Agenda Item: 5A-2

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS

AGENDA ITEM SUMMARY

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Meeting Date: June 7, 2022

[ ] **Consent** [X] **Regular**
[ ] **Workshop** [ ] **Public Hearing**

Submitted By: Department of Airports

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I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Amendment No. 2 to the General Consulting Agreement with HDR Engineering, Inc. (HDR) for Consulting/Professional Services in the amount of $541,180.72, and to exercise the second one (1) year renewal option for the continued performance of professional planning and design services related to the approved Palm Beach County Airports Capital Improvement Program.

Summary: The Consulting Agreement with HDR for general airport planning and design was approved by the Board on August 20, 2019 (R-2019-1157) in the amount of $960,107 in order to carry out the approved Capital Improvement Programs for the County's Airports. Amendment No. 1 was approved by the Board on August 17, 2021 (R-2021-1024), allowing the County, at its sole discretion, to exercise the first one-year renewal option for the continuation of services provided under this agreement. Approval of Amendment No. 2 will allow the County, at its sole discretion, to exercise the second one-year renewal option for the continuation of services provided under this agreement and provide an additional $541,180.72 to complete the following tasks: Task I Services – North Palm Beach County General Aviation Airport (F45) Terminal Ramp Expansion Design; and the Palm Beach County Park Airport (LNA) Runway 10-28 Surface Treatment Design. HDR is an Omaha, Nebraska based firm; however, the majority of the work to be completed in this agreement will be managed through their West Palm Beach, Florida office in conjunction with several Palm Beach County-based and South Florida-based sub-consultants and firms. A Disadvantaged Business Enterprise (DBE) goal of 20% was set for this contract. HDR committed to 20% in its proposal. The anticipated DBE participation based upon the approved tasks is approximately 20.99%. The current paid to date DBE participation is approximately 18.5%. The DBE participation for this Amendment is approximately 26%. Pursuant to changes to Chapter 332, Florida Statutes, effective October 1, 2020, a governing body of a commercial service airport may not approve purchases of contractual services in excess of the Category Five threshold amount of $325,000 provided in Section 287.017, Florida Statutes, on a consent agenda. This amendment exceeds the threshold amount and must be approved on the regular agenda. **Countywide (AH)**

Background and Policy Issues: In order to carry out the approved Capital Improvement Program for the County, the Department of Airports requires professional planning and design engineering services. This agreement is for 2 years with 2 one (1) year renewal options. Approval of Amendment 2 allows for the continuation of services necessary for the development and operation of the County's airport system.

Attachments:
1. Amendment No. 2 with HDR, Inc. – 3 Originals
2. DBE Goal Information

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Recommended By: Laura Baker — 5-11-22
Department Director — **Date**

Approved By: [illegible] — 5/17/22
County Administrator — **Date**

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2022	2023	2024	2025	2026
Capital Expenditures	$ 541,181				
Operating Costs					
External Revenues (Grants)	$(432,944)				
Program Income (County)					
In-Kind Match (County)					
NET FISCAL IMPACT	$ 108,237				
# ADDITIONAL FTE POSITIONS (Cumulative)					

Is Item Included in Current Budget? Yes X No ____
Does this item include the use of federal funds? Yes ____ No X

Budget Account No: Fund 4111 Department 121 Unit A367 Object 6504
Reporting Category ____ A382 6505

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Funds are available in the above referenced accounts. Source of funds: Grants of $432,944 and Airport local funds of $108,237.

C. Departmental Fiscal Review: [signature]

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

[signature] 5/6/22
OFMB 5.5.22 5/5/22

[signature] 5/16/22
Contract Dev. and Control 5-16-22

B. Legal Sufficiency:

[signature] 5/17/22
Assistant County Attorney

C. Other Department Review:

Department Director

REVISED 11/17

(THIS SUMMARY IS NOT TO BE USED AS A BASIS FOR PAYMENT)

CERTIFICATE

The undersigned hereby certifies that she is the Assistant Secretary of HDR Engineering, Inc., a Nebraska corporation (the "Corporation"), and that, as such, has custody of the minute books of the Corporation, and that, by Consent and Agreement of the Board of Directors, the following resolution was unanimously adopted:

1. "**RESOLVED,** that effective immediately, and until termination of said individual from the Corporation, or until recision by the Corporation's Board of Directors, whichever occurs first, the following individuals are hereby granted the nondelegable authority to execute or approve on behalf of the Corporation, contracts, amendments or change orders for engineering services and architectural services incidental to engineering services to be rendered by the Corporation, . . . , or releases of claim or lien in connection with such services, such contracts, amendments, change orders or releases so executed or approved shall be binding upon the Corporation:

. . . Jennifer E. Hunt – Senior Vice President . . .
. . . Harold E. Lewis, Jr. – Senior Vice President . . .
. . . Melanie E. Fowler – Vice President . . .
. . . Erki Suarez – Vice President . . .
. . . John E. Wimberly – Vice President . . .
. . . Jeffrey B. Arms – Associate Vice President . . .
. . . Matt D. Bell – Authorized Representative . . ."

2. "**RESOLVED,** that the following are elected officers of the Corporation until their successors are elected and qualified:

. . . Thomas A. Donnelly – Senior Vice President . . .
. . . Stephen J. Ferrell – Senior Vice President . . .
. . . Jennifer E. Hunt – Senior Vice President . . .
. . . Chance V. Lauderdale – Senior Vice President . . .
. . . Andrew E. Lauzier – Senior Vice President . . .
. . . Harold E. Lewis, Jr. – Senior Vice President . . .
. . . Kent L. McWaters – Senior Vice President . . .
. . . Jay C. Nagle – Senior Vice President . . .
. . . Guillermo J. Suero – Senior Vice President . . .
. . . Brenda Van Ravenswaay – Senior Vice President . . .
. . . Brian A. Blanchard – Vice President . . .
. . . Nelson E. Canjura – Vice President . . .
. . . Samuel D. Cobb – Vice President . . .
. . . Stephen W. Dortch – Vice President . . .
. . . Katie E. Duty – Vice President . . .
. . . Melanie E. Fowler – Vice President . . .
. . . John M. Hansen – Vice President . . .
. . . Lew R. Herrington – Vice President . . .

. . . Donald R. Holcomb – Vice President . . .
. . . John B. Hyre – Vice President . . .
. . . Carlos C. Lopez-Paniagua – Vice President . . .
. . . George W. McGregor – Vice President . . .
. . . Kristina M. Price – Vice President . . .
. . . Thomas A. Quinn – Vice President . . .
. . . Marlin A. Register II – Vice President . . .
. . . Mark G. Roberts – Vice President . . .
. . . Santanu Roy – Vice President . . .
. . . Steven J. Schnell – Vice President . . .
. . . Erki Suarez – Vice President . . .
. . . John E. Wimberly – Vice President . . .
. . . Jeffrey B. Arms – Associate Vice President . . .
. . . Lisa C. Bell – Associate Vice President . . .
. . . Jonathon D. Burchfield – Associate Vice President . . .
. . . Brad B. Collins – Associate Vice President . . .
. . . Raphael C. Costa – Associate Vice President . . .
. . . Ted E. Davidson – Associate Vice President . . .
. . . Mark E. Hall – Associate Vice President . . .
. . . Warren F. Jenik – Associate Vice President . . .
. . . Javier Manso – Associate Vice President . . .
. . . Daniel S. Suarez – Associate Vice President . . .
. . . Leonel A. Zapata – Associate Vice President . . .
. . . Elizabeth C. Buell – Assistant Secretary . . .
. . . Laurie S. Vik – Assistant Secretary . . ."

The undersigned further certifies that the foregoing resolution has been spread in full upon the minute books of the Corporation and is in full force and effect.

DATED January 17, 2022.

(CORPORATE SEAL)

Elizabeth C. Buell, Assistant Secretary

STATE OF NEBRASKA
COUNTY OF DOUGLAS

On this 17th day of January, 2022, before me personally appeared Elizabeth C. Buell, known to me to be the person who executed the within instrument as Assistant Secretary of and on behalf of the corporation therein named and acknowledged to me that the corporation executed it.

(NOTARY SEAL)

GENERAL NOTARY - State of Nebraska
LAURIE S. VIK
My Comm. Exp. March 5, 2023

Laurie S. Vik, Notary Public

AMENDMENT NO. 2 TO CONTRACT
BETWEEN
PALM BEACH COUNTY DEPARTMENT OF AIRPORTS
AND
HDR ENGINEERING, INC.
FOR
CONSULTING / PROFESSIONAL SERVICES AT
PALM BEACH COUNTY AIRPORTS

This Amendment No. 2 to the Contract is made as of the_____day of_____, 2022, by and between **Palm Beach County**, a Political Subdivision of the State of Florida, by and through its Board of Commissioners, hereinafter referred to as the **COUNTY,** and **HDR Engineering, Inc.**, [ ] an individual, [ ] partnership, [X] a corporation authorized to do business in the State of Florida, hereinafter referred to as the **CONSULTANT**, whose Federal Tax I.D. number is 470680568.

WITNESSETH

WHEREAS, on August 20, 2019, the COUNTY entered into an Agreement (R-2019-1157) with the CONSULTANT for the CONSULTANT to provide Consulting / Professional Services for the Palm Beach County Department of Airports at Palm Beach County Airports (PBI, F45, LNA, & PHK); and

WHEREAS, on August 17, 2021, the County entered into an Amendment No. 1 (R-2021-1024) with the CONSULTANT to exercise the first one (1) year renewal option for the continuation of services for the Department of Airports, Palm Beach County, in accordance with Article 25 of the original Agreement; and

WHEREAS, Article 2 of the Contract defines the performance period of the contract as two (2) years, with two (2) one (1) year renewal options, the exercise of which are within COUNTY'S sole control and discretion, and

WHEREAS, it is the COUNTY'S desire to exercise the second one (1) year renewal option for the continuation of services provided by the CONSULTANT under this contract; and

WHEREAS, Article 25 of the Contract requires an amendment when the parties are able to define additional services and the parties have now defined those services;

NOW THEREFORE, in consideration of the mutual covenants herein contained, and such other good and valuable consideration, the receipt of which the parties hereby acknowledge, the parties agree to the following terms and conditions:

1. The parties agree to amend the Contract to include the second one (1) year renewal option for the continuation of services provided by the CONSULTANT under this Contract, to include the Scope of Services and Fees as outlined in Exhibit A. The total amount to be paid by the COUNTY to the CONSULTANT for professional services, including any out of pocket expenses, shall not exceed Five Hundred Forty-One Thousand, One Hundred Eighty Dollars and Seventy-Two Cents ($541,180.72) for the services in Amendment No. 2 to the original contract.

2. Except as specifically amended herein, all other terms and conditions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused the Second Amendment to the Contract to be signed by the Mayor of the Board of County Commissioners and the Seal of said Board to be fixed hereto and attested by the Clerk of said board, and the CONSULTANT, HDR Engineering, Inc., has caused these presents to be signed in its corporate name by its duly authorized officer Melanie E. Fowler, Vice President, acting on behalf of said CONSULTANT, and the Seal of said CONSULTANT to be affixed hereto and attested by the Secretary of said CONSULTANT, the day and year first written above.

ATTEST:
JOSEPH ABRUZZO
CLERK OF THE CIRCUIT COURT
& COMPTROLLER

By:_____
Deputy Clerk

PALM BEACH COUNTY, FLORIDA
BOARD OF COUNTY COMMISSIONERS:

By: _____
Robert Weinroth, Mayor

WITNESS:

Elizabeth Bzuell
SIGNATURE

Elizabeth Bzuell
Name (type or print)

CONSULTANT:

HDR Engineering, Inc.
COMPANY NAME

Signature

Melanie E. Fowler
Name (type of print)

Vice President
Title

(Corporate Seal)

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

By:_____
County Attorney

APPROVED AS TO TERMS
AND CONDITIONS

By:
Director of Airports

AMENDMENT NO. 2 INDEX

CERTIFICATE OF INSURANCE

EBIX

Palm Beach County
Compliance Summary Report

Vendor Number	Vendor Name	AM Best Rating	Insurance Carrier	Policy #	Eff. Date	Exp. Date	Coverage	Contract Number	Contract Name
DX00000767	HDR Engineering, Inc.	Modified	Compliant with Minor/Expiring Deficiencies					DOA 18-2B	Airport Civil Consulting Services
		Ap , XV	Liberty Mutual Fire Insurance Company	AS2641444950041	6/1/2021	6/1/2022	Auto Liability		
		Ap , XV	Ohio Casualty Insurance Company	EUO21S7919363	6/1/2021	6/1/2022	Excess Liability		
		Ap , XV	Liberty Mutual Fire Insurance Company	TB2641444950031	6/1/2021	6/1/2022	General Liability		
		Ap , XV	Lexington Insurance Company	061853691	6/1/2021	6/1/2022	Professional Liability		
		Ar , XV	Liberty Insurance Corporation	WA764D444950011	6/1/2021	6/1/2022	Workers Comp		

Risk Profile : Standard - General Services-AOA

Required Additional Insured : Palm Beach County Board of County Commissioners

Ownership Entity :

EXHIBIT A: AMENDMENT NO. 2

This Amendment No. 2 is in accordance with the Contract for Consulting/Professional Services (Agreement R-2019-1157) between Palm Beach County (COUNTY) and HDR Engineering, Inc. (CONSULTANT) dated August 20, 2019.

CERTIFICATE OF INSURANCE

EXHIBIT A: AMENDMENT NO. 2

EXHIBIT A-1 – Task I-22-F45-H-005: Terminal Ramp Expansion Design
EXHIBIT A-2 – Task I-22 LNA-H-006: Runway 10-28 Surface Treatment Design

EXHIBIT B: DETAILED FEES, EXPENSES AND PAYMENTS

EXHIBIT B-I: Summary of Fees
EXHIBIT B-II: Schedule of Payments

EXHIBIT C – PROPOSED SCHEDULES

EXHIBIT D – DISADVANTAGED BUSINESS ENTERPRISE COMPLIANCE

EXHIBIT A-1 – Task I-22-F45-H-005: Terminal Ramp Expansion Design

Palm Beach County Department of Airports

Airport Civil Consulting Services

Task Authorization No. I-22-F45-H-005

North Palm Beach County General Aviation Airport (F45)

Terminal Ramp Expansion Design

1475 Centrepark Boulevard, Suite 230
West Palm Beach, FL 33401

June 2022

EXHIBIT 'A'

SCOPE OF SERVICES

Description of the services outlined below in Section 0.0 - General is intended to be general in nature and should not be construed to be a complete description of the services or a limitation on the Scope of Services to be provided. Refer to Sections 1 through 8 for the definition of specific scope items to be performed by HDR.

