

<b>Local Programs</b>	State Funding	Agency and Address					
Agree	ement	Snohomish County					
Work by Public Agencies		3000 Rockefeller Ave, Everett, WA 98201					
Agreement Number	Maximum Amount Authorized \$6,500,000.00	Location and Description of Work (See also Exhibit "A")  Snohomish County Airport (that is, Paine Field [PAE])					
Participating Percentage	Project Number	The R&D Center will consist of a fuel repository capable of holding large volumes of experimental fuels and a combustion testing facility.					

This AGREEMENT is made and entered into between the STATE OF WASHINGTON, Department of Transportation, acting by and through the Secretary of Transportation, hereinafter called the "STATE," and the above named organization, hereinafter call the "AGENCY."

WHEREAS, the AGENCY is planning the work shown above, and in connection therewith, the AGENCY has requested financial assistance for the project or program, and

WHEREAS, the AGENCY has requested funds for the above shown project or program, which has been selected by the STATE for funding assistance.

NOW THEREFORE, in consideration of the terms, conditions, covenants, and performances contained herein, or attached and incorporated and made a part hereof, IT IS MUTUALLY AGREE AS FOLLOWS:

		Estimate of Funding							
	Type of Work	(1) Estimated Total Project Funds	(2) Estimated Agency Funds	(3) Estimated State Funds					
PE	a. Agency	\$ 2,041,692.00		\$ 2,041,692.00					
	b. Other Consultants	\$ 4,458,308.00		\$ 4,458,308.00					
	c. Other								
	d. State Services								
	e. Total PE Cost Estimate (a+b+c+d)	\$ 6,500,000.00	\$ 0.00	\$ 6,500,000.00					
Right of Way	f. Agency								
	g. Other								
	h. Other								
	i. State Services								
	J. Total R/W Cost Estimate (f+g+h+i)	\$ 0.00	\$ 0.00	\$ 0.00					
Construction	k. Contract								
	I. Other								
	m. Other								
	n. Other								
	o. Agency								
	p. State Services								
	q. Total CN Cost Estimate (k+l+m+n+o+p)	\$ 0.00	\$ 0.00	\$ 0.00					
	r. Total Project Cost Estimate (e+j+q)	\$6,500,000.00	\$ 0.00	\$ 6,500,000.00					

# General

The AGENCY agrees to perform the above described work in accordance with the Project Application attached hereto as "Exhibit A" and made a part of this AGREEMENT.

Plans, specifications, and cost estimates shall be prepared by the AGENCY in accordance with the current State of Washington Standard Specifications for Road, Bridge, and Municipal Construction and adopted design standards, unless otherwise noted. The AGENCY will incorporate the plans and specifications into the AGENCY's project and thereafter advertise the resulting project for bid and, assuming bids are received and a contract is awarded, administer the contract, or if the project is of a size which the AGENCY is authorized to perform with its own forces under the laws of the State of Washington, the AGENCY may proceed with its own forces.

All work performed under this AGREEMENT shall comply with the applicable provisions of state law.

# **Payment**

The STATE, in consideration of the faithful performance of the work to be performed by the AGENCY, agrees to reimburse the AGENCY for the percentage of the actual direct and related indirect cost of the work shown above, up to the "MAXIMUM AMOUNT AUTHORIZED". The agency will comply with Governmental Accounting Auditing and Financial Reporting Standards and applicable state law and local regulations, policies and procedures. No payment will be made for work done prior to

Partial payments shall be made by the STATE, upon request of the AGENCY, to cover costs incurred. These payments are not to be more frequent than one (1) per month. It is agreed that any such partial payment will not constitute agreement as to the appropriateness of any item and that, at the time of the final audit, all required adjustments will be made and reflected in a final payment. The AGENCY agrees to submit a final bill to the STATE within forty-five (45) days after the AGENCY has

execution of this AGREEMENT.

completed work.

The AGENCY agrees that all costs in excess of the amount authorized and the AGENCY's matching funds shall be the responsibility of the AGENCY.

