and designated satellite facilities. See 7.5 for probation requirements.
 - e. Represent the program at all trainings and conferences.
 - f. Develop and coordinate partnerships with businesses and government agencies
 - g. Submit monthly site reports to the Hill AFB PM. The report shall contain, at a minimum, the following for both STARBASE Hill Academy and STARBASE 2.0 sites:
 - STARBASE Hill Academy
 - 1. 4 or 5 day schedule
 - 2. District(s) served
 - 3. Name and number of schools served
 - 4. Number of students served
 - 5. Number of classes conducted
 - 6. Total program expenditures
 - 7. Update on procurement of additional funds and community collaborations
 - 8. Volunteers for
 - a. Tours - site of tour and number of volunteers
 - b. Graduation – guest speaker, number of adults (family, guardians, grandparents) attending
 - 9. Monthly accounting of hours worked by all employees, including work for STARBASE 2.0.
 - STARBASE 2.0
 - 1. District and schools served
 - 2. Dates scheduled
 - 3. Activity
 - 4. Number of students served
 - 5. Mentor / Volunteer: number, hours provided, and source (industry company, university, Hill AFB)
 - 6. Total program expenditures
 - 7. Update on procurement of additional funds and community collaborations

7.2 Program Teacher. The Program Teacher shall be able to organize and manage classrooms; provide classroom instruction; maintain records and files; and organize, manage and prepare classes in all areas of the DoD required STARBASE curriculum for teachers and students. They shall also be responsible for assisting the Director with the operations, management, development and implementation of the STARBASE program. Teachers report to the Director.

7.2.1 The Program Teacher shall meet the following qualification criteria:

- a. Bachelor's degree in education with 2 years of experience teaching STEM subjects, or bachelor's degree and 2 years work experience in a STEM field and able to demonstrate teaching ability.
- b. Current teaching certificate not required.
- c. Experience in teaching elementary or secondary level science, technology, engineering and/or mathematics

7.2.2 The Program Teacher shall possess the following knowledge, skills and abilities:

- a. Knowledge of computers.
- b. Ability to recognize and implement effective teaching practices and classroom management skills
- c. Ability and willingness for quality communication and effective relationships with STARBASE Hill Academy staff, military and civilian personnel, district school teachers, students, parents, and volunteers
- d. Ability to travel
- e. Maintain current CPR/First Aid certification

7.2.3 Responsibilities of the Program Teacher:

Classroom Duties:

- a. Prepare materials, lesson scripts, classrooms, and activities for instruction utilizing computer and SMART technology for lessons where appropriate, save backups to external hard drives.
- b. Provide instruction in all areas of STARBASE curriculum for teachers and students.
- c. Work as a team with other teachers to prepare lessons, daily class schedules, and instruction in the classrooms.
- d. Identify participating individual students' needs, and attempt to provide appropriate intervention and accommodation to help ensure success in program completion.
- e. Assist in developing new curriculum lessons, which are correlated with state and national objectives, to submit to STARBASE.
- f. Assist visiting teachers who participate in STARBASE Hill Academy.
- g. Participate in graduation ceremonies.
- h. Assist in planning, preparing, and conducting program workshops for local, state, and national levels.

Clerical Duties:

- a. Assist district teacher in completing on-line STARBASE survey and email results to the Hill AFB PM.
- b. Conduct evaluations, collect data, and prepare statistical summaries of program data.
- c. Plan graduation ceremonies, secure guest speaker, and prepare presentation for graduation.
- d. Write articles for STARBASE Hill Academy newsletter if applicable.
- e. Assist in maintenance of photos, press releases, announcements, and other pertinent materials documenting program progression and success.

- f. Select and prepare requests for appropriate materials for purchase.
- g. Assist in verifying material shipments, updating material inventories, and putting away supplies.
- h. Maintain bulletin boards.