0. GENERAL

0.1 THE PROJECT

The Palm Beach County (COUNTY) Department of Airports (DOA) North Palm Beach County General Aviation Airport (F45) is designated as a reliever for Palm Beach International (PBI) and serves helicopters, reciprocating engine aircraft, and jet aircraft.

The existing apron is situated east of Runway 14-32, north of Runway 9R-27L and adjacent to the FBO terminal building and hangars. The apron currently provides approximately 82 tie-down spaces over an aircraft parking area of approximately 40,550 square yards. The existing apron has 34 tie-down spaces sized for small single engine aircraft and 48 tie-down spaces sized for multi-engine aircraft. In addition to the aircraft tie-down locations, the apron provides two parking positions for helicopters.

The 2006 Airport Master Plan Update (MPU) and the 2018 draft Activity Demand Projections report both forecast increased demand for parking on the terminal apron. Historically, airplane design group (ADG) I aircraft have comprised most of the parked fleet at F45. In the future, ADG II aircraft are projected to become a larger portion of the fleet with the anticipated extension of Runway 14-32. The COUNTY completed a study in 2020 to evaluate ramp expansion layout alternatives to meet the increase in parking demand and up-gauging of the fleet. The alternatives evaluated 3 development scenarios:

1. Runway 14-32 existing alignment and existing Runway Design Code B-II
2. Runway 14-32 existing alignment and upgraded Runway Design Code C-II
3. Runway 14-32 shifted 60 feet further from the ramp and upgraded Runway Design Code C-II

Alternative 3 was selected as the preferred alternative for its maximization of ramp space and because it was the mostly likely outcome of the Runway 14-32 Extension Environmental Assessment. Figure 1 shows the preferred alternative 3 ramp expansion recommended in the study.

The COUNTY wishes for HDR Engineering, Inc ('Consultant') to proceed with design and production of construction documents for the ramp expansion in general compliance with preferred alternate 3.

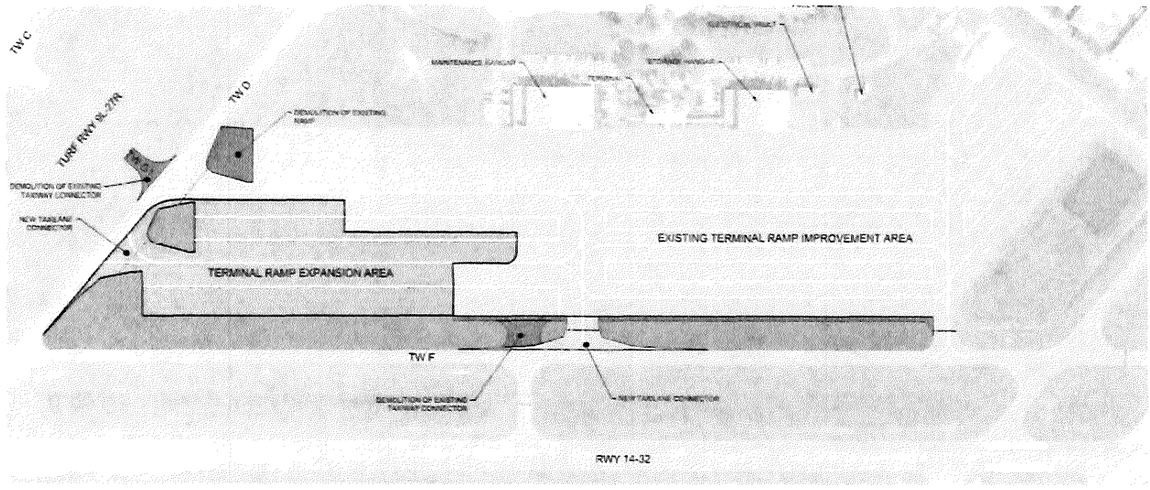


Figure 1 – Alternative 3 Preferred Apron Expansion Layout

PROJECT DESCRIPTION AND GENERAL SCOPE

Consultant will perform programming, design, and bid phase services for the reconfiguration and expansion of the terminal apron as a task under its Professional Services Agreement (PSA) with the COUNTY. The desired task outcome will be the creation of design documents to support a COUNTY bid solicitation for construction of the project. Specific project components are:

- Existing terminal apron improvements
  - Removal of existing pavement markings and application of new pavement markings
  - Removal of existing and installation of new aircraft tie-downs as needed
- Terminal apron expansion
  - New pavement expansion of existing apron
  - New pavement markings
  - New grading and stormwater management to accommodate the additional impervious area
- Taxiway connections
  - Removal of existing taxiway connector between the apron and Taxiway F
  - New taxiway between the apron and Taxiway F aligned to avoid a direct connection between the ramp and Runway 14-32
  - 2 new taxiway connectors from the ramp to Taxiway D
  - Associated signage, lighting, and electrical

1. Phase 1A: Planning and Programming

1.1. Kickoff meeting. Consultant shall schedule and lead a project kickoff meeting with the DOA and design team. The CONSULTANT will provide written minutes from the meeting.
  1.1.1. Confirm proposed design schedule and milestone review dates
  1.1.2. Confirm construction budget and milestone dates for grant compliance.
  1.1.3. Define communication and quality procedures for the Project Management Plan.
  1.1.4. Discuss operational constraints to inform the field services and construction phasing approaches.

1.2. Consultant shall gather and review South Florida Water Management District (SFWMD) Environmental Resources Permit (ERP) conditions to identify water quality and attenuation requirements for the proposed additional impervious area and changes in site storage.

1.3. Consultant shall prepare requirements for:
  1.3.1. Topographic Survey
  1.3.2. Subsurface Utility Engineering
  1.3.3. Geotechnical Investigation
  1.3.4. Wildlife Survey

1.4. Field Services Coordination Meetings. CONSULTANT will conduct two (2) meetings with DOA staff to coordinate the field investigations. Meetings will address safety, security, and operational impacts. CONSULTANT will host up to 9 weekly meetings with the field services team to coordinate schedules and track progress of the field work.

1.5. Field Services. DOA will be responsible for providing airfield access and escorts within the movement area. Consultant will be responsible for providing escorts within the AOA outside the movement area. The investigation activities are anticipated to be performed in accordance with Table 1.

1.6. Topographic Survey. Consultant shall perform a topographic survey and subsurface utility engineering of the work area through its subconsultant, Brown and Philips. See attached Brown and Phillips, Inc. task order for detailed scope.

1.7. Geotechnical Investigation. Consultant shall perform a geotechnical investigation of the project area through its subconsultant, Tierra SF. See attached Tierra SF, Inc. task order for detailed scope.

1.8. Environmental (Threatened and Endangered Species and Wetland) Survey. CONSULTANT shall perform a field survey of Burrowing Owl nests, Gopher Tortoises, and wetlands within the project area. The purpose of the wildlife survey is to identify potential wildlife mitigation activities and permitting required prior to construction. The purpose of the wetland survey is to identify potential wetland impacts within the project area. Consultant shall prepare a draft memo summarizing its general observations and providing recommendations for mitigation of wildlife and wetland issues.

1.9. Site Observation and Pavement Visual Inspection. Upon receipt of the topographic survey, the CONSULTANT shall visit the project site to observe the condition of items in the work area and verify the completeness and accuracy of the survey. Consultant shall perform a visual observation of the airfield pavements within the project area to ascertain the general condition of the pavement and identify areas within the project exhibiting structural or high-severity distresses. CONSULTANT shall schedule the visit during a typical operational period for the purpose of observing the operational function of the facility. The preference is to do the work after completion of the other field work items. However, DOA may require this task to be performed concurrently with other field work to reduce impacts to operations.

Table 1 Field Services Detail

Service	Consultant	Escort	Work Period	Duration
Topographic Survey	B&P - 2 staff	None	0800-1700, M-F	9 weeks
Geotechnical Investigation	TSF - 2 staff HDR – 1 staff	1 DOA escort	0800-1700, M-F	2 weeks
Environmental Survey	HDR – 2 staff	1 DOA escort	0800-1700, M-F	1 day
Site Visual Investigation	HDR – 2 staff	1 DOA escort	0800-1700, M-F	1 day

1.10. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
1.11. Design Project Quality Program. CONSULTANT shall develop and execute a quality program for the project, defined by a Quality Management Plan (QMP) specifying quality assurance and quality control procedures, schedules, reviewers, and resources.
1.12. Project Management. CONSULTANT will provide project management which will consist of the development of a Project Management Plan (PMP) specifying scope monitoring, budget maintenance, client coordination, subconsultant coordination, project status/schedule updates, invoicing per COUNTY requirements, payment of subconsultants, DBE participation monitoring, and general project documentation.

2. Phase 1B: Conceptual Design

This phase is not part of this proposal. Conceptual design was performed under the previous Ramp Expansion Study task.

3. Phase 2: Schematic Design

Following Phase 1A Planning and Programming approval and upon receipt of the DOA Representative's written authorization to initiate Phase 2, CONSULTANT will prepare schematic design documents.

3.1. Preparation of plans as shown in Table 2.
3.2. Preparation of schematic design and construction schedule
3.3. Preparation of schematic opinion of probable construction cost (OPC)
3.4. Stormwater permitting
  3.4.1. Draft drainage report
    3.4.1.1. Summary of existing permit conditions, anticipated affected basins
    3.4.1.2. Estimated footprint of new stormwater management area
  3.4.2. Coordinate and attend 1 pre-application meeting with the SFWMD in anticipation of submittal of an application for modification to the airport conceptual ERP in a later phase of this task.
3.5. Conceptual Construction Safety and Phasing Plan (CSPP). CONSULTANT will produce safety and phasing plans to accompany the conceptual CSPP based on the DOA's template, modified for this project.
3.6. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
3.7. Preliminary Airfield Phasing Coordination Meeting. CONSULTANT shall coordinate and attend 1 meeting with a representative of DOA Operations leadership to develop general operational constraints during construction and collaboratively prepare a schematic phasing approach. The CONSULTANT will provide written notes of the meeting and distribute to attendees.
3.8. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
3.9. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

4. Phase 3A: 60% Construction Documents

4.1. Preparation of plans as shown in Table 2.
4.2. Update of design and construction schedules
4.3. Preparation of design development OPC
4.4. Prepare draft technical specifications
4.5. Prepare draft Engineer's Report
4.6. Stormwater permitting
  4.6.1. Prepare calculations and models
  4.6.2. Update drainage report per the 60% design
  4.6.3. Prepare and submit applications for a modification to the conceptual ERP to SFWMD
4.7. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
4.8. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
4.9. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

5. Phase 3B: 90% Construction Documents

5.1. Preparation of plans as shown in Table 2.
5.2. Update of design and construction schedules
5.3. Preparation of design development OPC
5.4. Prepare draft technical specifications
5.5. Consultant shall review Front End specifications provided by the DOA for alignment with the design documents and advise of potential conflicts between them.
5.6. Prepare draft Engineer's Report
5.7. Stormwater permitting
  5.7.1. Revise calculations, models, and drainage report per ERP application review comments received from SFWMD.
  5.7.2. Respond to ERP application review comments received from SFWMD
5.8. Final Construction Safety and Phasing Plan (CSPP). CONSULTANT will produce safety and phasing plans to accompany the final CSPP based on the DOA's template, modified for this project.
5.9. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
5.10. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
5.11. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

6. Phase 3C: 100% Construction Documents

6.1. Preparation of plans as shown in Table 2.
6.2. Prepare final construction schedule
6.3. Preparation of final OPC
6.4. Prepare final technical specifications
6.5. Consultant shall insert project-specific information into the Front End specifications provided by the DOA.
6.6. Prepare final Engineer's Report
6.7. Environmental (Threatened and Endangered Species and Wetlands) Survey Memo. CONSULTANT shall update the draft memo previously submitted to account for changes to the project scope and regulatory policy.
6.8. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.

6.9. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.

6.10. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

Table 2 - Plan Submittal Schedule

TITLE	30%	60%	90%	100%
Cover Sheet	Preliminary	Updated	Final	Final
Drawing Index	Preliminary	Updated	Final	Final
General Notes, Legend, and Abbreviations	N/A	Preliminary	Final	Final
Summary of Quantities	Preliminary	Updated	Updated	Final
Project Area Plan (Overall Site Plan)	Preliminary	Updated	Final	Final
Staging and Access Plan	Preliminary	Updated	Final	Final
Safety Plan	Preliminary	Updated	Final	Final
Construction Phasing and MOT Plan	Preliminary	Updated	Updated	Final
Wildlife Management Plan	N/A	Preliminary	Updated	Final
Safety and Security Notes and Details	N/A	Preliminary	Final	Final
Topographic Survey	N/A	Final	Final	Final
Horizontal Control Plan	N/A	Preliminary	Updated	Final
Erosion Control Plan	N/A	Preliminary	Updated	Final
Erosion Control Details	N/A	Preliminary	Updated	Final
Demolition Plan	Preliminary	Updated	Updated	Final
Paving and Geometry Plan	Preliminary	Updated	Updated	Final
Typical Sections	Preliminary	Updated	Updated	Final
Paving Details	N/A	Preliminary	Updated	Final
Drainage Plan	N/A	Preliminary	Updated	Final
Drainage Profiles	N/A	Preliminary	Updated	Final
Summary of Drainage Structures	N/A	Preliminary	Updated	Final
Drainage Details	N/A	Preliminary	Updated	Final
Grading Plan	N/A	Preliminary	Updated	Final
Grading Profiles	N/A	Preliminary	Updated	Final
Pavement Elevation Plan	N/A	Preliminary	Final	Final
Cross-Sections	N/A	Preliminary	Final	Final
Pavement Marking Plan	Preliminary	Updated	Updated	Final
Pavement Marking Details	N/A	Preliminary	Updated	Final
Site Restoration Plan	N/A	Preliminary	Updated	Final
Airfield Electrical General Notes, Legend, and Abbreviations	N/A	Preliminary	Final	Final
Airfield Electrical Demolition Plans	N/A	Preliminary	Final	Final
Airfield Lighting Plans	Preliminary	Updated	Final	Final
Airfield Signage Plans	Preliminary	Updated	Final	Final
Airfield Signage Schedule	N/A	Preliminary	Final	Final
Airfield Circuitry Plans	Preliminary	Updated	Final	Final
Ductbank Layout and Details	Preliminary	Updated	Final	Final
Airfield Lighting and Signage Details*	N/A	Preliminary	Updated	Final
Miscellaneous Electrical Details*	N/A	Preliminary	Updated	Final
Vault and Circuiting Schematics	N/A	Preliminary	Updated	Final

7. Phase 4: Bidding and Award of Contract

7.1. CONSULTANT will assist the COUNTY in conducting one pre-bid conference for the prime contract to share pertinent bidding and technical information and requirements with prospective bidders. Consultant will attend one site visit with prospective bidders.