### Ш Audit

The AGENCY agrees that an audit may be conducted by the STATE. During the progress of the work and for a period not less than three (3) years from the date of final payment to the AGENCY, the records and accounts pertaining to the work and accounting thereof are to be kept available for inspection and audit by the STATE and copies of all records, accounts, documents, or other data pertaining to the project will be furnished upon request. If any litigation, claim, or audit is commenced, the records and accounts along with supporting documentation shall be retained until all litigation, claim, or audit finding has been resolved even though such litigation, claim, or audit continues past the three-year retention period.

# **Legal Relations**

No liability shall attach to the AGENCY or the STATE by reason of entering into this AGREEMENT except as expressly provided herein.

### **Nondiscrimination**

The AGENCY agrees to comply with all applicable state and federal laws, rules, and regulations pertaining to nondiscrimination and agrees to require the same of all subcontractors providing services or performing any work using funds provided under this AGREEMENT.

# Venue

For the convenience of the parties to this AGREEMENT, it is agreed that any claims and/or causes of action which the AGENCY has against the STATE, growing out of this AGREEMENT or the project or program with which it is concerned, shall be brought only in the Superior Court for Thurston County.

### VII **Termination**

The Secretary of the Department of Transportation may terminate this AGREEMENT if the funding becomes unavailable or if the Secretary determines that it is in the best interest of the STATE.

Final Report and Final Inspection Within ninety (90) days following the completion of the project and submission of the final billing for the project, a final report and/or final

inspection shall be submitted to the Director, Highways & Local Programs containing the following information:

### Non-Capital Projects

- A description of the project or program.
- 2. A summary of actual costs of the project or program.
- 3. An evaluation of the project or program. This should address aspects such as transportation and/or other benefits to the public.

#### Capital Projects

A final inspection is required.

### IX Supplement

This agreement may be modified or supplemented only in writing by Parties. II Payment – is supplemented as detailed in attached Exhibit B.

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT on the day and year last written below.

AGENCY	STATE
Ву:	Ву:
Tillo.	Director, Local Programs
Title:	
Agency Date:	Date:



# Federal-Aid Prospectus Planning Scope of Work

A	Fordered Aid Dueis at November						
Agency Snohomish County	Federal Aid Project Number						
Project Title	INA						
Sustainable Aviation Fuel Research & Development Cen	ter at Paine Field Airport						
Federal Funding Program	Amount						
NA	NA						
Matching Funds NA	Total Amount \$6,500,000.00						
Project Area	<u> </u>						
The R&D Center will be constructed at the Snohomish County Airport (that is, Paine Field [PAE]) (approximate coordinates: 47°54'02.1"N 122°17'15.2"W). Snohomish County Airport PAE is a publicly owned airport located 6 miles southwest of the central business district of Everett, Washington and 30 miles north of downtown Seattle. PAE supports 158,227 jobs and has a total economic impact and business revenue of \$59.9 billion annually. The airport is most notably home to over 500 aircraft, including small single-engine recreational aircrafts, corporate jets, and vintage warbirds. Notably, PAE is the Boeing Company's primary production facility for 747-, widebody 7867-, 777-, and 787-series aircrafts and will begin producing 737 series aircraft by 2025. The airport offers high-quality aviation facilities, including an FAA tower, Category 1 2 Instrument Landing System (Cat 2 ILS), Part 139 certification, FBO services, and goods access to Seattle, Bellevue, and Redmond. In 2019, Paine Field began offering scheduled commercial service to destinations around the country. The airport is also home to the Boeing Future of Flight Aviation Center.							
Background							
For nearly 50 years, Snohomish County has been home to commercial aerospace of than 30,000 workers and develops cutting-edge innovations in aerospace and advar commercial aviation depends on addressing the industry's carbon emissions that consustainability of the aerospace industry, and high-quality careers and opportunities for are launching an applied research and development center focused on developing solow-carbon future for aerospace.	nced manufacturing technology. The continued success of ntribute to global climate change. To ensure the long-term or generations to come, Snohomish County and its partners						
The Sustainable Aviation Fuels Research & Development (SAF R&D) Center is a pa State University (WSU) and leverages the presence of campuses in Everett, Tri-Citie programs in three university colleges across its six-campus system working on SAF-National Laboratory (PNNL) in Richland, WSU co-leads the WSU-PNNL Bioproducts Technology (MIT) also co-lead ASCENT, a national consortium of research universite entities convened by the Federal Aviation Administration (FAA). Snohomish County Center to be launched successfully and efficiently.	es, and Pullman. WSU has researchers from eight related research. Together, with the Pacific Northwest Institute. WSU and the Massachusetts Institute of ies, government agencies, national labs, and private						
The R&D Center at Paine Field will consist of a fuel repository capable of holding lar facility to test those fuels at jet engine scale. The fuel repository, combined with data sustainable aviation fuel repository to serve the global need for reference samples to development what seedbanks do for agricultural research. Samples will then be independently the world's unrivaled hub for primary information on properties, feedstock	stored remotely, would comprise the world's only support research. In effect, the repository will do for SAF exed, analyzed, and distributed worldwide, making the						
In addition, a new combustion test facility at Paine Field will be used to research and worldwide. Experimental fuels will be tested there for safe aircraft operability at relevant techniques will be pursued to maximize the amount of renewable carbon that can be commercialization, quality assurance, and support the distribution of samples with research and support the samples with the sa	vant conditions and scales. Novel fuel processing put into SAF. Testing activities will facilitate						
Type of Study (check all that apply)							
☐ Region ☐ Area ☐ Corridor ☐ Intersection ■ Design ■ Feasibilit	y Modeling Other						