Other Duties:

- a. Cleaning and organization of classrooms, kitchen, teachers' offices, lobby, and storage areas as limited janitorial services are provided.
- b. Assist in all other duties or activities deemed necessary by the STARBASE Hill Academy Director for mission success with approval of the recipient's PM.

7.3 Office Manager. The Office Manager shall have advanced clerical duties to maintain records, correspondence, and files; create and maintain spreadsheets for tracking and ordering materials; set up and maintain website and social media; maintain school enrollment forms, records, and schedules including student bus scheduling issues; create and maintain spreadsheets for tracking data. Office manager reports to the STARBASE Hill Academy Director.

7.3.1 The Office Manager shall meet the following qualification criteria:

- a. Minimum of High School diploma
- b. 3 years' experience as an administrative assistant/office manager
- c. Good communication and interpersonal skills both in person and on the phone

7.3.2 The Office Manager shall possess the following knowledge, skills and abilities:

Knowledge and experience with various software programs including word processing, Excel, databases, Power Point, and social media.

- a. Ability to compose, format, edit, and proof correspondence, reports, and general office material
- b. Ability to maintain detailed records, tracking, scheduling, and filing systems
- c. Ability to organize and prioritize multiple work assignments, meeting deadlines, and adapting to changing priorities while maintaining a positive, effective, and professional approach

7.3.3 Responsibilities of the Office Manager shall include the following:

- a. Receive visitors; receive, review, and distribute all incoming and outgoing correspondence including creating a point of contact list.
- b. Supervise the front public lobby while students are in attendance.
- c. Budget and Ordering:
 - i. Maintain budget and accounting records, including categorizing purchases for end-of – year report
 - ii. Research purchase requests including material features, vender prices and services; prepare purchase orders, follow purchase process from initial request to receipt of orders, and verify receipt
 - iii. Create, maintain, and reconcile petty cash and records of other purchases made with the 501c.3 funds if applicable. 501c.3 is not required.
 - iv. Create and maintain classroom and program inventories
 - v. Conduct monthly budget and accounting records
 - vi. Organize Hill AFB tours for each session of STARBASE Hill Academy students
- a. Maintain quality control of official documents including travel vouchers, purchase orders, contracts, schedules, and other documents designated by the director
- b. Prepare outgoing correspondence including:
 - i. Work from a rough draft to format, edit and proofread a variety of correspondence

- ii. Create program and marketing materials in Power Point and Excel
 - iii. Make copies and maintain originals in files
 - a. Maintain program records, files, and databases; and to assist in consolidating data for end-of-year reports and other reports as needed.
 - b. Set up and maintain program social media
 - c. Coordinate with schools for attendance, graduation schedules, enrollment forms, and any schedule changes.
 - d. To ensure proper maintenances of:
 - i. computer hardware, software, and networks for computer lab and staff computers
 - ii. teacher and office equipment including copiers, printers, laminator, phones, binding equipment, and other clerical aids.
 - iii. Assist in cleaning and organizing kitchen, offices, lobby, and storage areas as limited janitorial services are provided
 - a. Maintain schedule, create agenda, take minutes, and distribute minutes for STARBASE staff and board meetings if applicable. Send notices and/or call attendees as needed.
 - b. Assist STARBASE Hill Academy teachers with tasks deemed necessary for mission success:
 - i. Assist with preparation of review and extension materials
 - ii. Work with Hill AFB PM to maintain staff security clearances as required
 - iii. Track and report required STARBASE Hill Academy staff training to the Hill AFB PM
 - iv. Assist in all other related activities and duties as deemed necessary for mission success by the STARBASE Hill Academy Director and/or recipient PM.
- 7.4 Teacher's Aide. (Optional) Assist in the classroom and other duties as assigned by any STARBASE staff.