7.2. CONSULTANT will issue up to 3 addenda to interpret, clarify or expand the Bidding Documents.

7.3. CONSULTANT will prepare bid tabulation sheets and assist COUNTY in evaluating bids or proposals and in assembling and awarding contracts for construction, materials, equipment, and services.

7.4. CONSULTANT will issue a conformed set of plans and the project manual.

8. Phase 5: Construction Administration Services

This phase is not part of this task's work.

9. Project Design Schedule*

Phase	Duration
1A – Planning and Programming	17 weeks
1B – Conceptual Design	N/A
2 – Schematic Design	5 weeks
3A – 60% Construction Documents	6 weeks
3A – 90% Construction Documents	6 weeks
3A – 100% Construction Documents	5 weeks
4 – Bid and Award	5 weeks
5 – Construction Administration	N/A

*See detailed schedule attached

Summary of Deliverables

Table 3. Deliverables by Phase

Task	Deliverables
Phase 1A – Planning and Programming	• Kickoff meeting minutes • Topographic survey (PDF, AutoCAD 2018 .dwg) • Geotechnical investigation report • Engineer's site observation notes • Draft environmental survey memo • All submittals in PDF format unless noted
Phase 2 – Schematic Design	• Plans (PDF, 1 hard copy 11x17 if requested) • Design and construction schedules • Opinion of probable construction cost • Drainage report • Pre-Application Meeting Minutes with SFWMD • Conceptual Construction Safety and Phasing Plan • Airfield phasing coordination meeting notes • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 3A – 60% Submittal	• Plans (PDF, 1 hard copy 11x17 if requested) • Design and construction schedules • Opinion of probable construction cost • ERP Application • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 3B – 90% Submittal	• Plans (PDF, 1 hard copy 11x17 if requested) • Design and construction schedules • Opinion of probable construction cost • Technical specifications • Front end specification review comments • Engineer's report • ERP application comment responses • Final construction safety and phasing plan • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 3C – 100% Submittal	• Plans (1 hard copy 11x17 if requested, PDF, AutoCAD 2018 .dwg) • Construction schedule • Opinion of probable construction cost (Excel) • Project Manual (Front end and Technical specifications, 1 hard copy if requested, Word) • Front end specification information (Word) • Engineer's report • Final environmental survey memo • SFWMD ERP Permit • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 4 – Bidding and Award of Contract	• Pre-bid meeting slides (PowerPoint) • Bid tabulation (Excel) • Award recommendation (PDF) • Conformed plans and project manual (1 hard copy 11x17 if requested, PDF, Word, AutoCAD 2018 .dwg)

Team Roles

Firm	Description
HDR	• Project management, civil engineering, environmental survey
Chen Moore and Associates	• Stormwater design and permitting
Quantum Electrical Engineering*	• Electrical engineering, lighting, and signage
Brown & Phillips*	• Topographic survey and SUE
Tierra South Florida*	• Geotechnical investigation

*DBE Firm

ASSUMPTIONS

- Design pavement limits and parking layout are based on the Ramp Expansion Study preferred alternative 3.
- Locations of expansion and parking are based on the 60-foot shift to the southwest and 1,700-foot extension of Runway 14-32.
- Fleet mix is assumed to be the same as defined in the ramp expansion study performed by HDR. Consultant will evaluate the ability of occasional ADG III aircraft to operate within the project pavements and geometry.
- Programming phase field work will be performed by HDR staff on foot for one daytime weekday mobilization. DOA will provide vehicle escort for work within the movement area. HDR will provide escort for work outside the movement area.
- Design and construction funding may be provided by the Florida Department of Transportation (FDOT) and/or the Federal Aviation Administration (FAA)
- Opinions of probable project cost or probable construction cost provided by CONSULTANT are made on the basis of information available to CONSULTANT and on the basis of CONSULTANT's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. However, since CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, or over the construction contractor(s') methods of determining prices, or over competitive bidding or market conditions, CONSULTANT does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost CONSULTANT prepares.
- The CONSULTANT assumes no modeling or design will be required to modify detention facilities or control structures outside the limits of the proposed F45 ramp expansion project limits.
- The CONSULTANT assumes that the water quality treatment volume required by the South Florida Water Management District for permitting will be limited to ½-inch of dry pre-treatment because the additional impervious area associated with the F45 ramp expansion has already been accounted for in the overall stormwater management system for F45, based on due diligence review of existing permitting and design documents available to the CONSULTANT.

EXCLUSIONS

- Northeastern ramp expansion parallel to Taxiway D will be designed in a later project.
- Wildlife relocation, if required, will be performed under a future construction services task.

HDR Engineering, Inc.
PROJECT PROPOSAL - F45 TERMINAL RAMP EXPANSION DESIGN

Task Authorization No. I-22-F45-H-005 - Terminal Ramp Expansion Design										
	Contract Rate	$232.50	$188.46	$173.96	$127.40	$136.27	$129.24	$114.89	$101.48	
	Scope / Task Title	Sr. PM	PM	Civil Engineer	Environmental Scientist	Jr. Civil Engineer	Engineering Intern	Accountant	Sr. Admin Assistant	Total
Phase 1A - Planning and Programming (Lump Sum)										
1.1	Kickoff meeting		2			4				6
1.2	Permit review			8		2				10
1.3	Field investigation requirements		4			4	16			24
1.4	Field services coordination					11	11			22
1.5	Field services		8			12	80			100
1.8	Environmental survey and memo			50	4					54
1.9	Site visual observation		8				12			20
1.10	Submit deliverables						4			4
1.11	Quality program		40				40			80
1.12	Project management		20					15		35
										0
	Phase 1A - Subtotal Hours	0	82	58	4	33	163	15	0	355
	Phase 1A - Subtotal Direct Labor Cost	**$0.00**	**$15,453.72**	**$10,089.68**	**$509.60**	**$4,496.91**	**$21,066.12**	**$1,723.35**	**$0.00**	**$53,339.38**
Phase 2 - Schematic Design (Lump Sum)										
3.1	plans		15	40			50			105
3.2	schedule		4	8						12
3.3	OPC		4	15			15			34
3.4	Stormwater permitting		4				4			8
3.5	CSPP			2						2
3.6	Design team coordination		4	4			4			12
3.7	Phasing coordination		8	8			6			22
3.8	Submit deliverables			2			4			6
3.9	Submittal review meeting		2				4			6
										0
										0
	Phase 2 - Subtotal Hours	0	41	79	0	0	87	0	0	207
	Phase 2 - Subtotal Direct Labor Cost	**$0.00**	**$7,726.86**	**$13,742.84**	**$0.00**	**$0.00**	**$11,243.88**	**$0.00**	**$0.00**	**$32,713.58**
Phase 3A - 60% Construction Documents (Lump Sum)										
4.1	plans		15	40			60			115
4.2	schedule		2	2						4
4.3	OPC		2	5			15			22
4.4	specifications		8	25						33
4.5	engineer's report			15						15
4.6	stormwater permitting		6				4			10
4.7	Design team coordination		8	3			3			14
4.8	Submit deliverables						4			4
4.9	Submittal review meeting		3				4			7
	Phase 3A - Subtotal Hours	0	44	90	0	0	90	0	0	224
	Phase 3A - Subtotal Direct Labor Cost	**$0.00**	**$8,292.24**	**$15,656.40**	**$0.00**	**$0.00**	**$11,631.60**	**$0.00**	**$0.00**	**$35,580.24**
Phase 3B - 90% Construction Documents (Lump Sum)										
5.1	plans		10	30			50			90
5.2	schedule		4	6						10
5.3	OPC		1	3			30			34
5.4	specifications		2	4						6
5.5	review front ends		3	10						13
5.6	engineer's report			5						5
5.7	Stormwater permitting		15				10			25
5.8	CSPP			2						2
5.9	Design team coordination		5	2			5			12
5.10	Submit deliverables						4			4
5.11	Submittal review meeting		2				4			6
										0
	Phase 3B - Subtotal Hours	0	42	62	0	0	103	0	0	207
	Phase 3B - Subtotal Direct Labor Cost	**$0.00**	**$7,915.32**	**$10,785.52**	**$0.00**	**$0.00**	**$13,311.72**	**$0.00**	**$0.00**	**$32,012.56**
Phase 3C - 100% Construction Documents (Lump Sum)										
6.1	plans		15	20			40			75
6.2	schedule		3							3
6.3	OPC		1	10			10			21
6.4	project manual			5			8			13
6.5	engineer's report			10						10
6.6	Final environmental memo				10					10
6.7	Design team coordination		4	4			8			16
6.8	Submit deliverables						8			8
6.9	Submittal review meeting		3				3			6
										0
	Phase 3C - Subtotal Hours	0	26	49	10	0	77	0	0	162
	Phase 3C - Subtotal Direct Labor Cost	**$0.00**	**$4,899.96**	**$8,524.04**	**$1,274.00**	**$0.00**	**$9,951.48**	**$0.00**	**$0.00**	**$24,649.48**

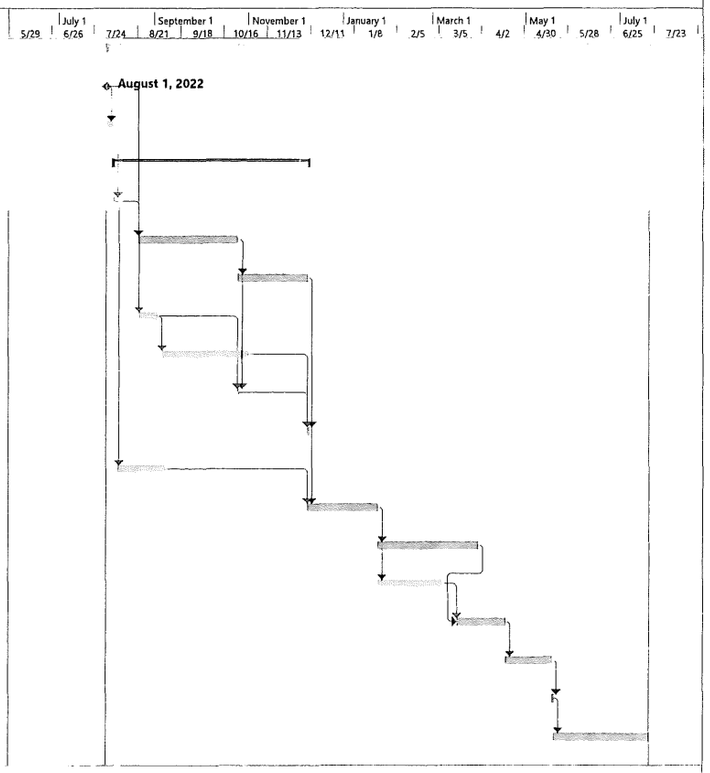
HDR Engineering, Inc.
PROJECT PROPOSAL - F45 TERMINAL RAMP EXPANSION DESIGN

Task Authorization No. I-22-F45-H-005 - Terminal Ramp Expansion Design										
	Contract Rate	$232.50	$188.46	$173.96	$127.40	$136.27	$129.24	$114.89	$101.48	
	Scope / Task Title	Sr. PM	PM	Civil Engineer	Environmental Scientist	Jr. Civil Engineer	Engineering Intern	Accountant	Sr. Admin Assistant	Total
Phase 4 - Bidding and Award of Contract (Lump Sum)										
7.1	prebid conference		8				8			16
7.2	issue addenda		10	15			15			40
7.3	bid tabulation		6				2			8
7.4	conformed documents		2				8			10
										0
										0
	Phase 4 - Subtotal Hours	0	26	15	0	0	33	0	0	74
	Phase 4 - Subtotal Direct Labor Cost	**$0.00**	**$4,899.96**	**$2,609.40**	**$0.00**	**$0.00**	**$4,264.92**	**$0.00**	**$0.00**	**$11,774.28**
	Total HDR Labor Hours	**0**	**261**	**353**	**14**	**33**	**553**	**15**	**0**	**1,229**
	Total HDR Labor Weeks	**0**	**6.5**	**8.8**	**0.4**	**0.8**	**13.8**	**0.4**	**0.0**	**30.7**
	Total HDR Labor Cost	**$0**	**$49,188**	**$61,408**	**$1,784**	**$4,497**	**$71,470**	**$1,723**	**$0**	**$190,069.52**
Subconsultants (Lump Sum)								DBE %	DBE	AMOUNT
Tierra SF								6%	1	$24,370.00
Quantum Electrical Engineering								6%	1	$21,720.93
Brown & Phillips								13%	1	$49,004.29
Chen Moore								0%		$90,055.20
									Subconsultants (Lump Sum)	**$185,150.42**
									DBE PARTICIPATION	25%
Reimbursables (Not to Exceed)										
Reproduction		# Drawings	# Pages	# Sets						
		@	@							
		$ 1.00	$ 0.20							
	Phase 1A - Planning and Programming									$ -
	Phase 2 - Schematic Design	40		1						$ 40.00
	Phase 3A - 60% Construction Documents	80		1						$ 80.00
	Phase 3B - 90% Construction Documents	80		1						$ 80.00
	Phase 3C - 100% Construction Documents	80	200	1						$ 120.00
	Phase 4 - Bidding and Award of Contract	80	200	1						$ 120.00
	Total Reproduction									$ 440.00
Postage/Delivery		# Packages	#Packages							
		@	@							
		$ -	$ -							
		0	0							$ -
	Total Postage/Delivery									$ -
Permitting										
	SFWMD Individual Permit Application Fee									$ 1,500.00
Travel				Airfare @		Car @	Lodging @	Meals @	Parking	
		# People	# Days	$ -		$ 75.00	$ -	$ 40.00	$ 20.00	
		$ -	$ -							
	Task 1.8 Environmental Survey					$ 150.00	$ 200.00	$ 80.00	$ 40.00	$ 470.00
	Environmental scientist from Tampa	1	2			$ 150.00	$ 200.00	$ 80.00	$ 40.00	
									Reimbursables (Not to Exceed)	**$2,410.00**
Summary										
									Phase 1A - Planning and Programming (Lump Sum)	$53,339.38
									Phase 2 - Schematic Design (Lump Sum)	$32,713.58
									Phase 3A - 60% Construction Documents (Lump Sum)	$35,580.24
									Phase 3B - 90% Construction Documents (Lump Sum)	$32,012.56
									Phase 3C - 100% Construction Documents (Lump Sum)	$24,649.48
									Phase 4 - Bidding and Award of Contract (Lump Sum)	$11,774.28
									Subconsultants (Lump Sum)	$185,150.42
									Reimbursables (Not to Exceed)	$2,410.00
Total Basic Services Contract Value Task Authorization No. I-22-F45-H-005 - Terminal Ramp Expansion Design										**$377,629.94**