#### Scope of Work

The SAF R&D Center project has been broken out into a series of tasks that represent different phases of the project.

Task 1: Preliminary Project Planning & Construction of the Temporary Research Site

Snohomish County will retain a consultant to support the initial phases of developing an applied research and development center at the Snohomish County Airport to effectuate FAA's goals of SAF and FAST to develop a Sustainable Aviation Fuel Research Center (SAF R&D). While it is envisioned the development and establishment of the center will unfold over several phases, the process of knowledge gathering and facilitation of discussions between key partners is critical to understanding the potential viability of the R&D center and to support decision making by Snohomish County. Services performed under this task may include, but not be limited to: --Initial fact finding and level setting with principal stakeholders.

- -- Facilities review to determine the viability of the proposed R&D center at Snohomish County Airport, Paine Field.
- -- Discussions around Technology focus, potential stakeholders, funding streams, facilities requirements, equipment requirements etc.
- -- Additional support for project as needed in contract time frame.

Task 1 also include the construction of the temporary SAF R&D Center structure located on a site at Paine Field (see figure 1). Project scope includes a concrete slab for the structure, multiple storage and blending tanks with a total additive capacity of up to 60,000 gallons housed within a secure, fenced area with the required electrical service for power and lighting. Contractor will engage the services of specialists familiar with fuel processing and the required fire protection regulations. Costs associated with Task 1 include:

- --Purchase of SAF Storage Tanks and Equipment for the repository (to be utilized at both the temporary and permanent sites)
- -- Engineering for Temp Site Jacobs Engineering has already been selected through a competitive RFP process

#### Task 2: Permanent Site Design and Feasibility

Through a competitive bid process, Snohomish County select a firm to fully executive the design of the permanent SAF facility. All environmental review and permitting will be completed before the start of construction of the SAF facility and will occur concurrently with design.

Costs associated with Task 2 include:

- -- Design of the Permanent Facility
- -- Preliminary permitting
- -- Environmental study

#### Task 3: Preliminary Construction of Facility

Snohomish County and partners will need to secure additional funding for the construction of the permanent SAF facility at Paine Field

Costs associated with Task 3 include:

-- Fund set aside for Federal Grants match, including but not limited to FAST SAF, ASCENT, and others

#### Task 4: Operating & Administrative Costs

Snohomish County will have portions of staff from the Executive Office and Airport dedicated to this project.

Costs associated with benchmarking trips have also been included in Task 4.

#### Public Involvement Plan

The project is built upon a well-tested model of collaboration, bringing together industry, academia and government. The Center will deliver advanced tools, techniques and technologies to industry partners; a world-class learning and R&D environment to academic partners; and economic prosperity and job growth to government. With support from a consultant, Snohomish County will build a business plan to demonstrate to the public the feasibility and long-term benefit of a collaborative SAF R&D Center. The project is supported by significant local and regional expertise in SAF, including County personnel and project partners at WSU.