7.5 Disciplinary Actions.

Any recipient contract employee that is determined by the recipient PM or the STARBASE Hill Academy Director to not meet what they consider minimum standards for teaching ability, knowledge of curriculum, and/or classroom management, shall be placed on probation, receive a 30-day Personal Improvement Plan (PIP) and receive additional training by the recipient PM and/or the STARBASE Hill Academy Director. A re-evaluation will occur after 30 days. If needed, probation and the PIP can be extended an additional 30 days. If the contract employee does not improve to the satisfaction of the recipient PM and/or the STARBASE Hill Academy Director within 60 days, the contract employee shall be terminated and replaced.

7.6 STARBASE Hill Academy Minimum Staffing Requirements.

7.6.1 The recipient shall provide either two teachers or one teacher and one teachers' aid per classroom. Two staff members must be present for all student instruction.

7.6.2 The recipient shall provide either one director or two part-time directors that are also teachers.

7.6.3 The recipient shall provide one office manager.

7.6.4 STARBASE Hill Academy staff are permitted to perform and be paid for overtime at their base hourly rate when extra effort is required for items such as start-up of the STARBASE Hill Academy at the beginning of the Cooperative Agreement, or overtime work needed to bring required new curriculum into the program as long as funding is available and it has been pre-approved by the Hill AFB PM.

8.0 REPORTS

8.1 The STARBASE Hill Academy Director, working with the recipient PM, shall submit annual budget requests to the DoD STARBASE PM that identify STARBASE Hill Academy expenditures by: (See Services Summary 15.0)

1. Staff
2. Facility furnishings
3. Transportation and travel
4. Supplies
5. Equipment
6. Contract services
7. Communication
8. Training

8.2 The STARBASE Hill Academy Director shall align reporting of funding and budgets with Federal fiscal year cycles, 1 Oct to 30 Sep.

8.3 The STARBASE Hill Academy staff shall provide the following reports and documentation:

- 8.3.1 Monthly site report emailed to the Hill AFB PM. (See Services Summary 15.0)
- 8.3.2 Perception of STEM Subjects data to Hill AFB PM at the end of each session. Work with Hill AFB PM to select relevant questions. (See Services Summary 15.0)
- 8.3.3 Attendee teacher survey data at the end of each session to the Hill AFB PM. (See Services Summary 15.0)
- 8.3.4 Annual report to the DoD STARBASE PM per their specifications with copies to Hill AFB PM. Must include program compliance, and fiscal and real property accountability.
- 8.3.5 Previous session schedule showing subjects to Hill AFB PM within 10 days of the end of each session. (See Services Summary 15.0)
- 8.3.6 Prepare for, provide requested information for, and accommodate an on-site audit every three years from the DoD STARBASE PM Representative that includes out-briefing to AFSC/EN OL-Hill AFB leadership.

9.0 GOVERNMENT FURNISHED PROPERTY/EQUIPMENT (GFP/GFE) AND CONTRACTOR ACQUIRED PROPERTY

9.1 All GFP/GFE will remain in the possession of Hill AFB. All property acquired by the recipient that is purchased for STARBASE Hill Academy with government funds will remain in the possession of Hill AFB and is a deliverable to be accepted by the government.

9.2 The GFP/GFE and property acquired by the recipient will remain in the possession of Hill AFB at contract completion.

10.0 FACILITIES, EQUIPMENT, AND SERVICES:

The government shall provide facilities for the STARBASE Hill Academy program, equipment and items specified below, in a ready for use condition for the performance of the STARBASE Hill Academy Program.

10.1 Government Furnished Facilities. The Government will provide to the STARBASE Hill Academy the building identified as Building 460 (North Wing) located at Hill AFB, Utah. Title to the facilities shall remain with the Government. The Government will maintain the facility and perform repairs IAW sound industrial practices. The Government will maintain the grounds

surrounding the building. The recipient and STARBASE Hill Academy staff shall not permit the use of the facility for activities not related to the STARBASE Hill Academy program without written permission of the Hill AFB PM. STARBASE Hill Academy shall not construct or install, at its own expense, any fixed improvement or structural alteration, without advance approval by the Hill AFB PM. STARBASE Hill Academy shall take all reasonable steps to protect the facilities from damage and shall contact the Hill AFB PM immediately if damage is sustained.