End of Exhibit B

F45 Terminal Ramp Expansion
Design Schedule

ID	Task Mode	Task Name	Duration	Task Calendar Days	Calendar Days from NTP	Start	Finish	Predecessors
0		**F45 Ramp Expansion Design Schedule**	**245 days**	**353 days**	**353 days**	**Mon 8/1/22**	**Wed 7/19/23**	
1		**Notice to Proceed**	**0 days**	**0 days**	**0 days**	**Mon 8/1/22**	**Mon 8/1/22**	
2		**Project Setup**	**4 days**	**4 days**	**4 days**	**Mon 8/1/22**	**Thu 8/4/22**	1
3		**1A Programming**	**87 days**	**127 days**	**131 days**	**Fri 8/5/22**	**Fri 12/9/22**	
4		Project Kickoff	1 day	1 day	5 days	Fri 8/5/22	Fri 8/5/22	2
5		Survey/SUE Field Work	45 days	64 days	85 days	Mon 8/22/22	Mon 10/24/22	1FS+15 days
6		Survey Deliverable	30 days	45 days	130 days	Tue 10/25/22	Thu 12/8/22	5
7		Geotech field work	10 days	12 days	33 days	Mon 8/22/22	Fri 9/2/22	4FS+10 days
8		Geotech deliverable	40 days	56 days	92 days	Tue 9/6/22	Mon 10/31/22	7
9		Wildlife survey and engineer's visual inspection	1 day	1 day	86 days	Tue 10/25/22	Tue 10/25/22	5,7
10		Submit phase deliverables	1 day	1 day	131 days	Fri 12/9/22	Fri 12/9/22	6,8,9
11		**2 Schematic Design**	**22 days**	**31 days**	**38 days**	**Mon 8/8/22**	**Wed 9/7/22**	4
12		**3A 60% Construction Documents**	**30 days**	**46 days**	**176 days**	**Fri 12/9/22**	**Mon 1/23/23**	11,6
13		**Stormwater Permitting**	**48 days**	**66 days**	**242 days**	**Tue 1/24/23**	**Thu 3/30/23**	12
14		**3B 90% Construction Documents**	**30 days**	**42 days**	**218 days**	**Tue 1/24/23**	**Mon 3/6/23**	12
15		**3C 100% Construction Documents**	**22 days**	**32 days**	**260 days**	**Fri 3/17/23**	**Mon 4/17/23**	13FS-10 days,14
16		**Bid Advertisement**	**22 days**	**30 days**	**290 days**	**Tue 4/18/23**	**Wed 5/17/23**	15
17		**Bid Opening**	**1 day**	**1 day**	**291 days**	**Thu 5/18/23**	**Thu 5/18/23**	16
18		**FAA AIP Funds Application**	**42 days**	**62 days**	**353 days**	**Fri 5/19/23**	**Wed 7/19/23**	17



Task — Summary — Inactive Milestone — Duration-only — Start-only — External Milestone — Critical Split
Split — Project Summary — Inactive Summary — Manual Summary Rollup — Finish-only — Deadline — Progress
Milestone — Inactive Task — Manual Task — Manual Summary — External Tasks — Critical — Manual Progress

Updated Wed 4/27/22

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Subconsultant Contract

Quantum Electrical Engineering

Electrical Design

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Quantum Electrical Engineering, ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated _____, 2021, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: X
PROJECT NAME: F45 Terminal Ramp Expansion Design

PART 1.0 PROJECT DESCRIPTION:

The Palm Beach County (COUNTY) Department of Airports (DOA) North Palm Beach County General Aviation Airport (F45) is designated as a reliever for Palm Beach International (PBI) and serves helicopters, reciprocating engine aircraft, and jet aircraft.

The existing apron is situated east of Runway 14-32, north of Runway 9R-27L and adjacent to the FBO terminal building and hangars. The apron currently provides approximately 82 tie-down spaces over an aircraft parking area of approximately 40,550 square yards. The existing apron has 34 tie-down spaces sized for small single engine aircraft and 48 tie-down spaces sized for multi-engine aircraft. In addition to the aircraft tie-down locations, the apron provides two parking positions for helicopters.

The 2006 Airport Master Plan Update (MPU) and the 2018 draft Activity Demand Projections report both forecast increased demand for parking on the terminal apron. Historically, airplane design group (ADG) I aircraft have comprised most of the parked fleet at F45. In the future, ADG II aircraft are projected to become a larger portion of the fleet with the anticipated extension of Runway 14-32. The COUNTY completed a study in 2020 to evaluate ramp expansion layout alternatives to meet the increase in parking demand and up-gauging of the fleet.

The alternatives evaluated 3 development scenarios:

1. Runway 14-32 existing alignment and existing Runway Design Code B-II
2. Runway 14-32 existing alignment and upgraded Runway Design Code C-II
3. Runway 14-32 shifted 60 feet further from the ramp and upgraded Runway Design Code C-II

Alternative 3 was selected as the preferred alternative for its maximization of ramp space and because it was the mostly likely outcome of the Runway 14-32 Extension Environmental Assessment. Figure 1 shows the preferred alternative 3 ramp expansion recommended in the study.

The COUNTY wishes for HDR Engineering, Inc ('Consultant') to proceed with design and production of construction documents for the ramp expansion in general compliance with preferred alternate 3.

Consultant will perform programming, design, and bid phase services for the reconfiguration and expansion of the terminal apron as a task under its Professional Services Agreement (PSA) with the COUNTY. The desired task outcome will be the creation of design documents to support a COUNTY bid solicitation for construction of the project. Specific project components are:

- Existing terminal apron improvements
  - Removal of existing and application of new pavement markings
  - Removal of existing and installation of new aircraft tie-downs
- Terminal apron expansion
  - New pavement expansion of existing apron
  - New pavement markings
  - New grading and stormwater management to accommodate the additional impervious area
- Taxilane connections
  - Removal of existing taxilane between the apron and Taxiway F
  - New taxilane between the apron and Taxiway F aligned to break the direct connection between the ramp and Runway 14-32
  - New connector taxilane to Taxiway Delta
  - Associated signage, lighting, and electrical

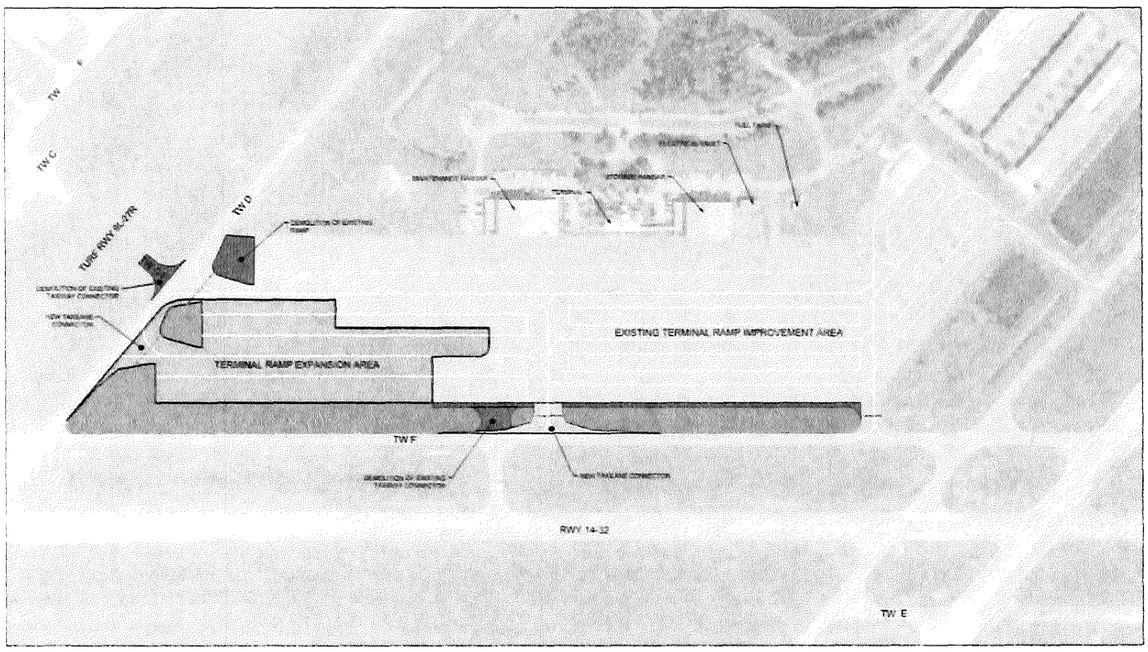


Figure 1 – General Scope Depiction

Subconsultant shall support HDR in developing contract documents for the electrical, lighting, and signage design associated with the development of the new ramp and taxilane connectors, and the demolition of the existing taxilane connector between the ramp and Taxiway F.

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will provide engineering design of electrical, lighting, and signage components of the project.

The following services will be provided:

1. Meetings:
    a. Site visit verification of survey
    b. Kickoff meeting via conference call
    c. 4 design progress meetings
    d. Virtual meetings with the DOA after each progress submittal
2. Construction Schedule - Subconsultant will review HDR's proposed construction schedule at each milestone and advise of any revisions needed due to the Subconsultant's scope of work.
3. Opinion of Probable Cost (OPC) - Subconsultant will provide quantities and unit costs of work items shown in Subconsultant's design documents.
4. Technical Specifications- Subconsultant will provide technical specifications relevant to its scope of work and coordinate with HDR to align any shared specifications, e.g. structural concrete for sign and light bases.
5. Engineer's Report - Subconsultant will provide relevant information to Subconsultant's portion of the Engineer's Report.
6. Design Plans – Subconsultant will provide the following items related to the scope of work:
    a. Electrical demolition and installation notes
    b. Electrical demolition plans
    c. Lighting and signage layout plans
    d. Lighting circuitry plans
    e. Electrical details to support the proposed electrical design
    f. Airfield Electrical Vault equipment modifications if required to support the additional lighting.
    g. Advise HDR of the electrical, signage, and lighting constructability within the proposed construction phasing for each progress submittal. Subconsultant shall advise HDR of lead times and predecessors for submittal approval, materials shipping, and civil-related construction critical path items.
7. Bid Phase:
    a. The Subconsultant shall attend the pre-bid meeting. The Subconsultant shall respond to questions from prospective bidders.
    b. The Subconsultant shall provide supplemental information to prospective bidders as required during the bidding process through the issuance of addenda

c. The Subconsultant shall review all bids to determine the most responsible and responsive bidder and provide the DOA with a recommendation for award of the construction contract.

8. Subconsultant will utilize ProjectWise software to share common files and information. The purpose of ProjectWise is to reduce the opportunity for error when HDR incorporates Subconsultant's deliverables into the master project documents. The following is an incomplete list of files that are expected to be shared between HDR and the Subconsultant.
    a. AutoCAD sheet set manager
    b. Opinion of Probable Cost Excel file
    c. Plan sheet quantity table Excel file
    d. Technical specifications Word file
    e. Engineer's Report Word file
9. Subconsultant's Project Design Schedule:
    a. Schematic Design
    b. 60% Construction Documents
    c. 90% Construction Documents
    d. 100% Construction Documents
    e. Bid and Award

The following deliverables will be provided:

- Plans
    - PDF unsigned 11x17 and 22x34 at schematic/60/90/100 percent
    - PDF digitally signed/sealed 11x17 and 22x34 at conformed documents.
    - CADD files in AutoCAD 2020 format at schematic/60/90/100/bid conformed percent complete
- Specifications in Word format at 60/90/100/bid conformed percent
- Electrical bid line items and cost estimates in excel format at 30/60/90/100 percent
- Engineer's Report sections in Word format at 30/60/90/100 percent
- Signing and sealing HDR supplied plans at HDR Office for bid phase, if requested.

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

PART 4.0 HDR'S RESPONSIBILITIES:

Contract administration.

