July 15, 2020

Mr. Nick Wendell  
Executive Director  
State Board of Technical Education  
800 Governors Drive  
Pierre, SD  57501-2291

Re: Expansion of Aviation Program

Dear Executive Director Wendell:

Please accept this letter as notification that Lake Area Technical College requests approval for the expansion of the Aviation program to offer a second option under the existing Professional Pilot program, Unmanned Aerial Systems (UAS) Pilot. This option provides students a choice in their last semester to either pursue the Certified Flight Instructor route or Unmanned Aerial Vehicle route.

The Unmanned Aerial Systems Pilot option will prepare graduates to fly UAS Beyond Visual Line of Sight and in controlled or restricted air spaces, both conditions requiring Federal Aviation Administration fixed wing or rotary aircraft pilot ratings. The focus is on large drones above 55 lbs rather than the smaller drones which can be flown under Part 107 licensure.

The curriculum change is limited with five credits difference in the fourth semester of the program allowing students to choose between the current Certified Flight Instructor Option and the Unmanned Aerial Systems Pilot Option. The Higher Learning Commission does not require additional approval due to the limited scope of the change.

Graduates of our Aviation Pilot program are employed in Unmanned Aerial Systems careers currently. This option will better prepare them for careers in this industry.

Respectfully submitted,

Michael Cartney  
President  
Lake Area Technical College
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I. Executive Summary

As noted in our original Aviation Professional Pilot Associates of Applied Science program application in 2017, Lake Area Technical College requests approval to include an Unmanned Aerial Systems Pilot Option for our Professional Pilot program. Expanding the program will capitalize on the expertise and industry relationships built over time and serve the current and future workforce needs in South Dakota and the region.

The Unmanned Aerial Systems Pilot Option will prepare graduates to pursue careers operating large unmanned aerial vehicles (above 55lbs) Beyond Visual Line of Sight (BVLOS) and in controlled air spaces. Operation of these unmanned aerial systems requires a pilot license. Students will pursue the core Aviation Professional Pilot curriculum and then choose either the Certified Flight Instruction currently offered or the Unmanned Aerial Systems Pilot option in the fourth semester. The proposed curriculum change for this expanded specialization is five credits and does not require additional approvals from the Higher Learning Commission due to the limited scope of the change.

Lake Area Tech joined a consortium including the Federal Aviation Administration (FAA) for the implementation of Sections 631 and 632 of the FAA Reauthorization Act of 2018, relating to academic institution engagement in unmanned aircraft system technology programs. Lake Area Tech is in the preliminary stages of applying to the FAA to become designated as a UAS Collegiate Training Initiative (CTI) school (Section 632). The program mission is for the FAA to collaborate with partner schools to deliver up-to-date UAS training tools, resources, and guidelines that will prepare students for careers in UAS and continue to maintain the safety of the National Airspace System.

Graduates with this option will be licensed Professional Pilots who have the additional ability to pilot Unmanned Aerial Systems beyond visible line of sight and in controlled airspace. Emerging employment opportunities support a large number of industries including crop dusting, search and rescue, mining, energy, construction, data collection and analysis, public safety, telecommunications, transportation. As additional applications for large Unmanned Aerial Systems flown Beyond Visual Line of Sight and in controlled airspaces are developed in various industries, the breadth of employment opportunities will also grow. As with any pilot license, UAS pilots in the classification must maintain their aircraft rating but regularly flying traditional manned aircraft. Lake Area Tech is an excellent fit for this new option as we have a strong Aviation program which would share equipment and educational content for the program.
II. **Identification and Description of the Program**
Within the existing Aviation Pilot Associate of Applied Science Degree, the Unmanned Aerial Systems Pilot Option is designed for students interested in a career in the unmanned aerial pilot industry. This option will prepare individuals to apply technical knowledge and skills to the field of aviation relative to operating large unmanned aerial vehicles (above 55lbs) Beyond Visual Line of Sight (BVLOS) and in controlled air spaces. Students will be trained in the areas of: aerodynamics, private pilot simulation, private pilot flight training, private pilot ground school, aviation safety, federal air regulations, instrument rating ground/simulation/flight, commercial pilot ground/flight training, instrument instructor ground/flight training, airspace systems, airspace operations, and unmanned aerial vehicle flight. Graduates will earn up to a commercial pilot license with instrument rating with specialized training and experience flying unmanned aerial systems with the specifications listed above.