10.2 Maintenance of Government Owned Facilities. The Hill AFB 75th ABW CE Maintenance Department will be responsible for coordination of outside building maintenance. Outside maintenance will include preventative maintenance for Class II property, such as HVAC systems, emergency generators and fire protection systems. The Government will provide exterior repair and maintenance to facilities for painting, roofing, roof ventilators, exterior doors and windows, gutters, down spouts and other such requirements that assure weather tightness or basic structural integrity. The government will be responsible for maintenance and improvements to the interior of the building. All interior modifications must receive approval by the Hill AFB PM prior to implementation and shall meet all local fire prevention, Occupational Safety and Health Administration/Association (OSHA) and Americans with Disabilities Act (ADA) standards.

10.3 Utilities. The Government will furnish electricity, water, and sewage as necessary for accomplishment of work IAW the Cooperative Agreement, SOO and DoDI 1025.7. All facilities do not receive the same utility services. STARBASE Hill Academy shall not change or modify any utility system or component; or connect any recipient or STARBASE Hill Academy staff property, equipment or system without prior Hill AFB PM review and approval. STARBASE Hill Academy shall practice energy conservation in the Government provided facilities.

10.4 Security, Fire, and Medical Services. The Government will provide police and fire protection. In the event of a medical emergency, base ambulance service for transporting an injured staff member to a local hospital is available on a cost reimbursement basis.

10.5 Telephone. The Government will provide a minimum of three (3) telephone line(s) in the Government provided facility for STARBASE Hill Academy to use in making calls on and off base calls in support of program requirements. Toll calls are not authorized on government phones.

10.6 Government Furnished Items. The government will furnish to the STARBASE Hill Academy staff at least one computer to connect to the NIPR. The government shall provide STARBASE Hill Academy staff office furniture to include a desk and chair for each staff position.

11.0 STARBASE Hill ACADEMY AND STARBASE 2.0 FURNISHED FACILITIES, EQUIPMENT, AND SERVICES:

11.1 STARBASE Hill Academy Furnished Items. STARBASE Hill Academy funding shall provide classroom furniture, classroom and office equipment and supplies such as printers and paper. All items purchased with STARBASE Hill Academy funding will remain property of the STARBASE Hill Academy program at Hill AFB and shall not be taken by the recipient or STARBASE Hill Academy staff.

11.2 STARBASE Hill Academy Instructional Furnished Items. STARBASE Hill Academy funding shall furnish all equipment and supplies necessary to successfully teach all required curriculum. All items purchased with STARBASE Hill Academy funding will remain property of the

STARBASE Hill Academy program at Hill AFB and shall not be taken by the recipient or STARBASE Hill Academy staff.

11.3 Inventory. STARBASE Hill Academy staff shall maintain a current inventory of furniture, office and all classroom equipment and material and supplies and be able to provide a list within 10 days of being requested. (See Services Summary 15.0)

11.4 Safety Requirements. STARBASE Hill Academy staff shall perform work in a safe manner as required by OSHA Safety and Health Requirements. The STARBASE Hill Academy Director will provide a verbal report to the Hill AFB PM and the recipient as soon as possible of each occurrence of damage to Government property or an accident resulting in death, injury, occupational disease, or adverse environmental impact. The STARBASE Hill Academy Director shall provide a completed copy of required Accident Investigation Reports to the Hill AFB PM and the recipient within five calendar days of each occurrence.

11.5 Physical Security. STARBASE Hill Academy and STARBASE 2.0 shall be responsible for safeguarding all government property provided for STARBASE Hill Academy use. At the close of each work period, government facilities, property and materials shall be secured as required.

11.5.1. Key control. The STARBASE Hill Academy Director and the Hill AFB PM shall establish and implement methods of ensuring that no keys issued by the government are lost or misplaced and are not used by unauthorized persons. No keys issued to STARBASE Hill Academy staff by the government shall be duplicated. The STARBASE Hill Academy Director shall develop procedures covering key control such as a check-out process and a turn-in procedure for any key issued to STARBASE Hill Academy personnel who no longer require access to locked areas.