PART 5.0 PERIODS OF SERVICE:

Subconsultant will provide services concurrent with the schedule stated in HDR's task order with the DOA.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $21,720.93. Subconsultant acknowledges that the amount is not a guarantee of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the lump sum amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit B

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

_____	HDR ENGINEERING, INC.
"Subconsultant"	"HDR"
BY: _____	BY: _____
NAME: _____	NAME: _____
TITLE: _____	TITLE: _____
ADDRESS: _____	ADDRESS: _____
_____	_____

Exhibit A
Work Breakdown Fee Schedule

PALM BEACH COUNTY DEPARTMENT OF AIRPORTS - F45 TERMINAL RAMP EXPANSION DESIGN
QUANTUM ELECTRICAL ENGINEERING, INC.
SCOPE FEE SUMMARY
FEE PROPOSAL ELECTRICAL DESIGN to HDR 11/3/2021

Rate	$161.54	$144.23	$138.46	$69.23	$132.69	$46.15			
	Proj. Mgr.	Prof. Eng	Proj. Eng	CADD/Tech	Field Eng.	Clerical	Total		TOTAL
PHASE OF WORK	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Expenses	TASK COST
Meetings									
Progress Conference calls (1hr)		4					4		$576.92
Subtotal	**0**	**4**	**0**	**0**	**0**	**0**	**4**		**$576.92**
30% Design Deliverable Phase									
Kickoff and Design Review Mtgs DOA and HDR		2					2		$288.46
Discovery & Record Review		2					2		$288.46
Electrical Design Plans & Details		8	8	16			32		$3,369.20
Bid Items & Cost Estimates, Engineering Report		2				2	4		$380.76
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**16**	**8**	**18**	**0**	**2**	**44**		**$4,753.80**
60% Design Deliverable Phase									
Design Review Mtgs DOA and HDR		1					1		$144.23
Field Investigation		6					6		$865.38
Electrical Design Plans & Details		8	20	28			56		$5,861.48
Specifications, Bid Items & Cost Estimates, Engineering Report		4	4			4	12		$1,315.36
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**21**	**24**	**30**	**0**	**4**	**79**		**$8,613.37**
90% Design Deliverable Phase									
Design Review Mtgs DOA and HDR		1					1		$144.23
Electrical Design Plans & Details		4	8	16			28		$2,792.28
Specifications, Bid Items & Cost Estimates, Engineering Report		1	4			1	6		$744.22
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**8**	**12**	**18**	**0**	**1**	**39**		**$4,107.65**
100% Design Deliverable Phase									
Design Review Mtgs DOA and HDR		1					1		$144.23
Electrical Design Plans & Details		2	4	4			10		$1,119.22
Specifications, Bid Items & Cost Estimates, Engineering Report		1	2			1	4		$467.30
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**6**	**6**	**6**	**0**	**1**	**19**		**$2,157.67**
Bid & Award									
Attend Pre-Bid Meeting		1					1		$144.23
RFI Responses		4	2	4		1	11		$1,176.91
Review of Bid Results & Recommendation		1				1	2		$190.38
Subtotal	**0**	**6**	**2**	**4**	**0**	**2**	**14**		**$1,511.52**
Grand Total Hours	**0**	**61**	**52**	**76**	**0**	**10**	**199**		**$21,720.93**
Grand Total Labor Cost	**$0.00**	**$8,798.03**	**$7,199.92**	**$5,261.48**	**$0.00**	**$461.50**			

Exhibit B
HDR Prime Agreement with Client

Subconsultant Contract

Chen Moore & Associates

Stormwater Design and Permitting

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Chen Moore and Associates, ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated November 18, 2021, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: 1
PROJECT NAME: F45 Terminal Ramp Expansion Design

PART 1.0 PROJECT DESCRIPTION:

The Palm Beach County (COUNTY) Department of Airports (DOA) North Palm Beach County General Aviation Airport (F45) is designated as a reliever for Palm Beach International (PBI) and serves helicopters, reciprocating engine aircraft, and jet aircraft.

The existing apron is situated east of Runway 14-32, north of Runway 9R-27L and adjacent to the FBO terminal building and hangars. The apron currently provides approximately 82 tie-down spaces over an aircraft parking area of approximately 40,550 square yards. The existing apron has 34 tie-down spaces sized for small single engine aircraft and 48 tie-down spaces sized for multi-engine aircraft. In addition to the aircraft tie-down locations, the apron provides two parking positions for helicopters.

The 2006 Airport Master Plan Update (MPU) and the 2018 draft Activity Demand Projections report both forecast increased demand for parking on the terminal apron. Historically, airplane design group (ADG) I aircraft have comprised most of the parked fleet at F45. In the future, ADG II aircraft are projected to become a larger portion of the fleet with the anticipated extension of Runway 14-32. The COUNTY completed a study in 2020 to evaluate ramp expansion layout alternatives to meet the increase in parking demand and up-gauging of the fleet.

The alternatives evaluated 3 development scenarios:

1. Runway 14-32 existing alignment and existing Runway Design Code B-II
2. Runway 14-32 existing alignment and upgraded Runway Design Code C-II
3. Runway 14-32 shifted 60 feet further from the ramp and upgraded Runway Design Code C-II

Alternative 3 was selected as the preferred alternative for its maximization of ramp space and because it was the mostly likely outcome of the Runway 14-32 Extension Environmental Assessment. Figure 1 shows the preferred alternative 3 ramp expansion recommended in the study.

The COUNTY wishes for HDR Engineering, Inc ('Consultant') to proceed with design and production of construction documents for the ramp expansion in general compliance with preferred alternate 3.

Consultant will perform programming, design, and bid phase services for the reconfiguration and expansion of the terminal apron as a task under its Professional Services Agreement (PSA) with the COUNTY. The desired task outcome will be the creation of design documents to support a COUNTY bid solicitation for construction of the project. Specific project components are:

- Existing terminal apron improvements
  - Removal of existing and application of new pavement markings
  - Removal of existing and installation of new aircraft tie-downs
- Terminal apron expansion
  - New pavement expansion of existing apron
  - New pavement markings
  - New grading and stormwater management to accommodate the additional impervious area
- Taxilane connections
  - Removal of existing taxilane between the apron and Taxiway F
  - New taxilane between the apron and Taxiway F aligned to break the direct connection between the ramp and Runway 14-32
  - New connector taxilane to Taxiway Delta
  - Associated signage, lighting, and electrical

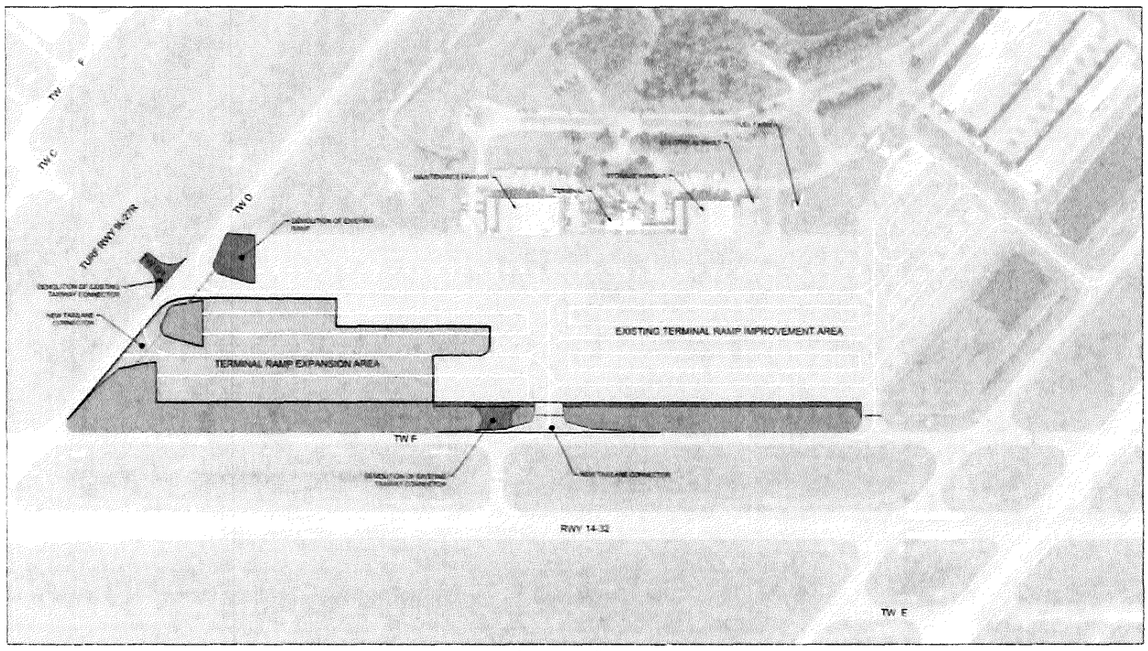


Figure 1 – General Scope Depiction

Subconsultant shall support HDR in developing contract documents for the surface water permitting and storm water design associated with the development of the new ramp and taxilane connectors, and the demolition of the existing taxilane connector between the ramp and Taxiway F.

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will provide engineering design of surface water permitting and storm water components of the project.

The following services will be provided:

1. Meetings:
    a. Site visit verification of survey
    b. Kickoff meeting via conference call
    c. 4 design progress meetings
    d. Virtual meetings with the DOA after each progress submittal
2. Construction Schedule – Subconsultant will review HDR's proposed construction schedule at each milestone and advise of any revisions needed due to the Subconsultant's scope of work.
3. Opinion of Probable Cost (OPC) – Subconsultant will provide quantities and unit costs of work items shown in Subconsultant's design documents.
4. Technical Specifications – Subconsultant will provide technical specifications relevant to its scope of work and coordinate with HDR to align any shared specifications, e.g. structural concrete for drainage structures.
5. Engineer's Report – Subconsultant will provide relevant information to Subconsultant's portion of the Engineer's Report.
6. Design Plans – Subconsultant will provide the following items related to the scope of work:
    a. Storm water system demolition and installation notes
    b. Storm water drainage demolition plans
    c. Storm water drainage layout plans
    d. Storm water drainage profiles
    e. Storm water drainage details to support the proposed design, including oil/grease skimmers, pollution retardant baffles, and other BMPs where applicable.
    f. Advise HDR of the stormwater drainage system constructability within the proposed construction phasing for each progress submittal. Subconsultant shall advise HDR of lead times and predecessors for submittal approval, materials shipping, and civil-related construction critical path items.
7. Surface Water Permits
    a. Subconsultant will obtain, review, assemble, and complete permit application packages.
    b. The subconsultant will prepare backup documentation required with the permit application packages, which may include drainage calculations, stormwater modeling analysis, and any map exhibits.

c. If necessary, subconsultant will update the relevant basins within the existing stormwater model for F45 to conduct a comprehensive analysis.
d. HDR will provide the relevant paving, grading, and drainage plans to be included within the permit application packages.
e. Subconsultant will be responsible for coordination with all regulatory agencies during the permitting process.
f. Subconsultant will attend pre-application meetings with the necessary regulatory agencies to discuss proposed improvements under this project and confirm the permit requirements at F45.
g. Subconsultant will send the completed permit applications to the DOA (via HDR) for review and signature along with a check request for all required permit application fees.
h. The DOA will be responsible for providing all required permit application fees.
i. The regulatory agencies typically complete their review within 30 calendar days after the permit application submittal. Subconsultant will be available to attend reviews meetings with the regulatory agencies to discuss any review comments on the permit submittal.
j. Upon obtaining review comments from the regulatory agencies, subconsultant will revise permit application package as per any comments from these regulatory agencies and re-submit to the regulatory agencies for permit approval. All required permit approvals must be obtained from the regulatory agencies prior to submitting the final construction documents to the DOA.

8. Bid Phase:
   a. The Subconsultant shall attend the pre-bid meeting. The Subconsultant shall respond to questions from prospective bidders.
   b. The Subconsultant shall provide supplemental information to prospective bidders as required during the bidding process through the issuance of addenda
   c. The Subconsultant shall review all bids to determine the most responsible and responsive bidder and provide the DOA with a recommendation for award of the construction contract.
9. Subconsultant will utilize ProjectWise software to share common files and information. The purpose of ProjectWise is to reduce the opportunity for error when HDR incorporates Subconsultant's deliverables into the master project documents. The following is an incomplete list of files that are expected to be shared between HDR and the Subconsultant.
   a. AutoCAD sheet set manager
   b. Opinion of Probable Cost Excel file
   c. Plan sheet quantity table Excel file
   d. Technical specifications Word file
   e. Engineer's Report Word file
10. Subconsultant's Project Design Schedule:
   a. Schematic Design
   b. 60% Construction Documents
   c. 90% Construction Documents
   d. 100% Construction Documents
   e. Bid and Award

The following deliverables will be provided:

- Plans
    - PDF unsigned 11x17 and 22x34 at schematic/60/90/100 percent
    - PDF digitally signed/sealed 11x17 and 22x34 at conformed documents.
    - CADD files in AutoCAD 2020 format at schematic/60/90/100/bid conformed percent complete
- Specifications in Word format at 60/90/100/bid conformed percent
- Storm water drainage bid line items and cost estimates in excel format at 30/60/90/100 percent
- Engineer's Report sections in Word format at 30/60/90/100 percent
- Signing and sealing HDR supplied plans at HDR Office for bid phase, if requested.

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

- The CONSULTANT assumes no modeling or design will be required to modify detention facilities or control structures outside the limits of the proposed F45 ramp expansion project limits.
- The CONSULTANT assumes that the water quality treatment volume required by the South Florida Water Management District for permitting will be limited to ½-inch of dry pre-treatment because the additional impervious area associated with the F45 ramp expansion has already been accounted for in the overall stormwater management system for F45.

PART 4.0 HDR'S RESPONSIBILITIES:

- Contract administration.
- HDR will provide the approved F45 Airport Layout Plan to Subconsultant. HDR will provide any available stormwater record drawings to Subconsultant.
- HDR will provide any available F45 Stormwater Master Plan documents to Subconsultant.
- HDR will provide any existing stormwater modeling files from the previous F45 Stormwater Master Plan Project to Subconsultant (if available).
- HDR will provide any geotechnical reports completed for the F45 Terminal Ramp Expansion.
- HDR will provide any necessary signed and sealed plans for the F45 Terminal Ramp Expansion Project, which will be required for the permit application packages.
- HDR will assist in obtaining any signatures and fees required with the permit application packages from the DOA.