III. **Objectives and Purpose of the Program**
The primary purpose of the Unmanned Aerial Systems Pilot Option is to develop a highly trained unmanned aerial systems workforce to support the operation of this emerging technology across industry sectors. With the foundation as a professional pilot, graduates will be uniquely prepared as Unmanned Aerial Systems pilots operating large unmanned aerial vehicles (above 55lbs) Beyond Visual Line of Sight (BVLOS) and in controlled air spaces. Students will be exposed to four basic types of flying: 1) internal payload; 2) suspended payload; 3) pulling or lifting; and 4) evasive or high-risk flying. These four types of flying support most large drone operations in the most industries.

a. **Learning Objectives**
Expanded Program Outcomes specific to the Unmanned Aerial Systems option in addition to the Pilot Outcomes
- Demonstrate knowledge of aviation maintenance regulations and practices as they relate to Unmanned Aerial Systems (UAS).
- Demonstrate proficiency in multirotor and fixed-wing UAS flight operations.
- Demonstrate knowledge of and proficiency in the data-to-information conversion process as it relates to low-altitude aerial datasets collected using UAS.
- Demonstrate UAS pilot flight skills using the following techniques:
  a. Internal payload flight either patterned or free flight (i.e., filming with a camera)
  b. External (suspended) payload (typically a “Tethered load” hanging below the craft)
  c. Pulling (such as stretching utility cables)
  d. High risk or evasive flying (e.g., in support of police SWAT operations or firefighting)
General Education Outcomes
- Demonstrate critical thinking
- Develop professional competencies
- Demonstrate effective oral and written communication
- Apply mathematical concepts to solve quantitative problems
- Locate and effectively use information from various sources
- Demonstrate technological literacy
- Demonstrate an awareness of the organization and diversity of the human community
- Use theories and concepts to understand human behavior

Certifications/Licenses: (Can be numerous combinations of these):
- Federal Aviation Administration (FAA) Private Pilot
- FAA Instrument Pilot
- FAA Multi-Engine Pilot
- FAA Commercial Pilot
- Other Logbook Endorsements (Tailwheel airplane, complex airplane, high performance airplane)
- SFAR 73 Certification
- Large UAS pilot/operator license (under development at the FAA)

Lake Area Tech joined a consortium including the Federal Aviation Administration (FAA) for the implementation of Sections 631 and 632 of the FAA Reauthorization Act of 2018, relating to academic institution engagement in unmanned aircraft system technology programs. Lake Area Tech is in the preliminary stages of applying to the FAA to become designated as a UAS Collegiate Training Initiative (CTI) school (Section 632). The program mission is for the FAA to collaborate with partner schools to deliver up-to-date UAS training tools, resources, and guidelines that will prepare students for careers in UAS and continue to maintain the safety of the National Airspace System.

IV. Method of Obtaining the Program

Upon approval from the South Dakota Board of Technical Education, Lake Area Tech plans to allow Pilot students to select the Unmanned Aerial Systems Pilot Option beginning with the Fall 2021 cohort. The program will be delivered on campus at the Aviation Annex with flight instruction at the Watertown Regional Airport. Students will have the option of completing general education courses on the main campus or online.
The program option will include classroom instruction, simulation lab experiences, flight training, and unmanned flight training. The curriculum will incorporate a variety of instructional methods.