Both the project budget and the project schedule have some contingency built in to ensure the project is constructed within the performance period to support public involvement. The County personnel already have the experience implementing a project of this type with the on-site temporary facility and will communicate this out to the public. Any concerns for public safety will be mitigated through extensive community input and risk analysis.

Environmental Considerations
Environmental review and permitting will be required for this project due to the proposed construction activities. The environmental review process has not yet begun and is a proposed task to be funded through the WSDOT grant award. To comply with all state and federal environmental requirements, the project will undergo NEPA and SEPA review before any ground-breaking activities. During the environmental review phase, all required permitting and approvals will be acquired.
environmental review priase, all required permitting and approvals will be acquired.
TDM/TSM and Transit alternatives to be considered
NA

Land Use Implications

Site locations for both the Temporary and Permanent R&D Centers have been strategically selected at Snohomish County's Airport, Paine Field (PAE). This project fits within the scope of pertinent use of airport property and land. The proposed R&D Center is at the nexus point of ongoing commercial aerospace manufacturing and assembly, which provides the potential for future expansion. As a commercial service airport, fuelers at PAE currently dispense over 8,000,000 gallons of Jet A annually, primarily to airlines, Boeing and corporate jet operators. An ancillary benefit of this project exists to transition portions of the on-airport existing Jet A demand to SAF rapidly.

Any additional land use implications will be further identified in the environmental study, permitting and design phase of this project.

Project Schedule

Project Agreement End Date \_\_\_\_\_

FY 2024

Q1

NA Q2

Task 4: Ongoing Operations & Administrative Costs

O3

Task 1: Business Plan Support | Engineering of Temp Site | SAF Storage Tanks & Equipment for Temp Site

Task 2: RFP to Select Design Firm for Permanent Site | Preliminary Environmental Study

Task 4: Ongoing Operations & Administrative Costs

O4

Task 1: Business Plan Support | SAF Storage Tanks & Equipment for Temp Site

Task 2: Design of Permanent Site | Environmental Study

Task 4: Ongoing Operations & Administrative Costs

FY 2025

Q1

Task 1: Business Plan Support

Task 2: Design of Permanent Site

Task 4: Ongoing Operations & Administrative Costs

Q2

Task 1: Business Plan Support

Task 2: Design of Permanent Site

Task 3: Apply / cost match for additional grants for facility construction

Task 4: Ongoing Operations & Administrative Costs

Q3

Task 1: Business Plan Support

Task 2: Design of Permanent Site

Task 3: Apply / cost match for additional grants for facility construction

Task 4: Ongoing Operations & Administrative Costs

Q4

Task 1: Business Plan Support

Task 2: Design of Permanent Site

Task 3: Apply / cost match for additional grants for facility construction

Task 4: Ongoing Operations & Administrative Costs

Cost Breakdown By Task

Task 1: Preliminary Project Planning & Construction of Temporary Site

\$68,000 - SAF R&D Center Framework & Business Plan

\$409,438 - SAF Storage Tanks & Equipment \$141,261 - Engineering for Temporary Site

TOTAL: \$618,699

Task2

\$3,999,046 - Design / permitting of Permanent Facility

\$250,000 - Environmental Study

TOTAL: \$4,249,047

Task 3

\$1,000,000 - Federal Grants Match

TOTAL: \$1,000,000

Task 4

\$632,254 - Operating & Administrative Costs

TOTAL: \$632,254

PROJECT TOTAL: \$6,500,000

Deliverable Final Products

Business Plan
Temporary Site
Permitting for Permanent Site
Design for Permanent Site