- a. Lost keys. STARBASE Hill Academy Director and Hill AFB PM shall immediately report the occurrences of a lost key to the division/building monitor who is responsible for the security of that facility.
- b. The STARBASE Hill Academy staff and the recipient shall prohibit the use of keys issued by the government by any persons other than the STARBASE Hill Academy staff for the sole purpose of STARBASE Hill Academy employment.

11.6 Common Access Card (CAC) Hill AFB Global Network and Base Access Cards. The Hill AFB PM shall complete a "Request for Identification Credential (AFMC Form 496)" with input from STARBASE Hill Academy personnel for each member of the STARBASE Hill Academy staff requiring access to the Hill AFB Global Network and Hill AFB. These cards expire at the end of each POP. The STARBASE Hill Academy Director and the Hill AFB PM will determine which staff member needs a CAC rather than a DBiDS. The requests shall be submitted by the Hill AFB PM to the security email box "OO-ALC Security." Upon termination of individuals or termination of the Cooperative Agreement, the CAC shall be turned into the security office, building 849. If a card is lost by any STARBASE Hill Academy personnel, they shall immediately inform the STARBASE Hill Academy Director and the Hill AFB PM.

11.7 DBiDS Hill AFB Access Cards. The Hill AFB PM shall complete a "Request for Identification Credential (AFMC Form 496)" with input from STARBASE Hill Academy personnel for each member of the STARBASE Hill Academy staff requiring access to Hill AFB without the

need for Global Network access. These cards expire at the end of each POP. The STARBASE Hill Academy Director and the Hill AFB PM will determine which staff member needs a DBiDS rather than a CAC. The requests shall be submitted by the Hill AFB PM to the security email box "OO-ALC Security." Upon termination of individuals or termination of the Cooperative Agreement, the DBiDS shall be turned into the security office, building 849. If a card is lost by any STARBASE Hill Academy personnel, they shall immediately inform the STARBASE Hill Academy Director and the Hill AFB PM.

12.0 QUALITY ASSURANCE.

The government will periodically evaluate the performance of STARBASE Hill Academy staff and the recipient to ensure services are received. This can be intermittent on-site inspections and evaluating any complaints from base personnel or customers. The government may inspect each task as completed or increase the number of quality control inspections if deemed appropriate because of repeated failures discovered during quality control inspections or because of repeated customer complaints. Likewise, the government may decrease the number of quality control inspections if merited by performance. The government may investigate complaints received from customers of the STARBASE Hill Academy program. The STARBASE Hill Academy staff and/or the recipient may be required to provide documentation of past performance. The STARBASE Hill Academy staff shall be responsible for initially validating customer complaints.

13.0 STARBASE Hill Academy ON-HAND MATERIALS, IT EQUIPMENT, AND RECORDS.

All on-hand materials, including consumables, IT equipment, records, files, documentation, working papers, and software provided by or purchased by STARBASE Hill Academy staff with government funds, or generated in the performance of the Cooperative Agreement, become deliverables to the government at the end of the Cooperative Agreement and remain government property and shall be maintained IAW AFI 33-322.

14.0 TERM OF COOPERATIVE AGREEMENT.

14.1 Unless terminated earlier by agreement of either party, the Cooperative Agreement shall remain in effect for a POP from 28 Aug 2020 to 27 Aug 2021 with 9 optional funding periods.

14.2 The Cooperative Agreement may be amended only by instrument in writing signed by the parties hereto.

14.3 This written SOO with its references and the Cooperative Agreement constitutes the entire agreement between the parties as to scope and subject matter. All prior discussions and understandings concerning such scope and subject matter are superseded by the Cooperative Agreement.

14.4 The Cooperative Agreement may be executed in several copies, duplicates with original signatures, each of which shall be deemed an original.