The Unmanned Aerial Systems Pilot Option will work closely with an industry advisory board composed of representatives from potential employers. The Advisory Board will approve the curriculum, ensure graduates meet entry-level industry requirements, discuss and recommend equipment purchases, and assist in forming partnerships to aide Lake Area Tech in the development of innovative curriculum and mutually beneficial relationships.

Over the past three years, Lake Area Tech worked closely with the Federal Aviation Administration and representatives of the Unmanned Aerial Systems industry as part of a consortium of colleges who joined together to commit to training the workforce to meet the demands of this rapidly growing industry. The curriculum will evolve based on the guidance received from these stakeholders as well as changes in regulations.

a. Entry and Exit Points
The Aviation Pilot Associate of Applied Science degree, Unmanned Aerial Systems Pilot Option is an 18 month program of study.

Entry point: Fall 2021
Exit point: Spring 2023

b. Curriculum Design
The Unmanned Aerial System Option will diverge from the Aviation Pilot program in the fourth semester of the curriculum replacing the 5 credits of Certified Flight Instructor training with 5 credits of Unmanned Aerial Systems Pilot training. Students may choose to complete both options.
See Appendix A for the Curriculum Outline.

V. Labor Market Demand

The Federal Aviation Administration projects as many as 1.6 million small unmanned aerial systems in commercial use by 2021. The Bureau of Labor Statistics predicts 11% to 20% growth over the next 10 years in this industry. It is essential to train the workforce to support the use of large unmanned aerial vehicles (above 55lbs) Beyond Visual Line of Sight (BVLOS) and in restricted air spaces. Unmanned Aerial Systems Pilots are needed across various industries in South Dakota including agriculture, aerial film and photography, aviation, construction, data collection and analysis, public safety, telecommunications, transportation, United States military, amongst others.
Businesses use unmanned aircraft systems for security, to conduct inspections and surveys, take photos, and many other purposes. Unmanned aircraft systems are used for data collection and analysis in agriculture, land management, energy, and construction. Many small businesses use unmanned aircraft systems as well as aerospace companies and defense contractors. Lake Area Tech anticipates a greater demand for employees who can operate unmanned aircraft systems regionally as the number of graduates with this training grows.

Due to the nature of this emerging industry, the Department of Labor statistics on the occupation associated with CIP Code 36.0207 – Remote Aircraft Pilot is unavailable at this time. Appendix B contains projections on the growth of the small and large unmanned aerial systems industry. The wages for Avionics Technicians and Aircraft Mechanics and Services Technicians are below to provide salary projections. Please note the graduates will achieve up to the Commercial Pilot licensure and they will be prepared for pilot careers in both manned and unmanned aerial systems.

SOUTH DAKOTA WAGE DATA

<table>
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<tr>
<th>SOC CODE</th>
<th>OCCUPATION</th>
<th>EMPLOYMENT</th>
<th>2019 ANNUAL MEAN WAGE</th>
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<tr>
<td>53-2012</td>
<td>Commercial Pilots</td>
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NATIONAL WAGE DATA

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<th>SOC CODE</th>
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<th>EMPLOYMENT</th>
<th>2019 MEDIAN PAY</th>
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<td>$147,220.00</td>
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<td>53-2012</td>
<td>Commercial Pilots</td>
<td>40,700</td>
<td>$121,430.00</td>
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VI. Population to be Served by the Program

Lake Area Tech aims to serve a wide demographic of traditional and non-traditional students seeking a career as a pilot in the cutting-edge unmanned aerial systems industry. The Aviation Pilot program currently serves both traditional age students and non-traditional age students seeking a career change.
The program will be available to all interested individuals who successfully meet the established Lake Area Tech admission criteria. All applicants must be high school graduates and must take an admission test to establish reading and math abilities. No restriction will be made regarding race, creed, gender, or age. Due to the nature of the program, applicants will be subject to additional pre-screening tests including, but not limited to, drug testing, a background check and appropriate medical certificates required for a career in the aviation industry.