PART 5.0 PERIODS OF SERVICE:

Subconsultant will provide services concurrent with the schedule stated in HDR's task order with the DOA.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $90,055.20. Subconsultant acknowledges that the amount is not a guarantee of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the lump sum amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit B

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

_____	HDR ENGINEERING, INC.
"Subconsultant"	"HDR"
BY: _____	BY: _____
NAME: _____	NAME: _____
TITLE: _____	TITLE: _____
ADDRESS: _____	ADDRESS: _____
_____	_____

Exhibit A
Work Breakdown Fee Schedule

EXHIBIT A - FEE PROPOSAL
Palm Beach County Department of Airports - HDR
F45 Terminal Ramp Expansion Design

Chen Moore and Associates Project # P21.065-004

									Total
		Principal	Sr. Project Manager	Project Manager	CMA Senior Engineer	Project Engineer	Designer		
Hourly Rate		$282.12	$197.48	$183.38	$155.17	$126.96	$98.75		
TASK 1	**Meetings**								
1.1	Site Visit - Verification of Survey		4		4				$1,410.60
1.2	Kickoff Meeting via Conference Call		1		2				$507.82
1.3	Design Progress Meetings (4)		8		12				$3,441.88
1.4	Virtual Meetings with DOA after Progress Submittals		8		16				$4,062.56
Task 1 Total		**$0**	**$4,147**	**$0**	**$5,276**	**$0**	**$0**	**$0**	**$9,422.86**
TASK 2	**Schematic Design**								
2.1	Plan Sheet - Stormwater Notes and Legend		1		2		4		$902.82
2.2	Plan Sheet - Stormwater Demolition Plan (6 sheets)		1		4		8		$1,608.16
2.3	Plan Sheet - Stormwater Layout Plan (6 sheets)		8		16		24		$6,432.56
2.4	Plan Sheet - Stormwater Profiles (3 sheets)		2		6		12		$2,510.98
2.5	Plan Sheet - Stormwater Details		2		4		8		$1,805.64
2.6	Preliminary Engineer's Report		8		24				$5,303.92
2.7	Preliminary OPC and Review of Projected Construction Schedule		1		2				$507.82
Task 2 Total		**$0**	**$4,542**	**$0**	**$9,000**	**$0**	**$5,530**	**$0**	**$19,071.90**
TASK 3	**60% Construction Documents**								
3.1	Plan Sheet - Stormwater Notes and Legend				1		2		$352.67
3.2	Plan Sheet - Stormwater Demolition Plan (6 sheets)		1		4		8		$1,608.16
3.3	Plan Sheet - Stormwater Layout Plan (6 sheets)		8		24		36		$8,858.92
3.4	Plan Sheet - Stormwater Profiles (3 sheets)		4		8		16		$3,611.28
3.5	Plan Sheet - Stormwater Details		1		4		8		$1,608.16
3.6	60% Engineer's Report		8		16				$4,062.56
3.7	60% OPC and Review of Projected Construction Schedule		1		4				$818.16
3.8	Outline of Technical Specifications		1		2				$507.82
Task 3 Total		**$0**	**$4,740**	**$0**	**$9,776**	**$0**	**$6,913**	**$0**	**$21,427.73**
TASK 4	**90% Construction Documents**								
4.1	Plan Sheet - Stormwater Notes and Legend				1		2		$352.67
4.2	Plan Sheet - Stormwater Demolition Plan (6 sheets)		1		4		8		$1,608.16
4.3	Plan Sheet - Stormwater Layout Plan (6 sheets)		4		6		24		$4,090.94
4.4	Plan Sheet - Stormwater Profiles (3 sheets)		2		8		12		$2,821.32
4.5	Plan Sheet - Stormwater Details		1		2		4		$902.82
4.6	90% Engineer's Report		1		2				$507.82
4.7	90% OPC and Review of Projected Construction Schedule		1		2				$507.82
4.8	Draft Technical Specifications		8		16				$4,062.56
Task 4 Total		**$0**	**$3,555**	**$0**	**$6,362**	**$0**	**$4,938**	**$0**	**$14,854.11**
Task 5	**Permitting**								
5.3	Prepare ERP Application		8		24				$5,303.92
5.4	Respond to RAI (Up to 2)		4		8				$2,031.28
Task 5 Total		**$0**	**$2,370**	**$0**	**$4,965**	**$0**	**$0**	**$0**	**$7,335.20**
TASK 6	**100% Construction Documents**								
6.1	Plan Sheet - Stormwater Notes and Legend				1		1		$253.92
6.2	Plan Sheet - Stormwater Demolition Plan (6 sheets)		1		2		4		$902.82
6.3	Plan Sheet - Stormwater Layout Plan (6 sheets)		1		12		8		$2,849.52
6.4	Plan Sheet - Stormwater Profiles (3 sheets)		2		8		6		$2,228.82
6.5	Plan Sheet - Stormwater Details		1		4		4		$1,213.16
6.6	100% Engineer's Report		1		2				$507.82
6.7	100% OPC and Review of Projected Construction Schedule		1		2				$507.82
6.8	Final Technical Specifications		4		8				$2,031.28
Task 6 Total		**$0**	**$2,172**	**$0**	**$6,052**	**$0**	**$2,271**	**$0**	**$10,495.16**
Task 7	**Bid and Award**								
7.1	Attend Pre-Bid Meeting		1		2				$507.82
7.2	Respond to Bidder Questions / Addenda		4		8		16		$3,611.28
7.3	Review Bids for Stormwater and Provide Award Recommendation		1		4				$818.16
7.4	Prepare Conformed Documents		2		6		12		$2,510.98
Task 7 Total		**$0**	**$1,580**	**$0**	**$3,103**	**$0**	**$2,765**	**$0**	**$7,448.24**
TOTAL FEE									**$90,055.20**

Exhibit B
HDR Prime Agreement with Client

Subconsultant Contract

Brown & Philips

Topographic Survey and SUE

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Brown & Phillips, Inc., ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated October 7, 2019, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: 4
PROJECT NAME: F45 Terminal Ramp Expansion Design

PART 1.0 PROJECT DESCRIPTION:

HDR will perform programming, design, and bid phase services as a task order under its Professional Services Agreement (PSA) with the DOA. The project outcome will be the creation of design documents that enable the DOA to bid, select a contractor, and construct the project. Specific project components are:

- Existing terminal apron improvements
    - Removal of existing pavement markings and application of new pavement markings
    - Removal of existing and installation of new aircraft tie-downs as needed
- Terminal apron expansion
    - New pavement expansion of existing apron
    - New pavement markings
    - New grading and stormwater management to accommodate the additional impervious area
- Taxiway connections
    - Removal of existing taxiway connector between the apron and Taxiway F
    - New taxiway between the apron and Taxiway F aligned to avoid a direct connection between the ramp and Runway 14-32
    - New connector taxilane to Taxiway Delta
    - Associated signage, lighting, and electrical

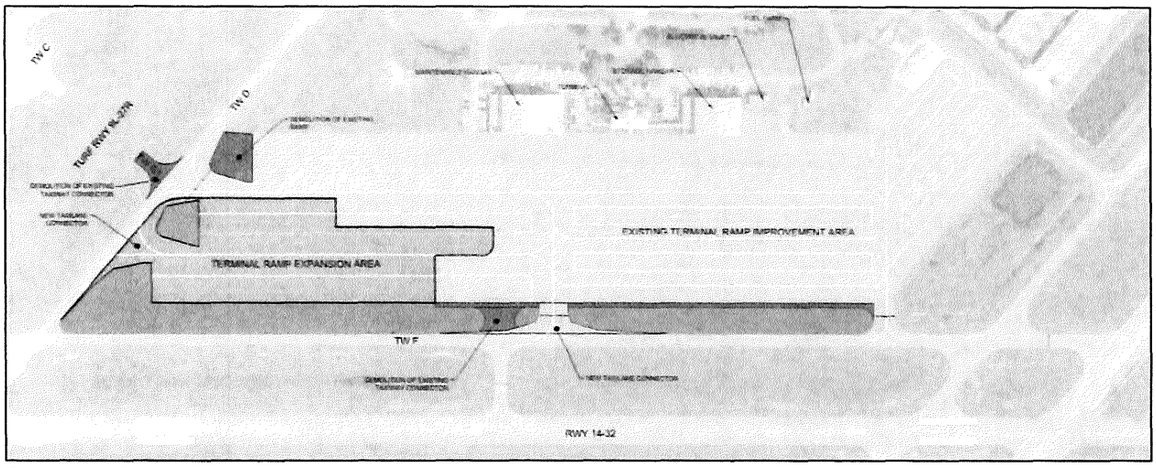


Figure 1 Design Concept

Subconsultant will perform a topographic survey and subsurface utility engineering (SUE) for the use of HDR to develop base mapping for the preparation of engineering design documents. Limits of the work are depicted in Exhibit B 'Project Location/Extents'.

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will perform a topographic survey and subsurface utility engineering (SUE) with the intent to develop base mapping for the preparation of engineering design documents. Limits of the work are depicted in Exhibit B 'Project Location/Extents'.

The following services will be provided:

1. Subconsultant shall provide a survey party with an adequate number of movement area badged drivers to escort the party.
2. Set project benchmarks.
3. Set adequate project horizontal control and references. Establish baselines for Taxiway D and Taxiway F. The Horizontal Datum will be NAD 83-90 (State Plane, East Coast, US Foot) and the Vertical Datum will be NAVD-88.
4. Perform a topographic survey within the project limits to include pavement edges, pavement markings, rock and other improved driving surfaces, and existing ground elevations to include apparent high and low points.
5. Provide a TIN file of the topographic surface.
6. Locate all above-ground features within the survey extents, including lights, signs (with description of sign faces), junction cans, etc. together with all evidence of below-ground features.
7. Dimensions of drainage structures, including grate size, box length, box width, box depth, box diameter, pipe size and material. Elevations of drainage structures, including rim, inverts, baffles, weirs, and bottom. Subconsultant shall be responsible for coordinating opening of grates, rims, and other covers for underground structures.
8. Map underground utilities with ground penetrating radar (GPR) and electromagnetic induction (EI) methods.

9. Perform GPR investigation of up to 35 geotechnical boring locations to clear the vicinity of buried utilities.
10. Obtain elevations within the survey limits using a 25-foot grid on paved surfaces and 50-foot grid on dirt.
11. Locate and obtain surface elevations at soil borings.
12. Limited survey areas. As depicted in Exhibit B, there are project areas required a limited scope of survey
    a. All surface features, no topography. These areas require the horizontal location and extents of all surface features, including but not limited to lighting, signage (with panel descriptions and orientations), all surface evidence of existing underground features, markings, tie-downs, and edge of pavement. No topography is required in this area.
    b. Lighting and edge of pavement. This area requires the horizontal location and extents of airfield lighting. Surveyor shall provide horizontal location/extents of adjacent edge of full-strength pavement.
13. Confirm horizontal and vertical control prior to construction.
14. Provide deliverables as specified herein.

The following deliverables will be provided:

- Electronic CAD files in AutoCAD Civil 3D in accordance with HDR CADD Specifications for Project Drawings (Exhibit D). Software version, survey sheet names, numbers, and borders shall be provided by HDR. Plan views at 40 scale or less.
- 1 digitally signed/sealed PDF, 24x36 and 11x17
- 1 unsigned/unsealed PDF, 24x36 and 11x17
- 1 signed and sealed hard copies of survey 24x36 and 11x17.
- TIN surface in .xml format
- Points in ASCII PNEZD format.

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

PART 4.0 HDR'S RESPONSIBILITIES:

Contract administration

PART 5.0 PERIODS OF SERVICE:

Subconsultant will conform to the schedule in Exhibit C.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $49,004.29. Subconsultant acknowledges that the amount is not a guarantee

of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the lump sum amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit E

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

BROWN & PHILLIPS, INC. "Subconsultant"		HDR ENGINEERING, INC. "HDR"	
BY:		BY:	
NAME:	John E. Phillips, III	NAME:	
TITLE:	President	TITLE:	
ADDRESS:	1860 Old Okeechobee Road, Suite 509 West Palm Beach, FL 33409	ADDRESS:	

Exhibit A
Work Breakdown Fee Schedule

BROWN & PHILLIPS, Inc.
PROFESSIONAL SURVEYING SERVICES

EXHIBIT 'A'

F45 Terminal Ramp Expansion Design

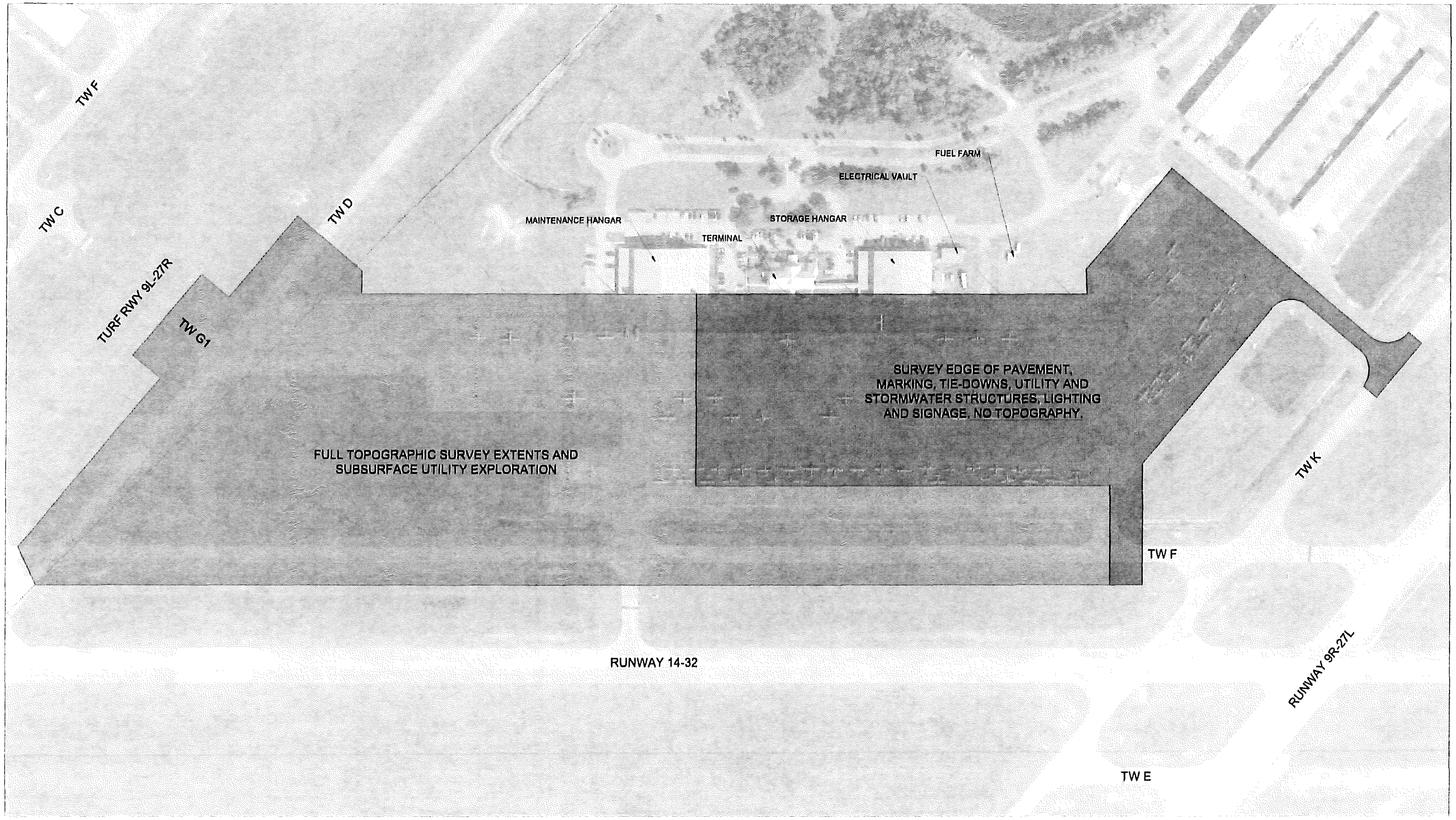
Type of Survey: Topographic
Size:
Date: November 5, 2021