14.5 Each party shall promptly notify the other parties of any legal impediment, change of circumstances, pending litigation, or any other event or condition that may adversely affect such party's ability to carry out any of its obligations under the Cooperative Agreement.

14.6 The Cooperative Agreement does not create, alter, or affect any obligation of the U.S. government, or U.S. government personnel.

15.0 SERVICES SUMMARY. ITEMS 1-11.

SS#	Performance Objectives	Details	SOO Reference	Performance Threshold
1	Monthly site reports for STARBASE Hill Academy and STARBASE 2.0	See 7.1.3 item 7 and 8.3.1 for information required	7.1.3 item 7 8.3.1	Emailed to Hill AFB PM by the 4th day of each month when STARBASE Hill Academy is in session. 95% on time and complete.
2	Required curriculum taught	As directed by DoDI 1025.7	6.3	Session classroom subject schedule emailed to Hill AFB PM within 10 days of the end of each session. 95% of time spent on topics required by DoDI 1025.7.
3	Complete minimum number of required contact hours and classes/sessions.	As directed by DoDI 1025.7	6.1.1	Annual DoD STARBASE Report emailed or link given to Hill AFB PM within 10 days of completion of report. Accomplished 98% of the time.
4	All staff complete Hill AFB required trainings	Directed and tracked by the Hill AFB PM as dictated by OO-ALC Security Specialist(s)	6.6	95% on time
5	Attendee teacher survey data	On-line survey given to at least 90% of attendee teacher on their last day of participation.	8.3.4	Emailed to Hill AFB PM within 10 days of the end of each session. 90% positive.
6	Provide six session reports of a short pre and post survey on Perceptions of STEM with on-sight participants	Provide results of a short survey on Perceptions of STEM that is given at the beginning and end of 6 STARBASE sessions.	8.3.2	Emailed to Hill AFB PM within 10 days of the end of the last day of the STARBASE school year.
7	Inventory of Materials and Equipment kept up-to-date	An inventory must be kept of all materials and equipment existing and newly purchased; include S/N when applicable.	4.2.14 11.3	Provide yearly and within 10 days of request.
8	Monthly accounting of hours worked by STARBASE Hill Academy Staff	Include on the monthly site report total number of hours worked by STARBASE Hill Academy staff	7.1.3 item 7	Emailed to Hill AFB PM by the 4th day of each month when STARBASE Hill Academy is in session. 95% on time and complete.
9	Provide annual DoD STARBASE report	Work with DoD STARBASE to upload information for Annual Report	8.3.5	Report finished on time and link emailed to Hill AFB PM.
10	Provide quarterly account balance	Use recipient format	4.2.8	Email to Hill AFB BA and Hill AFB PM. 95% on time and complete.
11	Submit an Annual Budget to DoD STARBASE PM	Work with DoD STARBASE to upload information for Annual Budget	8.1	On time and complete.

APPENDIX A

ACRONYM LIST

ADA	Americans with Disabilities Act
AF	Air Force
AFI	Air Force Instruction
AFSC/EN OL-Hill	Air Force Sustainment Center Engineering Directorate Operating Location Hill AFB
AFMC	Air Force Material Command
AFRC	Air Force Reserve Command
BA	Budget Analyst
CAC	Common Access Card
DBiDS	Defense Biometric Identification System
DoD	Department of Defense
DoDI	Department of Defense Instruction
FY	Fiscal Year
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GO	Grants and Agreements Officer
Hill AFB	Hill Air Force Base, UT
IAW	In accordance with
JAG	Judge Advocate General
MAJCOM	Major Command
MORD	Miscellaneous Obligation/Reimbursement Document
ODC	Other Direct Costs
OASD/M&RA	Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs
OSHA	Occupational Safety and Health Administration/Association
PM	Program Manager
POP	Period of Performance
SOO	Statement of Objectives
SS	Services Summary

STARBASE	Science & Technology Academies Reinforcing Basic Aviation & Space Exploration
USAF	United States Air Force