a. Program Capacity

<table>
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<tr>
<th>Starting Semester</th>
<th>Delivery Format</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>Fall 2021</td>
<td>Full-time, On Campus</td>
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VII. Projected Three-Year Budget

<table>
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<th></th>
<th>FY21</th>
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<th>FY23</th>
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<tr>
<td>Instructor Salary/Benefits</td>
<td>$5,000.00</td>
<td>$16,000.00</td>
<td>$16,000.00</td>
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<tr>
<td>(Adjuncts/Overload)</td>
<td></td>
<td></td>
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<tr>
<td>Equipment</td>
<td>$0.00</td>
<td>$100,000.00</td>
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<tr>
<td>Supplies</td>
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<td>$5,000.00</td>
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<tr>
<td>Travel</td>
<td>$1,000.00</td>
<td>$2,500.00</td>
<td>$2,500.00</td>
</tr>
<tr>
<td>Contracted Services*</td>
<td>$1,500.00</td>
<td>$5,000.00</td>
<td>$5,000.00</td>
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<tr>
<td>Totals</td>
<td>$9,500.00</td>
<td>$128,500.00</td>
<td>$78,500.00</td>
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</table>

VIII. Statement of Non-Duplication

The South Dakota Technical Colleges have applied small Unmanned Aerial Systems training, including Part 107 certification, across many programs. At Lake Area Tech, students receive instruction on Unmanned Aerial Systems in our Agriculture, Business, and Aviation programs.

There is currently not another Unmanned Aerial Systems Pilot Option within an Aviation Pilot Program in South Dakota at the four technical colleges that prepare graduates to fly large unmanned aerial vehicles (above 55lbs) Beyond Visual Line of Sight (BVLOS) and in restricted air spaces. Creation of this program will encourage South Dakota residents to stay in South Dakota for their education, as opposed to pursuing their education in adjoining states.
IX. Suggested CIP Code

36.0207 – Remote Aircraft Pilot

X. Letters of Support

See Appendix C and D.

XI. Appendices
A. Curriculum outline
B. Employment Projections
C. Letters of Support
D. Letter to Secretary of Transportation Requesting Centers of Excellence
Appendix A: Curriculum Outline

Within the current Professional Pilot curriculum, in their last semester students choose either courses for Certified Flight Instructor Option or the Unmanned Aerial System Option. Both options result in an Aviation Professional Pilot degree.

**Aviation • Unmanned Aerial System Pilot Option**

**Semester Course Outline • 2021 – 2022**

18 Months (4 Semesters) • Revised: 2/5/20

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 70

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<th>Credits</th>
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<td>FLT 267</td>
<td>Specialized Flight Operations</td>
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<td>1</td>
</tr>
<tr>
<td>FLT 269</td>
<td>Exploring Professional Aerial Services</td>
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<td>1</td>
</tr>
<tr>
<td>FLT 271</td>
<td>History and Development of Beyond Visual Line of Sight</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>FLT 273</td>
<td>Beyond Visual Line of Sight Operations Lab</td>
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<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>140</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

**Aviation • Certified Flight Instructor Option**

**Semester Course Outline • 2021 – 2022**

18 Months (4 Semesters) • Revised: 2/5/20

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 70

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Clock Hours</th>
<th>Credits</th>
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<td>FLT 255</td>
<td>CFI SEL Commercial Maneuvers Ground Instruction</td>
<td>14</td>
<td>.5</td>
</tr>
<tr>
<td>FLT 260</td>
<td>CFI SEL Commercial Maneuvers Flight</td>
<td>14</td>
<td>.5</td>
</tr>
<tr>
<td>FLT 285</td>
<td>CFI Check Ride</td>
<td>14</td>
<td>.5</td>
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<tr>
<td>FLT 290</td>
<td>CFII Check Ride</td>
<td>14</td>
<td>.5</td>
</tr>
<tr>
<td>FLT 295</td>
<td>FAA Fundamentals of Instruction</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>101</strong></td>
<td><strong>5</strong></td>
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</tbody>
</table>
Appendix B: Employment Projections

As for projected growth of the UAV sector the FAA Projects:

![UAV Fleet Growth Chart](image)

The White House recently issued an executive order entitled "Unmanned Aircraft Systems Integration Pilot Program." See https://www.whitehouse.gov/the-press-office/2017/10/25/presidential-memorandum-secretary-transportation. The purpose of the executive order is to help facilitate private sector cooperation and the involvement of state and local governments in federal efforts to develop new guidelines relating to UAS operations.