**Environmental Study on Site Location** 



### Permanent Sustainable Aviation Fuel R&D Center Cite



		7												
Exhibit B - Project Budget Estimate														
Costs outlined below are estimated, and subject to change		l												
throughout the life of the project														
			FY 2	024			FY 2025							TOTAL
REVENUES:			Q3		Q4		Q1		Q2		Q3	Q4		IOIAL
Washington State Local Prgrams	Count Deirekonson	,	000 256		0.47.005	,	1 167 276		067.276	<u>,</u>	1 446 276	4 242 422		
TOTAL REVENUES:	Grant Reimbursement	\$ ¢	888,356 <b>888.356</b>	\$ <b>\$</b>	847,095 <b>847,095</b>	_	1,167,376 <b>1,167,376</b>	_	867,376 <b>867,376</b>		1,416,376 \$	,,		
TOTAL NEVEROLS.		) >	000,330	Ą	047,033	Ş	1,107,370	Ą	007,370	Ą	1,410,370	7 1,515,422		
EXPENDITURES:	1	$\vdash$											┢	
EXI ENDITORES.	SAF R&D Center Framework & Business Plan	Ś	12,000	\$	12,000	Ś	12,000	\$	12,000	\$	11,000 \$	\$ 9,000	Ś	68,000
Task 1: Business Plan & Preliminary Work	SAF Storage Tanks and Equipment	\$	204,719	\$	204,719		-	\$	-	\$	- 9	5 -	Ś	409,438
,	Engineering for temp site	\$	141,261		-	\$	-	\$	-	\$	- 5	-	\$	141,261
	Subtotal	\$	357,980	\$	216,719	\$	12,000	\$	12,000	\$	11,000 \$	\$ 9,000	\$	618,699
		۲	200.000	۲	400.000	۲	CEO 000	Ļ	750,000	ć	000 000	. 000.047		
Task 2: Permanent Site Design and Feasibility	Design of facility / permitting	Þ	300,000	\$	400,000	Þ	650,000	Þ	750,000	Þ	900,000 \$	\$ 999,047	\$	3,999,047
	Environmental Study	\$	125,000	\$	125,000	\$	-	\$	-	\$	- \$	<b>\$</b> -	\$	250,000
	Subtotal	\$	425,000	\$	525,000	\$	650,000	\$	750,000	\$	900,000 \$	\$ 999,047	\$	4,249,047
Task 3: Preliminary Construction of Facility	Federal Grants Match	\$	-	\$	-	\$	-	\$	-	\$	- 5	<b>\$</b> -	\$	-
rask 3. Fremiliary Construction of Facility	rederal Grants Water	\$	-	\$	-	\$	-	\$	400,000	\$	400,000 \$	\$ 200,000	\$	1,000,000
	Subtotal	\$	-	\$	-	\$	400,000	\$	-	\$	400,000	\$ 200,000	\$	1,000,000
Task 4: Operating & Administrative Costs	Administrative Costs	\$	105,376	\$	105,376	\$	105,376	\$	105,376	\$	105,376	\$ 105,376	\$	632,254
	Subtotal	\$	105,376	\$	105,376	\$	105,376	\$	105,376	\$	105,376	\$ 105,376	\$	632,254
		\$	-	\$	-	\$	-	\$	-	\$	- 5	<del>-</del>	\$	-
TOTAL EXPENDITURES:		\$	888,356	\$	847,095	\$	1,167,376	\$	867,376	\$	1,416,376	\$ 1,313,422	\$	6,500,000

Ending Grant Balance	\$ 6,500,000.00

Consultant B
Consultant C

Agency

<sup>\*</sup>Travel reimbursment will follow WSDOT and County requirements requirements

<sup>\*\*</sup>Any design elements provided are required to meet Washington State standard building code

# **TASK 1: Business Plan & Temporary Facility**

## SAF R&D Center Framework & Business Plan

Business plan support will be required through the life of the project.

\$ 68,000.00

### **SAF Storage Tanks and Equipment**

Construction of a temporary Sustainable Aviation Fuel (SAF) structure located on a site at Paine Field.

Scope will include concrete slab for the structure, multiple storage and blending tanks with a total addative capacity of up to 60,000 gallons housed within a secure, fenced area with the required electrical service for power and lighting. Contractor will engage the services of specialists familiar with fuel processing and the required fire protection regulations.