TASK	SURVEY CREW	CADD TECH	SURVEY TECH	PLS	COMMENTS
Meetings and Coordination				4	
Horizontal Project Network Control	12		4	2	Establish and tie-in control
Vertical Project Network Control	16		2		Set benchmarks along corridor
Baseline Layout- Twy D & F	4		8	1	Establish baselines
Pink Area - full topo Tie-In Improvements	32		6	2	Locate all above ground features
Cross Sections	40		20	2	25' grid on paved surfaces, 50' grid on dirt - TIN file
As-builts	24		5	1	As-built drainage structures - rim, invert, material, pipe size, etc
Underground Utilities	12	6	8	2	Coordinate underground utilities and locate designates
Runway Markings	12		2		Tie in pavement markings
Locate and Obtain Elevations at Soil Borings	8		2	1	Locate soil borings (maximum of 35 soil borings) done by others
Purple Area - limited topo Locate E/P, marking, tie-downs, utility and stormwater structures, lighting and signage	32		7	2	No vertical
Topographic Survey		60	12	6	Prepare survey drawing at 1"=40' and other deliverables
Address comments		8	8	4	Comment revisions
Confirm horizontal and vertical control prior to construction	10		6	2	Return prior to construction to flag control points
Total Hours:	202	74	90	29	
Rate/Hour	$140.90	$84.54	$84.54	$137.17	
Subtotal:	$28,461.80	$6,255.96	$7,608.60	$3,977.93	
Total Labor Cost:					$46,304.29

Other Direct Costs:	quantity	unit	cost/unit	total	
Utility Targeting (GPR)	1	LS	$2,700.00	$2,700.00	
Total Other Direct Costs:					$2,700.00

TOTAL PRICE **$49,004.29**

Exhibit B
Survey Extents



LEGEND

PROPOSED APRON

EXISTING APRON

0 100' 200'

TERMINAL RAMP EXPANSION SURVEY EXTENTS

ASSUMPTIONS:
RW 14-32 NEW SOUTHWESTERN ALIGNMENT
RW 14-32 NEW RUNWAY DESIGN CODE C-II

NORTH PALM BEACH COUNTY GENERAL AVIATION AIRPORT (F45)
TERMINAL RAMP EXPANSION

DATE
NOVEMBER, 2020

EXHIBIT NO.
1

Plot Date: 2021/11/03 at 8:02 AM local time
Author: BOWDOIN, WILLIAM

Exhibit C
Schedule

MILESTONE DESCRIPTION	DATE
Notice to Proceed	Week 1
Start of field work	Week 3
Completion of SUE field work	Week 5
Completion of survey fieldwork	Week 11
Delivery of Draft Survey	Week 15
HDR survey review (1 week)	Week 16
Delivery of Final Survey	Week 17

Exhibit D
HDR Survey Deliverable Requirements

HDR Survey Deliverable Requirements

The attached files may include Civil 3D Drawing Templates. Check with your HDR project contact to determine if a template drawing is required.

DIGITAL SURVEY DELIVERABLE SPECIFICATIONS

Unless specifically directed by the engineer, the following specifications shall be applied for all digital survey deliverables to HDR that are to be utilized for design projects.

DRAWING COORDINATE SYSTEM

The drawing file is to be in model space utilizing the coordinate system and vertical datum specified by the client/HDR. A separate document should also be supplied with any combined site scale factor and origin needed to convert coordinates from ground to grid if applicable.

PROPERTIES AND DRAWING ENTITIES

Electronic survey to be delivered in AutoCAD Civil 3D release 2018 format or other approved format. The drawing shall be layered in accordance with National CAD Standards (NCS). See attached AutoCAD template file containing layers provided by HDR.
Separate layer names should be used for all distinct objects surveyed. Do not group dis-similar items together on the same layer. For example, do not place line work and annotation on the same layer.
All properties of the AutoCAD entities in the drawing are to be BYLAYER (Absolutely No Exceptions Here). In other words, do not change the properties of individual entities. For example, do not place water items on the sanitary layer and just change the color, linetype, or lineweight of the entity. Any user defined blocks used in the drawing shall have all entities created on layer 0, and all other properties shall be set to BYLAYER.
All blocks, dimensions, mtext, mleaders used in the drawing will use the Annotative property wherever possible. An exception to this will be blocks used as point symbols. These blocks cannot have an annotative property.
Points and survey figures shall not be used to depict physical features. Features shall be depicted using blocks or linework. Points shall only be used for topographic information.

SURFACES

Creating an accurate existing surface model is critical to the overall design process. An accurate model extends past the requirements for the given contour interval stated by the Master Services Agreement. It is the intention of this model to be generated with breaklines. There must be breaklines at all breaks in grade along the site. This should include but not limited to ALL Tops, Toes, Swales, Crowns, Flow Lines, Face/Back of Curbs, Edge of Pavement and any other linear features. A surface given without breaklines will be a cause for immediate rejection and delay the project schedule.
Surfaces created with Civil 3D shall be created from Survey Points and 3D break lines (with preference to the use of Feature Lines) at a minimum. In the event the number of collected points exceeds 20,000, an external point file may be used for natural ground or spot shots. The external file shall be a separate comma delimited ASCII point file in PNEZD (Point Number, Northing, Easting, Elevation, and Description) format. The point file should then be linked to the existing ground surface and a note placed in the description of the surface giving the external file name.
Surfaces created from other software programs should include Survey Points and 3D Breaklines at a minimum. The drawing should include polylines representing contours, 3D Lines or 3D Faces representing the surface model.

SURVEY OBJECTS

Survey Figures should NOT be used in the drawing for 2D line work. Survey Figures do not allow for editing inside the design process. For example, proposed curb cuts cannot be placed because a figure cannot be edited without the survey database, so even changing a layer would be impossible. Therefore, any figure created should be converted to a 2D polyline at elevation (z-value) of '0'.
All points shall be inserted from a Survey Database thereby creating Survey Points and not Cogo Points. This will lock the point and prevent users from accidentally modifying survey data (location, elevation, and description.).
Parcels shall be made up of individual segments and not polyline segments. Parcel geometry should be clean with no overlapping segments, duplicate segments or vertical PI's. Parcels shall be of a single elevation of zero (0).

UNDERGROUND UTILITIES

At a minimum, the surveyor must supply both 2D and 3D linework. 3D polylines and/or Feature lines need to represent existing pipes from invert to invert. If the surveyor would prefer to use Civil 3D pipe and structure objects to represent existing utilities then they are free to do so. Rim or top elevations, measure downs or dips and top of nut elevations of water valves shall also be labeled as required by the project manager.

DOCUMENTATION

A list of bench marks including the reference datum, reference bench mark, an accurate description of each mark and its elevation. At least two of the permanent bench marks shall be located on or near the project outside the area of proposed construction where possible.
A separate comma delimited ASCII point file is required as a QA/QC step to check the drawing in the event we should experience difficulties. This file is to be a comma delimited PNEZD (Point Number, Northing, Easting, Elevation, and Description) ascii format.

Exhibit E
HDR Prime Agreement with Client

Subconsultant Contract

Tierra SF

Geotechnical Investigation

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Tierra South Florida Inc., ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated October 3, 2019, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: X
PROJECT NAME: F45 Terminal Ramp Expansion

PART 1.0 PROJECT DESCRIPTION:

The Palm Beach County (COUNTY) Department of Airports (DOA) North Palm Beach County General Aviation Airport (F45) is designated as a reliever for Palm Beach International (PBI) and serves helicopters, reciprocating engine aircraft, and jet aircraft.

The existing apron is situated east of Runway 14-32, north of Runway 9R-27L and adjacent to the FBO terminal building and hangars. The apron currently provides approximately 82 tie-down spaces over an aircraft parking area of approximately 40,550 square yards. The existing apron has 34 tie-down spaces sized for small single engine aircraft and 48 tie-down spaces sized for multi-engine aircraft. In addition to the aircraft tie-down locations, the apron provides two parking positions for helicopters.

The 2006 Airport Master Plan Update (MPU) and the 2018 draft Activity Demand Projections report both forecast increased demand for parking on the terminal apron. Historically, airplane design group (ADG) I aircraft have comprised most of the parked fleet at F45. In the future, ADG II aircraft are projected to become a larger portion of the fleet with the anticipated extension of Runway 14-32. The COUNTY completed a study in 2020 to evaluate ramp expansion layout alternatives to meet the increase in parking demand and up-gauging of the fleet.

The alternatives evaluated 3 development scenarios:

1. Runway 14-32 existing alignment and existing Runway Design Code B-II
2. Runway 14-32 existing alignment and upgraded Runway Design Code C-II
3. Runway 14-32 shifted 60 feet further from the ramp and upgraded Runway Design Code C-II

Alternative 3 was selected as the preferred alternative for its maximization of ramp space and because it was the mostly likely outcome of the Runway 14-32 Extension Environmental Assessment. Figure 1 shows the preferred alternative 3 ramp expansion recommended in the study.

The COUNTY wishes for HDR Engineering, Inc ('Consultant') to proceed with design and production of construction documents for the ramp expansion in general compliance with preferred alternate 3.

Consultant will perform programming, design, and bid phase services for the reconfiguration and expansion of the terminal apron as a task under its Professional Services Agreement (PSA) with the COUNTY. The desired task outcome will be the creation of design documents to support a COUNTY bid solicitation for construction of the project. Specific project components are:

- Existing terminal apron improvements
  - Removal of existing and application of new pavement markings
  - Removal of existing and installation of new aircraft tie-downs
- Terminal apron expansion
  - New pavement expansion of existing apron
  - New pavement markings
  - New grading and stormwater management to accommodate the additional impervious area
- Taxilane connections
  - Removal of existing taxilane between the apron and Taxiway F
  - New taxilane between the apron and Taxiway F aligned to break the direct connection between the ramp and Runway 14-32
  - New connector taxilane to Taxiway Delta
  - Associated signage, lighting, and electrical

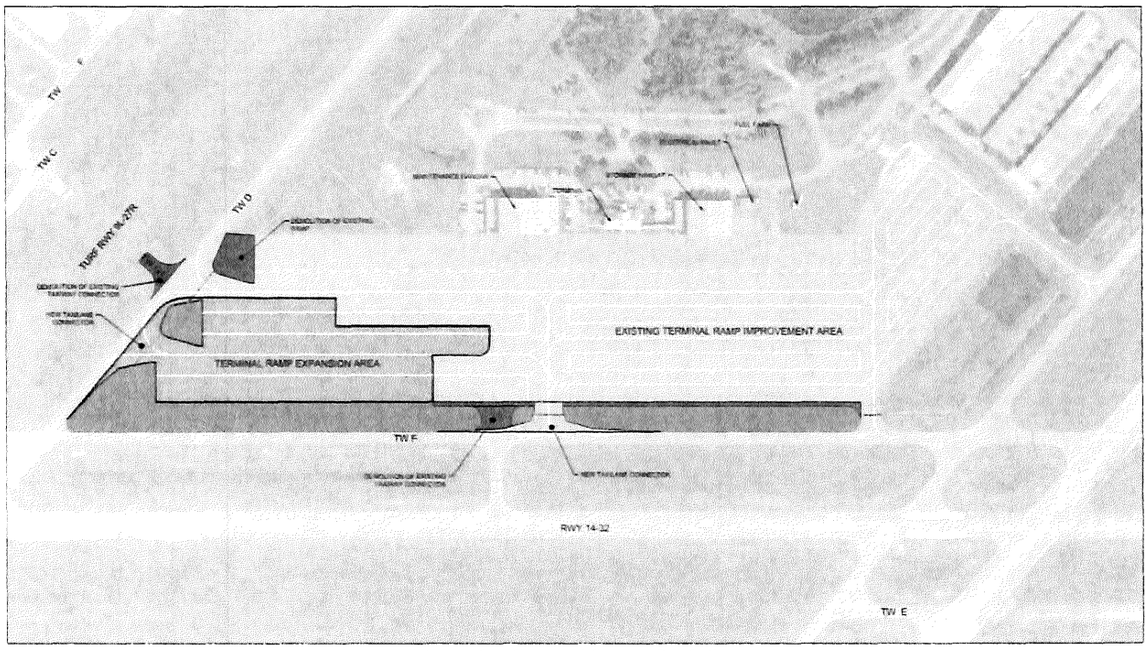


Figure 1 – General Scope Depiction

Subconsultant shall support HDR in developing contract documents for the geotechnical services associated with the development of the new ramp and taxilane connectors, and the demolition of the existing taxilane connector between the ramp and Taxiway F.