The executive order announces a policy of the United States to promote the safe operation of UAS and enable the development of UAS technologies for use "in agriculture, commerce, emergency management, human transportation, and other sectors." It states that, in order to promote continued technological innovation and to ensure the global leadership of the United States in drone technology, the regulatory framework for UAS operations must be "sufficiently flexible to keep pace with the advancement of UAS technology." The executive order is part of the Trump administration's ongoing efforts to evaluate areas in which regulatory structures may be made more flexible and accommodating of industry's goals and objectives.

The executive order directs the Secretary of Transportation to establish a UAS Integration Pilot Program, intended to test and evaluate various models of state and local government involvement in the development and enforcement of federal regulations for UAS operations; encourage UAS owners and operators to develop and safely test new and innovative UAS concepts of operations; and inform the development of future Federal guidelines and regulatory decisions on UAS operations nationwide. DOT is directed to select state or local governments that plan to begin integration of UAS in their jurisdictions.

Lastly, we are very confident that this program will be particularly attractive to veteran students. It has been projected that, over the next ten years, 2 million service members will leave military service—many will utilize their VA Educational benefits:
February 26, 2020

Lake Area Technical Institute
1201 Arrow Ave
Watertown, SD 57201

Xcel Energy supports Lake Area Technical Institute’s proposed associate degree program in unmanned aerial systems. Xcel Energy is an electric and gas utility operating in eight states, including South Dakota. We have been using unmanned aerial systems, commonly known as drones, more and more in our operations to enhance safety, improve reliability, and capture efficiency gains to keep bills low. Drones are useful in a variety of utility operations, including conducting inspections during construction and operation of wind farms. We are a national leader in wind energy, and some of our new wind energy will be generated at wind farms near LATI.

Having a local program dedicated to drone operations could help drive progress in the use of drone technology in the utility industry and beyond. LATI understands that as technology advances, our workforce needs to advance, too. That’s why we support LATI’s Energy Technology and Energy Operation programs through the Xcel Energy Foundation and are pleased to support LATI’s application for the new UAS program.

Sincerely,

[Signature]

Steve Kolbeck
Principal Manager, Xcel Energy–South Dakota
March 4, 2020

Lake Area Technical Institute
1201 Arrow Avenue
POB 730
Watertown, SD 57201

The First District Association of Local Governments (First District) is a forty-nine-year-old association of 11 counties and 76 communities and 118,000 citizens in northeastern South Dakota with a mission of working together to improve the quality of life through the promotion of economic development within our region.

I believe the impact of the proposed Unmanned Aerial Systems (Drones) Program located at Lake Area Technical Institute (LATI) has the potential to enhance our business climate and foster economic growth and development within our region. This proposed program will advance the creation and retention of higher-wage jobs, supporting long term regional competitive markets for products and services, thereby growing the tax base that sustains our communities, schools, and local governments within the First District.

Therefore, I am pleased to provide this letter of support on behalf of the First District and its Governing Body for the proposed Unmanned Aerial Systems (Drones) Program at LATI.

Sincerely,

[Signature]

Todd A. Kays
Executive Director
July 14, 2020

Mr. Nick Wendell
South Dakota Board of Technical Education
925 East Sioux Avenue
Pierre, SD 57501

To the Board,

The South Dakota Space Grant Consortium fully supports Lake Area Technical College’s (LATC) Unmanned Aerial System option for Commercial Aircraft Pilot training. We welcome the opportunity to collaborate with Lake Area Tech on this program, as well as potentially fund some of their students through our NASA Internship and Fellowship program.