Cost Estimates				Model # or Brand
20,000 gallon tank	57,713 ea	57,713		Base model, db wall, not including containment or electrical
five fuel tanks 5,000 gallons ea.	26,454.45	132,272.25	Tankand barrel.com	Model # NB06000DWS096250
Fork lift	40,000 ea	40,000.00	Used	Used/Veries
Recirculation pump	1785.54 ea	1,785.54	Diesel-fuels.com	GP-602AC, 230V/50 Hz (AA0484)
Blending tank, 10,000 gallons	36,521.46 ea	36,521.46	tankandbarrel.com	Model: NB10000DWB096250 (subject to review by WSU)
2 Pallet jacks	752.63 ea	1,505.26	Grainger	DAYTON 2TUR3
5 Fuel hand pumps	254.51 ea	1,272.55	Grainger	FILL-RITE Item # 48YA13 Model # FR150
55 gallon drum dollies	104.58 ea	1,568.70	Grainger	Center Cap Item# 48J133 Model # 48J133
55 gallon drum store racks	1045.07 ea	6,270.42	Grainger	Dayton drum rack
200 - 55 gallon drums	207.47 ea	41,494	Grainger	Unlined transport drum Item # 476H49 Model # DRTU55-999
3 - 95 gallon overpack salvage drum spill kit	977.00 ea	2,931	New Pig	95 gallon overpack, Item # UN1H2/Y345/S
4 - Storm water drain spill covers	923.00 ea	3,692	New Pig	36" Drain blocker drain cover, Item # PLR404
4 - quick response spill kits	655.00 ea	2,620	New Pig	Quick Response spill kit, Item # KIT2401
10 - 4 drum containment pallets	461.00 ea	4,610	New Pig	4 drum poly spill containment pallet, Item # PAK210
4 - 2 drum containment pallets	252.00 ea	1,008	New Pig	2 drum poly spill containment pallet, Item #PAK565
Fork lift drum carrier	1223.60 ea	1223.6	Grainger	Item# 9WTR6 Mfr Model # 285A
Temp storage site fencing, 750 feet	91.40 Per LF	72,950	All City Fence	7' chain link, W/ 3 strand barbed, plus swing gates
	Sub total	409,438		

### Engineering for temp site

Snohomish County will identifying and contract with a qualified third party consultant to conduct engineering for the temporary SAF R& D site.

141,261

Upon execution, contract will be sent to WSDOT.

# TASK 2: Permanent Site Design & Feasibility

: Permanent Site Design & Feasibility				
Design of facility / permitting  Snohomish County will be seeking a design qualified consultant (A/E) firm to provide professional services to prepare specifications for a design/bid build stratagem for the construction under a design/ bid/build process of the Sustainable Aviation Fuel (SAF) Research & Development Center at Paine Field.  Construction costs for the permanent research & development center are estimated to be between ~\$1000 to \$1500 per square foot. At least a portion of it will be specialized construction (engine test cells) and therefore more expensive than more typical industrial construction. So, a rough initial estimate of ~\$20-\$30M for a 20K sqft facility.  Based on past projects, design of the facility is estimated to be about 10-15% of the construction cost of the facilityy. As a result, \$3 million has been reserved for the design phase and \$1 million has been reserved for preliminary permitting.	\$ 3,999,047			
Environmental Study  Holding dollars for preliminary site studies, including an environemntal study.	\$ 250,000			
Preliminary Construction of Facility				
Federal Grants Match				
Dollars have been set aside for a cash match for additional grants to support construction of				

# Task 3: P

the permanent SAF R& D facilility

1,000,000

# **Task 4: Operating & Administrative Costs**

### **Administrative Costs**

Below is an outline of the anticipated staff allocations of Snohomish County Exective Office and Airport staff to the SAF R&D project.

Admin costs also include information gathering benchmarking trips

PERSONNEL		FTE
Program Manager - Vacant	\$ 280,000	1
Economic Development Specialist - Simreet Dhaliwal	\$ 102,266	0.4
Senior Fiscal Analyst - Trudy Soriano	\$ 55,420	0.2
Airport Grants Specialist - Vacant	\$ 102,769	0.5
Airport Business Manager - Nick Landgraff	\$ 23,800	0.1
Benchmarking trips	\$ 68,000	
	\$ 632,254	2.2

Agency: Snohomish County	
Project Title:	
Agreement Number:	
IX SUPPL	EMENT
This agreement may be modified or supplemented	only in writing by parties.
II Payment – is supplemented as detailed in attack	hed Exhibit B.
IN WITNESS WHEREOF, the parties hereto have year last written below.  AGENCY	e executed this AGREEMENT on the day and  STATE
By: Title:	By:
Agency Date:	Date: