

Scope of Services

City of Flagstaff, Arizona Flagstaff-Pulliam Airport

Taxilane Reconstruction (Design Only)

A. PROJECT DESCRIPTION: City of Flagstaff (COF), Flagstaff-Pulliam Airport requires engineering design services for the existing taxilanes between and around hangars and shades in the west-plex area (see attached exhibit). The existing taxilane and apron areas have become oxidized and damaged and have pavement grade irregularities. This project will provide design plans and specifications for the replacement of the pavement. Pavement geometrics of the area will be revised to allow for better aircraft movement and snow plow operations. Existing pavement under the shade hangars will be replaced with Portland Cement Concrete pavement. Anticipated construction cost for this project is approximately \$6.0 Million. Construction of this project may be funded in two seasons depending on FAA funding availability.

B. PROJECT SCOPE: The specific scope of service for this project is identified as follows:

1. Project Administration and Design Services: The following general administration tasks are anticipated for the project.

- a) Provide project administrative tasks for support throughout the project.
- b) Provide project planning, budgeting, and initial project schedule.
- c) Provide progress reports, meetings and minutes of project meetings.
- d) Attend coordination and plan review meetings.

2. Engineer's Design Report and Categorical Exclusion (CE)

Kimley-Horn and Associates (Engineer) shall produce an Engineer's Design Report for the design including design methodology and other design concepts, criteria and standards. Reference will be made to appropriate FAA design circulars, specifications and applicable federal and state regulations. Design standards shall be according to FAA Advisory Circular 150/5300-13, Airport Design and associated circulars and Maricopa Association of Governments (MAG) standards.

The Western Pacific Region of the FAA requires Categorical Exclusion (CE) documents to be prepared following the guidance and format discussed in the FAA document titled: Extraordinary Circumstances Evaluation Information Submittal for Categorical Exclusion of Airport Projects. This CE document is being prepared by the airport sponsor (City of Flagstaff) in support of the grant application and to assist the FAA in determining if the proposed project can be categorically excluded from the NEPA requirement or determine if a formal Environmental Assessment (EA) or Environmental Impact Statement (EIS) will be required.

3. Preliminary Plans (30%):

As part of this early task, topographic survey and geotechnical work will be accomplished. These efforts will be done so that preliminary plans (30%) can be prepared. A reduced number of preliminary plans sheets will be produced which will allow ADOT MPD Aeronautics to understand the project limits and features of the project. A facilitated review meeting with the airport and ADOT MPD Aeronautics will be held to review the proposed work.

4. Preliminary and Final Design Contract Documents (60% and 95%)

The Engineer shall provide preliminary and final design contract documents (60% and 95%) for construction of the project. The Engineer shall provide engineering drawings and specifications for the contract documents. Grades, profiles, geometric layout, and other details for use in developing the final

plan sheets shall be provided. Plan sheets will include: cover sheet, sheet index, summary of quantities, general notes and abbreviations, project layout plan, site work, removals, pavement geometrical layout plans, typical section and details, grading and drainage plans, and striping/markings plans.

Plans shall be prepared for a preliminary and final submittals as well as the final buildable set of contract documents (plans and specifications). Review comments by the Owner, Federal and State shall be incorporated after the 60% and 95% review prior to the next submittal.

Construction Costs: An Engineer's opinion of probable construction costs will be provided for the project and shall be based on cost history for past work within the vicinity of the airfield and for projects of a similar nature. The estimate shall reflect construction during regular construction schedule.

C. Contractor Coordination

Upon election of the City to construct or complete construction of the Project, Engineer agrees to perform the duties and services set forth in this Agreement, the duties and services set forth in this Exhibit, and all duties and services reasonably inferable there from.

1. Engineer shall coordinate with the City during the design of the Project. Coordinate within the context of this Contract means to fully cooperate with other relevant parties.
2. If a CMAR is not the selected way of completing the project, the Engineer will provide bid assistance for the project.
3. Engineer shall be responsible for responding to questions regarding the plans, specifications, shop drawing and material selections used in the preparation of the construction documents.

D. SCHEDULE:

A project design schedule will be developed together with the Airport as a part of Project Administration, but it is anticipated that design will begin during the fall of 2012 and construction will begin in the spring of 2013.

E. DELIVERABLES: Final documents will be submitted to the airport for distribution for bidding purposes and for recording of records drawings.

The following deliverables will be provided according to this contract:

- (1) Engineer's Design Report – four copies to City of Flagstaff,
- (2) Plans and Specifications (30%, 60%, and 95% plan submittals) two (2) copies to City of Flagstaff, one (1) copy will be made available to FAA and ADOT MPD Aeronautics.
- (3) Estimate of probable construction costs – one copy with each submittal.
- (4) Final Plans and Specifications (Final Submittal) one final mylar copy to City of Flagstaff. The Airport will provide copies of the plans to contractors for bidding purposes.
- (5) Electronic drawing files to City of Flagstaff.

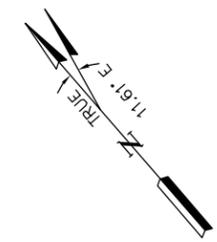
F. FEE AND BILLING:

KHA's team will perform the services described in this Scope of Services for the lump sum of:

\$203,176 as an Engineering Design Fee

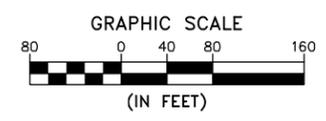
Fees and expenses will be invoiced monthly based, as applicable, upon the percentage of services completed or actual services performed and expenses incurred as of the invoice date. Payment will be due within 30 days of the date of the invoice. We will not perform any Additional Services without prior approval.

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 THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REDUCE
 IT AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



LEGEND

	APRON ASPHALT RECONSTRUCTION TOTAL = 430,585 SF (47,843 SY)
	APRON PCCP CONSTRUCTION TOTAL = 36,800 SF (4,089 SY)
	APRON MILL AND REPLACE TOTAL = 106,107 SF (11,797 SY)



TERMINAL

APRON

FLAGSTAFF PULLIAM AIRPORT
TAXILANE RECONSTRUCTION
EXHIBIT



Kimley-Horn and Associates, Inc.
 © 2010 KIMLEY-HORN AND ASSOCIATES, INC.
 7878 North 16th Street, Suite 300
 Phoenix, Arizona 85020 (602) 944-5500

DATE: AUGUST 2, 2012
PROJ. NO. 191133007
FILE NO. 191133007EX_BB
SHEET NO.
2
2 OF 2

NO.	DATE	REVISION	BY	APPD.

DESIGN: PAC DRAWN: PAC CHECKED: SHR

TAXILANE RECONSTRUCTION
 FLAGSTAFF PULLIAM AIRPORT
 CITY OF FLAGSTAFF
 DATE: SEPTEMBER 24, 2012 (revised October 29, 2012)

KIMLEY-HORN ASSOCIATES
 Phoenix, Arizona

EXHIBIT I - DESIGN - ENGINEERING FEE
 TAXILANE RECONSTRUCTION

DERIVATION OF COST OF PROPOSAL FEE

1. DIRECT LABOR

<u>TASK</u>	<u>DESCRIPTION</u>	<u>MANHOURS</u>	<u>TOTAL</u>	<u>EXTENDED TOTAL</u>
001	Project Administration	152	6,649.92	
002	Engineer's Design Report and Categorical Exclusion	143	6,025.50	
003	Preliminary Plans and ADOT Review	150	5,959.58	
004	Construction Drawings (Draft Submittal)	368	14,745.48	
	Specifications, Quantities & Cost Estimate	76	3,308.08	
	Airport Construction Safety Plan	45	1,780.77	
005	Construction Drawings (95% Submittal)	173	6,747.74	
	Quantities & Cost Estimate	13	521.49	
	Project Specifications	29	1,362.33	
006	Final Plans & Specification Submittal and Contractor Coordination	148	6,165.08	
TOTAL DIRECT LABOR		1,297		\$53,265.97

2. EXPENSES:

EXPENSE ALLOCATION (4.6%)	6,931.71	
DESIGN EXPENSES	4,005.00	
TOTAL EXPENSES:		\$10,936.71

3. CONSULTANTS:

SURVEY - SWI	7,300.00	
GEOTECHNICAL TESTING - SPEEDIE	15,050.00	
SUBCONSULTANT ADMINISTRATION - 5%	1,117.50	
TOTAL CONSULTANTS		\$23,467.50

4. ENGINEERING FEE

TOTAL LABOR		53,265.97
OVERHEAD (%)	182.90%	97,423.46
FEE (% OF NET)	12%	18,082.73
DIRECT EXPENSES		10,936.71
CONSULTANTS		23,467.50
TOTAL ENGINEERING FEE		\$203,176.37

EXHIBIT II - DESIGN - ENGINEERING FEE
 TAXILANE RECONSTRUCTION

DERIVATION OF COST OF PROPOSAL FEE

1. Direct Salary Costs

<u>Title</u>	<u>HOURS</u>	<u>Rate</u>	<u>Total Labor</u>	<u>EXTENDED TOTAL</u>
Project Manager	307	53.10	16,301.70	
Principal Engineer	25	73.29	1,832.25	
Professional Engineer	475	41.10	19,522.50	
Engineer in Training	87	29.60	2,575.20	
CADD	351	32.92	11,554.92	
Lead Inspector		41.22		
Clerical/Accounting Admin	52	28.45	1,479.40	
Total Direct Salary Costs	1,297			\$53,265.97

2. Labor and General & Administrative Overhead

Percentage of Direct Salary Costs By 182.9% \$97,423.46

3. Subtotal of Items 1 and 2

\$150,689.43

4. Fixed Payment

12 % of Item No. 3: \$18,082.73

5. Direct Non-Salary Expenses

EXPENSE ALLOCATION (4.6%)	6,931.71
DESIGN EXPENSES	4,005.00
Total Direct Non-Salary Expenses	\$10,936.71

6. Subcontract Costs

SURVEY - SWI	7,300.00
GEOTECHNICAL TESTING - SPEEDIE	15,050.00
SUBCONSULTANT ADMINISTRATION - 5%	1,117.50
Subtotal of subcontract Costs	\$23,467.50

7. TOTAL ENGINEERING FEE

\$203,176.37

DESIGN EXPENSES

<u>1. POSTAGE:</u> on Site	\$0.00 / mo. X	5	mos. =		0.00	0.0
<u>2. COMMUNICATIONS:</u>						
Cell Phones	\$0.00 / mo. X	5	people =	1	0.00	0.0
<u>3. PER DIEM/MEALS:</u>						
Per Diem (office)	\$34.00 / day X	10	people =	1	340.00	
Per Diem (Field Insp)	\$0.00 / day X	0	people =	1	0.00	
Meals /other	/ day X		people =		600.00	940.0
<u>4. LODGING:</u>						
	\$60.00 /night X	3	nights =	1	180.00	
	\$1,400.00 / month X	0	months =		0.00	180.0
<u>5. TRANSPORTATION:</u>						
Vehicle Rental and Fuel (RE)	\$900.00 / mon X	0	months X	1	0.00	
Airfare	\$550.00 / ticket X	2	trips for	1	1,100.00	
Vehicle Mileage (Office)	10 trips X	300	miles X	0.445	1,335.00	2,435.0
					Lower than IRS approved rates	
<u>6. PRINTING:</u>						
Reports	xerox @ \$0.12		per copy	12	0.00	
Record Drawings, Black Lines	plan sheets \$2.00		per copy	1	0.00	
Final Bid Set Specifications	500 spec docume \$0.08		per copy	12	450.00	
Final Engineer's Report	0 docs \$1,500.00		per copy	3	0.00	
Construction Photographs	0 set \$1,000.00		per copy	2	0.00	450.0
<u>7. COMPUTER (Software/Hardware)</u>						
Drafter	- CADD Stations	0	hours X	\$15.00	0.00	
Admin	- Word Process	0	hours X	\$15.00	0.00	
Field Team, 1 Computers	- Field Computer	0	months X	\$300.00	0.00	0.0
<u>8. FIELD SUPPLIES</u>						
Field Office	0 L.S.	1	=	1	0.00	
Furniture Rental	0 / Mon	5	=	1	0.00	
Utilities	0 / Mon	5	=	1	0.00	0.0
<u>10. LICENSES & PERMITS:</u>						
	0 @		=		0.00	0.0
<u>11. ADVERTISING</u>						
	0 X	0	days =	1	0.00	0.0
TOTAL EXPENSES =						4,005.0



Shephard ▲ Wesnitzer, Inc.

110 West Dale Avenue
Flagstaff, AZ 86001
928.773.0354
928.774.8934 fax
www.swiaz.com

Engineering an environment of excellence

PROPOSAL/ AGREEMENT FOR PROFESSIONAL SERVICES

Ref #12500

September 19, 2012

BETWEEN: Kimley-Horn and Associates, Inc.
Attn: Steve Reeder
7740 North 16th Street, Suite 300
Phoenix, Arizona 85020 ("CLIENT")

AND: Shephard - Wesnitzer, Inc.
110 West Dale Ave, Suite 1
Flagstaff, AZ 86001 ("SWI")

FOR THE PROJECT: Surveying Services – Topographic Survey
Flagstaff Pulliam Airport Hangar ("PROJECT")
Flagstaff, Arizona ("SITE")

The Client and SWI do hereby agree as follows:

1.0 DESCRIPTION OF PROJECT

Information provided by the Client indicates that the Project will consist of a topographic survey showing detailed site features and existing utilities within the Hangar area as shown on the exhibit provided.

2.0 PURPOSE

The purpose of our Surveying Services will be to provide a topographic survey that the client will use for improvements to the Hangar area aprons.

Client's Initials _____

3.0 SCOPE OF SERVICES

We propose to provide the following:

Item No.	Description	Fee
1.	<u>Survey Control:</u> Verify existing survey control and elevation benchmarks. Establish new permanent survey control for use through duration of the project.	
2.	<u>Topographic Survey:</u> Provide a detailed topographic survey of the airport Apron/Hangar area as shown on exhibit provided, including: edge of pavement, grade breaks, pavement markings, hangar support columns, roof drip lines, door openings, grading and drainage features, aircraft tie-downs, lighting and signage. Provide a signed and sealed topographic survey and associated CAD files.	
3.	<u>Utilities:</u> Coordination and location of utility bluestake markings and above-ground utility appurtenances to be incorporated within the Topographic Survey.	
4.	<u>Geotech Bore Locations:</u> Locate approximately 10-12 geotechnical bore and core locations and foundation checks to be incorporated within the Topographic Survey.	
	TOTAL	\$7,300.00

4.0 SCHEDULE

Work will commence upon receipt of a signed copy of this agreement, and is expected to require 2 weeks to complete.

5.0 ASSUMPTIONS

No boundary survey will be conducted or implied. Sufficient survey control exists in the immediate vicinity of the Site to facilitate the relation of the topography survey to known datum. Horizontal and vertical datum will be based on the SWI control network. If a different datum is requested, the client will provide the necessary control information.

6.0 MANNER OF PAYMENT

Billing for work in progress will be made on a monthly basis. Payment is due upon receipt of monthly billings. Late fees at the rate of 2% interest on balance owed will be assessed to client for delays in payments in excess of 60 days from the date of invoice. Services will be halted due to delays in payment. Final revisions to calculations and drawings will be released upon receipt of final payment.

7.0 FEES

The cost for services is a lump sum fee as indicated in Section 3.0 including reimbursable expenses. Reimbursable expenses include mileage, travel time, and equipment cost, a one time FedEx charge and plan reproduction costs. Any additional work which may be indicated by the discovery of unanticipated conditions in the field or revisions to the site plans instigated by others will be performed, only upon your authorization, in accordance with our current standard fee schedule. Current standard hourly rates are subject to change as current year expires. The lump sum fee noted in Section 3.0 is valid for 90 (ninety) calendar days after which time a review by SWI will be required.

8.0 STANDARD SWI TERMS AND CONDITIONS

Attached hereto and incorporated for reference are the **SWI Standard Terms and Conditions**, which shall govern this agreement.

9.0 SERVICES NOT INCLUDED

Boundary Survey, Geotechnical investigations, environmental studies, archeological studies, construction inspection, or any other work not specifically identified in Section 3.0, Scope of Services. All agency and/or permitting fees to be paid by the Client.

This Proposal/Agreement, and the attached **Terms and Conditions**, contains the entire agreement between the parties, and supersedes all other agreements, either oral or written. No representations or warranties shall be valid or binding unless contained herein.

The signature below constitutes Shephard - Wesnitzer Inc.'s intention to be bound under the terms of this Proposal/Agreement, including the attached **Terms and Conditions**. The Client may accept by signing and returning to Shephard - Wesnitzer, Inc.

Any change to the **Terms and Conditions** of this Proposal/Agreement, or the tender of any contract documents in place of this Proposal/Agreement shall not be valid unless made in writing, dated and signed by all the parties.

EXECUTED BY:



Shephard-Wesnitzer, Inc.

September 19, 2012
Date

The foregoing AGREEMENT with its attached **Terms and Conditions** has been proposed by Shephard - Wesnitzer, Inc. and has been read, is understood, and is hereby accepted.

Revised September 20, 2012

Steve Reeder
Kimley-Horn and Associates, Inc.
7878 N. 16th Street
Phoenix, AZ 85020

**RE: Proposal for Geotechnical Investigation
FLG Taxilane/Hanger Apron Rehab
Pulliam Drive
Flagstaff, AZ
Proposal No. 45713SFr**

Dear Mr. Reeder:

We are pleased to provide our cost estimate to conduct a soil investigation at the above referenced site that will satisfy site development and pavement design requirements. All work on this project will be carried out under the overall supervision of a registered Professional Engineer in the state of Arizona.

We understand that construction will consist of 430,585 sq. ft. of complete apron asphalt reconstruction, 106,107 sq. ft. of apron milling and replacement and 36,800 sq. ft. of apron PCCP construction. At this time, traffic volume is unknown and will be provided by Kimley-Horn prior to the investigation.

We will drill and sample sufficient test borings to adequately determine subsoil conditions and provide samples for laboratory testing. Sufficient laboratory tests will be conducted to properly classify the soils encountered and provide data for engineering design. We presently anticipate drilling 12 structural borings to depths of 5 to 10 feet below existing ground surface, or refusal, whichever comes first. Access to the site by conventional truck-mounted drilling equipment is assumed to be free and unencumbered.

We will also excavate one test pit, adjacent to a shade hanger foundation to verify existing width and depth of the foundation. It is assumed that this foundation is bearing at an elevation within 5 feet of existing grade. This will require saw cutting roughly a 5'x10' area of the existing asphalt, removal of the soil to the bottom of the foundation (maximum depth of 5 feet), recompaction of the excavated material and installation of a temporary patch. At this time, it is anticipated that the patch will consist of 2500 psi concrete.

We will analyze the data obtained from field and laboratory testing and prepare a report presenting all data obtained, together with our conclusions and recommendations regarding:

1. Groundwater conditions, if any, to the depths which will influence design and/or construction of the proposed development.
2. Swell potential of in-situ and compacted soils and recommendations for control if highly expansive.

3. Pavement design to provide economy and adequate service.
4. Suitability of site soils for use as compacted fill and preferred earthwork methods, including clearing, stripping, excavation and construction of engineered fill.
5. Local excavation and trenching conditions and stability considerations.
6. Discussion regarding the findings of the excavation adjacent to the shade hanger foundation.

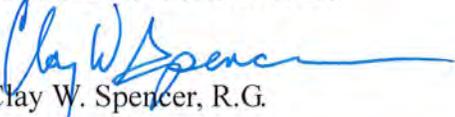
Charges for our services have been determined on the basis of our standard Fee and Rate Schedule, a copy of which is attached and made a part hereof. We propose to provide the services set forth herein for a lump sum amount of \$17,550.00 broken down as follows:

Apron Reconstruction Investigation/Report (Drill Rig Investigation)	\$11,094.00
Foundation Verification (Test Pit Investigation)	\$3,956.00
<u>Lump Sum Total</u>	<u>\$15,050.00</u>

This total includes all testing, engineering and reimbursable expenses, 2 hard copies and an electronic copy (pdf) of the report. Should we be informed that additional hard copies of the report are needed after it has been finalized, there will be an additional charge of \$15.00 per report. Time from authorization to proceed to final report submittal at this time is on the order of 3 to 5 weeks following our receipt of this signed proposal (authorization to proceed). This time frame does not include delays due to inclement weather or delays in the field not caused by Speedie & Associates and subcontractors.

We appreciate the opportunity to submit this proposal for your consideration. If the terms set forth are satisfactory, please sign the attached copy, or provide a subconsultant contract for our review and signature.

Respectfully submitted,
SPEEDIE & ASSOCIATES


Clay W. Spencer, R.G.

APPROVED AND ACCEPTED
For: Kimley-Horn and Associates, Inc.

By: _____

Print Name: _____

Date: _____

**ENGINEERING SERVICES
2012 Fee and Rate Schedule**

Fees for services will be based upon the time worked on the project at the following rates:

Title	Rate Per Hour
Principal	\$ 130.00
Project Manager	100.00
Sr. Geologist/Engineer	100.00
Project Engineer/Geologist	90.00
Environmental Specialist	85.00
Architectural Special Inspector	85.00
Structural Special Inspector	75.00
Staff Engineer/Geologist	70.00
Sr. Engineering Technician	55.00
Draftsman	50.00
Materials Testing Technician	45.00
Clerical/Administrative	40.00

REIMBURSABLE EXPENSES

Light Truck Mileage Rate: \$0.50 per mile

The following items are reimbursable to the extent of actual expenses plus 25%:

1. Transportation, lodging and subsistence for out of town travel
2. Special mailings and shipping charges
3. Special materials and equipment unique to the project
4. Duplication or reprinting/copying reports

TEST BORINGS AND FIELD INVESTIGATIONS

On projects requiring test borings, test pits, or other explorations, the services of reputable contractors to perform such work shall be obtained.

SUBCONTRACTORS/SUBCONSULTANTS CHARGES

Any charges for subcontractors/subconsultants are subject to a 25% handling fee if invoiced by Speedie & Associates or such charges can be directly paid by the CLIENT.

SPECIAL RATES

The following rates may be subject to a 35% increase:

- Overtime – time over 8 hours per weekday and on Saturday
- Sunday and Holidays
- Rush orders

EXPERT WITNESS

Deposition and testimony; 4-hour minimum, \$250.00 per hour.

The following Terms and Conditions are included and hereto made a part of this agreement.