South Dakota School of Mines & Technology (SDSM&T) is the lead institution within our 23-member Space Grant Consortium. Most of the activity regarding drones at SDSM&T centers on autonomy and onboard intelligence. We have been primarily focused on autonomous indoor navigation over the last decade, but there has been a growing interest in moving outdoor for both autonomous operations, semi-autonomous operations, and human piloted operations. Although we recently submitted a proposal to NIOSH regarding monitoring blast dust and gasses around surface mines in Wyoming using drones as sensor networks, we also have some drone-related projects for agriculture monitoring focused on swarm optimization. SDSM&T has a relatively active Unmanned Aerial Vehicle student team that collaborates with our Robotics team, and collaborative partnerships with LATC students would be welcome.

This is a great opportunity for our organization to collaborate regarding FAA regulations and beyond line of sight flying, and further our development of unmanned flight. There is an ever-growing market for UAS pilots.

We thank you for providing this opportunity and look forward to a continued and growing partnership through this project.

Sincerely,

Thomas V. Durkin, CPG
Deputy Director
South Dakota Space Grant Consortium

(605) 394-1975
Thomas.Durkin@sdsmte.edu
http://sd.spacegrant.org
Appendix C: Letters of Support

COMMUNITY AND TECHNICAL COLLEGE CONSORTIUM
1629 K Street, NW, Suite 300
Washington, DC 20006

Thomas C. Downs, Esq.
202.403.2302 t | 703.283.5914 m
tdowns@downsgovaffairs.com

July 7, 2020

Mr. Nick Wendell
South Dakota Board of Technical Education
925 East Sioux Avenue
Pierre, SD 57501

To The Board,

The Community and Technical College Consortium enthusiastically supports Lake Area Technical College’s (LATI) continued work in developing Unmanned Aerial System options to Aircraft Pilot training in their Aviation Technology program. Lake Area Tech has been instrumental in advocating for authorization, and now implementation of this national Centers of Excellence program in UAS/drone technology.

Community and technical colleges can help meet the nation’s requirements for a well-trained workforce to operate drones. This is an area in which there is a lack of adequately trained and licensed pilots and technicians, despite a growing need for drones in numerous industry applications. A booming sector of drone software and hardware vendors throughout the United States is addressing the needs of a long list of industry users in agriculture, land management, energy, and construction. Many of these drone vendors are small businesses, while others are large aerospace companies and defense contractors. They require a trained workforce.

Authorized under the FAA Reauthorization Act of 2018, the Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training program is establishing an expanded role for two-year public colleges in education and training of Americans for drone technology.

This Centers of Excellence initiative has been several years in the making and Lake Area Tech was in on the ground floor. I am attaching a document showing a timeline for this national initiative. I look forward to continued success working Lake Area Tech in connection with this initiative.
Appendix C: Letters of Support

Mr. Nick Wendell
Page 2

Thank you for this opportunity. I look forward to a continued and growing partnership through this project.

Sincerely,

[Signature]

Thomas C. Downs

Enclosure
Appendix C: Letters of Support

Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training

Timeline for this Initiative

**September 2016** – At a Washington, D.C. conference hosted by the Community and Technical College Consortium (CTCC), community and technical college leaders discussed a potential consortium initiative focused on UAS/drone technology centers of excellence – in particular, to develop capabilities for drones in precision agriculture.

**April 2017** – At the request of Senator Mark Warner (D-VA), CTCC drafted legislation to authorize Community and Technical College Centers of Excellence in UAS System Technology Training.

**June 2017** – S. 1410, Safe DRONE Act of 2017, was introduced by Senator Mark Warner, with original co-sponsors Senators John Hoeven (R-ND), Catherine Cortez Masto (D-NV), and Dean Heller (R-NV). Section 5 of S. 1410 authorizes Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training.

**May 2018** – S. 1405, 2018 Federal Aviation Administration Reauthorization Act of 2017, was reported out of the Senate Commerce, Science, and Transportation Committee incorporating an amendment offered by Senators Tammy Baldwin (D-WI) and Catherine Cortez Masto (D-NV) authorizing Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training.

**June 2018** – S. 1405, 2018 Federal Aviation Administration Reauthorization Act of 2017, was introduced in the Senate, authorizing Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training.


**October 2018** – Community and technical college leaders participated in a meeting at FAA headquarters to discuss implementation of the Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training.

**June 2019** – The FAA UAS Symposium 2019, in Baltimore, MD, included a side meeting with the FAA’s UAS team, industry and community and technical college leaders to discuss Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training.

**April 2020** – The FAA formally launches the Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training.

**June 2020** – CTCC and NACCE sponsor the Preparing the Drone Workforce webinar series with FAA, NASA, U.S. Army Corps of Engineers, Federal Highway Administration, and others.
Supporters of Funding for Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training

October 22, 2018

The Honorable Elaine L. Chao  
Secretary of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Re: Fiscal Year 2020 Funding for Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training

Dear Madam Secretary:

As you prepare the U.S. Department of Transportation’s recommendations to the Office of Management and Budget in connection with the Fiscal Year 2020 Budget for the Federal Aviation Administration (FAA), we respectfully urge you to include a request for funding of the Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training program. As you know this new program, authorized under Subsection D, Section 631 of the FAA Reauthorization Act of 2018 (H.R. 302), signed into law by the President on October 5, 2018, will establish an expanded role for two-year public colleges in education and training of Americans for unmanned aircraft systems (UAS), or drone technology.

Community and technical colleges can help meet the nation’s requirements for a well-trained workforce to operate drones. This is an area in which there is a lack of adequately trained and licensed pilots and technicians, despite a rapidly expanding need for drones in numerous industry applications.

Businesses use drones to take photos and video, for security, and to conduct inspections and surveys, among many other purposes. A booming sector of drone software and hardware vendors throughout the United States is addressing the needs of a long list of industry users in agriculture, land management, energy, and construction. Many of these drone vendors are small businesses, while others are large aerospace companies and defense contractors.

There is a shortage of technically trained drone technicians and pilots, and this shortage in trained workforce is expected to worsen as industry demands for usage of drones continues to grow. Operating and maintaining autonomous flight vehicles requires specialized education and training. Notably, commercial pilots must obtain a FAA drone license.
Supporters of Funding for Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training

The Honorable Elaine L. Chao
Page 2

With the number of commercial drone operations outpacing the pool of certified drone pilots, more training programs are needed – especially to help young flyers operate drones legally and safely. Community and technical colleges are uniquely capable of providing this training. These colleges can utilize specialized drone training curriculum to provide students with the skills and knowledge required to pilot drones and access emerging drone technology job opportunities. Hands-on training can enable two-year public colleges to give advanced insight into the business and employment opportunities created by drones.

Courses at community and technical colleges can cover such topics as the history of flight and of unmanned aircraft, flight fundamentals science, FAA regulations, airspace requirements, and uses for drones. Specific learning components can include:

- Different types of unmanned aircraft systems including both multi-rotor and fixed-wing
- Flight systems, autonomous vehicles, radio controllers, components and characteristics
- Routine maintenance, uses and applications, privacy concerns, safety and insurance
- Hands-on flight practice using small model quadcopters and computer simulator training
- FAA and Federal Communication Commission policies on unmanned aircraft systems
- Dual credit programs to deliver these training opportunities to high school students.

With funding and assistance to expand capacity related to drone technology, two-year public colleges can provide this education and training, on an affordable basis.

Thank you for your consideration of FY 2020 funding for the Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training program, and for your outstanding leadership for our nation’s transportation sector.

Sincerely,

Dr. Zarina Blankenbaker, President
Tarrant County College Northwest Campus, TX

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cc: The Honorable Daniel K. Elwell
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