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will perform a geotechnical investigation with the intent to develop site condition information for the preparation of engineering design documents. Anticipated design features requiring geotechnical information include:

- Hot mix asphalt (HMA) new pavement sections
- Asphalt overlay of HMA pavements
- Pavement demolition
- Stabilized soil shoulders
- Earthwork cut and fill
- Dry retention basin for stormwater quality and attenuation
- Drainage pipes
- Airfield signage and bases
- Electrical duct banks, junction can plazas
- Sodding and seeding

All work performed by subconsultant shall be in accordance with Advisory Circular (AC) 150/5320-6G 'Airport Pavement Design and Evaluation'.

The following services will be provided:

Field Investigation:

- 25 SPT Borings to a depth of approximately 10 feet below existing grade. Describe material in accordance with Unified Soil Classification System (USCS) and any pavement courses encountered.
    - 200,000 SF of new ramp / 10,000 SF per boring = 20 borings
    - 2 new taxiway connectors less than 200 feet long = 2 borings
    - 3 borings for additional exploration if needed.
- 10 cores through existing HMA taxiway or apron pavement section
    - Describe material and measure thickness of pavement mat layers, base course, subbase, subgrade stabilization (2 ft SPT with each core)
    - Measure crack width and depth, delamination depth
    - Color photos of profile and top view of all cores with ruler for reference
- Visually classification of the soils encountered
- 4 Double-Ring Infiltrometer Tests (DRIT) in accordance with ASTM D3385 Standard Test Method for Infiltration Rate of Soils in Field as recommended in the FDOT Drainage Design Guide, January 2020
- Determine the depth to ground water and estimate depth to seasonal high ground water
- Obtain soil samples for laboratory testing. Samples shall be gathered from the soil layer anticipated to be the top layer of subgrade under the completed pavement section. HDR

shall provide sample collection depth to the Subconsultant. (Sample to be adjacent to paved surfaces (i.e. no patching required))

Laboratory Testing:

- Perform testing on soil samples representing each distinctly different soil type or strata
- Follow ASTM D 421 Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
- ASTM D 422 Standard Test Method for Particle-Size Analysis of Soils
- ASTM D 2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D 4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- 3 Each - ASTM D 1883, Standard Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils (3 samples).
- ASTM D 1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
- ASTM D2974, Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils

Borings and test locations will be laid out on an exhibit by HDR and presented to Subconsultant prior to starting field work. Field work will be performed during the daytime by coordinating with Airport Operations. Significant coordination by Subconsultant will likely be required to perform the field operations. Field work will be performed by Subconsultant personnel with a security badge. The DOA will provide escort for all movement areas. Field work may require subconsultant field personnel to badged with the airport. If employee is not able to acquire a badge, HDR employee will provide escort as needed. All work will be coordinated with the Airport's Operations staff. A geotechnical engineer will evaluate the results of all drilling and testing.

Notes – access to the site assumed to be daytime. Completion schedule will be contingent to utility clearances for drilling access. Asphalt samples too thin for extraction gradation may need to be joined to other samples for testing.

Results of the field and lab work will be prepared in a report. The report will contain the following recommendations:

- Design subgrade bearing pressure for spread footings
- Subgrade preparation for spread footings
- Recommendations for pipe bedding and drainage structure foundations based on the observed soil conditions
- Subgrade CBR recommendations for use in pavement design

The report will contain a project vicinity map, plan view showing the location of borings, basis and results of tests performed, detailed description of findings, recommendations, and an executive summary.

The following deliverables will be provided:

- Geotechnical investigation report
  - Unsigned PDF format
  - Digitally signed/sealed PDF format
  - Two hard copies, in color, signed and sealed by a registered professional engineer in the State of Florida
- Boring logs in AutoCAD DWG Format

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

PART 4.0 HDR'S RESPONSIBILITIES:

Contract administration

PART 5.0 PERIODS OF SERVICE:

Subconsultant will conform to the schedule in Exhibit C.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $24,370.00. Subconsultant acknowledges that the amount is not a guarantee of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the lump sum amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit C

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

Tierra South Florida, Inc. "Subconsultant"		HDR ENGINEERING, INC. "HDR"	
BY:		BY:	
NAME:	Raj Krishnasamy, P.E.	NAME:	
TITLE:	President	TITLE:	
ADDRESS:	2765 Vista Pkwy, Ste 10 WPB, FL 33411	ADDRESS:	

Exhibit A
Work Breakdown Fee Schedule

Tierra South Florida Inc. Standard Hourly Rate Table
North Palm Beach County General Aviation Airport (F45)
TSF Proposal No. 2111-800.F45 Ramp Expansion (HDR)

CATEGORY	HOURLY RATE	UNIT	QUANTITY	FEES
Geotechnical Engineering/Inspections				
PROJECT MANAGER	$175.00	HOUR	4	$700.00
PRINCIPAL ENGINEER	$175.00	HOUR	12	$2,100.00
SENIOR ENGINEER	$150.00	HOUR	24	$3,600.00
PROJECT ENGINEER	$125.00	HOUR		
SENIOR TECHNICIAN	$75.00	HOUR	16	$1,200.00
CADD	$85.00	HOUR	24	$2,040.00
Field Investigation				
MOBILIZATION OF MEN AND EQUIPMENT				
TRUCK-MOUNTED EQUIPMENT	$350.00	DAY	1	$350.00
SUPPORT VEHICLE	$150.00	DAY	7	$1,050.00
STANDARD PENETRATION TEST BORINGS				
(BY TRUCK-MOUNTED EQUIPMENT)				
LAND: 0 - 50 FT DEPTH (DAY)	$13.00	LINEAL FOOT	270	$3,510.00
LAND: 0 - 50 FT DEPTH (NIGHT)	$18.00	LINEAL FOOT	0	$0.00
GROUT-SEAL BOREHOLES				
(BY TRUCK-MOUNTED EQUIPMENT)				
LAND: 0 - 50 FT DEPTH (DAY)	$6.00	LINEAL FOOT	250	$1,500.00
LAND: 0 - 50 FT DEPTH (NIGHT)	$7.00	LINEAL FOOT	0	$0.00
CASING ALLOWANCE				
(BY TRUCK-MOUNTED EQUIPMENT)				
LAND: 0 - 50 FT DEPTH (DAY)	$7.00	LINEAL FOOT	250	$1,750.00
LAND: 0 - 50 FT DEPTH (NIGHT)	$8.50	LINEAL FOOT	0	$0.00
FIELD PERMEABILITY TESTS (DAY)	$300.00	EACH	0	$0.00
FIELD PERMEABILITY TESTS (NIGHT)	$300.00	EACH	0	$0.00
DOUBLE RING INFILTRATION TEST	$500.00	EACH	4	$2,000.00
PAVEMENT CORES-ASPHALT	$225.00	EACH	10	$2,250.00
Laboratory Testing				
NATURAL MOISTURE CONTENT TESTS	$10.00	EACH	8	$80.00
GRAIN-SIZE ANALYSIS - FULL GRADATION	$65.00	EACH	8	$520.00
SINGLE SIEVE	$35.00	EACH		
ORGANIC CONTENT TESTS	$35.00	EACH	2	$70.00
ATTERBERG LIMIT TESTS	$75.00	EACH	2	$150.00
LAB CBR AND SAMPLE	$500.00	EACH	3	$1,500.00
BITUMEN EXTRACTION	$150.00	EACH	0	$0.00
BITUMEN GRADATION	$150.00	EACH	0	$0.00
Corrosion Series FM 5-550 through 5-553	$185.00	EACH	0	$0.00
				$24,370.00

NOTE - SEE CONTRACT RATE SHEET FOR OTHER RATES ON THE CONTRACT, IF NEEDED

Exhibit B
Schedule

Task	Days
TSF NTP	1
TSF Mobilization	14
TSF Field Work	14
TSF Laboratory Testing	14
TSF Draft Report Submittal	14
TSF Draft Report Review Period	14
TSF Update Draft Report	7
TSF Submit Final Report	5
	83

Exhibit C
HDR Prime Agreement with Client

END OF EXHIBIT A

EXHIBIT A-2 – Task I-22 LNA-H-006: Runway 10-28 Surface Treatment Design

Palm Beach County Department of Airports

Airport Civil Consulting Services

Task Authorization No. I-22-LNA-H-006

Palm Beach County Park Airport (LNA)

Runway 10-28 Surface Treatment and Taxiway C1 Design

1475 Centrepark Boulevard, Suite 230
West Palm Beach, FL 33401

June 2022

EXHIBIT 'A'

SCOPE OF SERVICES

Description of the services outlined below in Section 0.0 - General is intended to be general in nature and should not be construed to be a complete description of the services or a limitation on the Scope of Services to be provided. Refer to Sections 1 through 8 for the definition of specific scope items to be performed by HDR.

0.0 GENERAL

0.1 PROJECT UNDERSTANDING

The Palm Beach County (COUNTY) Department of Airports' (DOA) Palm Beach County Park Airport (LNA) is served by the 3,489' x 75' primary Runway 10-28. Runway 10-28 was constructed in 1965 and last rehabilitated/relocated in 2007.

The FDOT Pavement Management Program (PMP) Reports from the early 2010s advised that major rehabilitation of LNA's Runway 10-28 would be required in 2020. However, Runway 10-28 was assigned a Pavement Condition Index (PCI) of 78 in the most recent PMP Report dated November 2019. A PCI of 78 is considered 'Satisfactory' and does not warrant major rehabilitation per se. PCIs of 65 and lower on general aviation facilities typically indicates a need for major rehabilitation. HDR Engineering, Inc. (Consultant) completed a visual assessment of the pavement condition of Runway 10-28 and submitted a Pavement Evaluation Report to the DOA in April 2021. The report concluded that although the 2019 PCI data rated the runway pavement in "Satisfactory" condition, the 2021 re-inspection data showed a decline in the PCI resulting in a "Fair" rating. The decline indicated an acceleration of the rate of deterioration, in agreement with pavement performance models. The current PCI of 69 is below the Minimum Service Level PCI of 75 and above the critical PCI of 65. FDOT policy recommends that airports maintain the Minimum Service Level PCI with a combination of localized maintenance and repair and timely major rehabilitation. Due to the lack of structural distresses and light-duty traffic demands, the report recommended maintenance activities only, primarily the application of an asphalt seal surface treatment to restore the ride quality, surface binder, and fine aggregate. This treatment may extend the life of the runway pavement by up to 5 years.

The draft LNA Future Airport Layout Plan (ALP), dated July 2020, calls out a Runway Incursion Mitigation (RIM) improvement to Runway 10-28. In its existing condition, the alignment of Taxiway D is not desirable because it provides a direct connection between the south ramp and Runway 10-28. To mitigate this condition, the ALP calls for the removal of Taxiway D between Taxiway A and Taxiway C. A new connector designated Taxiway C1 is proposed between Taxiways A and C 280 feet west of existing Taxiway D.

In Figure 1 below, the Runway 10-28 surface treatment is shown in magenta, the new Taxiway C1 is shown in blue, and the partial removal of Taxiway D is shown in red. The COUNTY wishes for the Consultant to proceed with design and production of construction documents for the work.

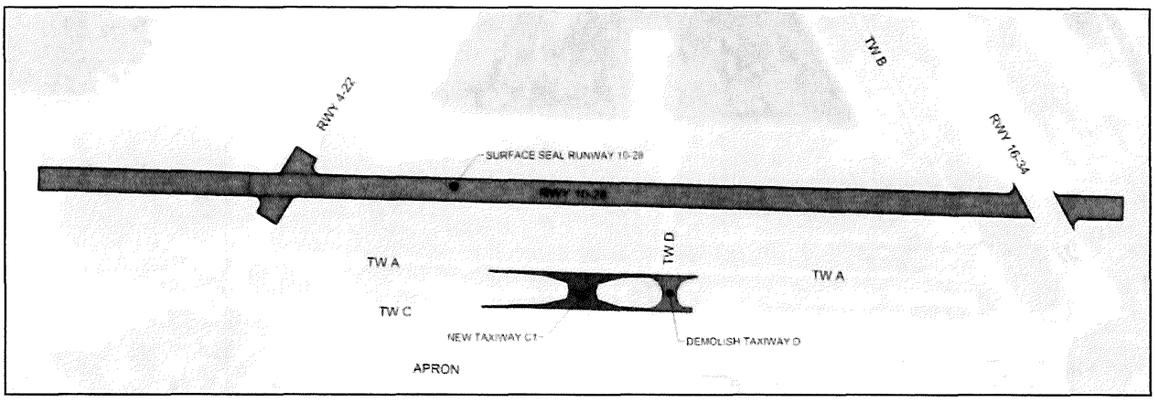


Figure 1 – General Scope Depiction

PROJECT DESCRIPTION AND GENERAL SCOPE

Consultant will perform programming, design, and bid phase services as a task order under its Professional Services Agreement (PSA) with the DOA. Project funding may be provided by the Florida Department of Transportation (FDOT). Project design shall comply with the funding requirements of the above listed agencies. The project outcome will be the creation of design documents that enable the DOA to bid, select a contractor, and construct the project. Specific project components are:

- Runway 10-28 improvements
  - Pavement surface preparation and marking removal where required
  - Emulsified asphalt slurry seal surface treatment
  - New pavement markings per current FAA standards
- Existing Taxiway D
  - Demolition of existing Taxiway D connector between Taxiway A and Taxiway C
  - Removal of existing markings on adjacent Taxiway A and apron leading to the demolished segment of Taxiway D.
  - Renaming of remaining pavement section of Taxiway D to an alpha numeric designation (Taxiway A2).
- New Taxiway C1
  - New pavement section
  - New electrical, lighting, and signage
  - New pavement markings per current FAA standards.
  - New grading and stormwater to accommodate pavement expansion

The following HDR team members will be involved in this project for the roles defined as follows. Their respective scope and fee proposals are provided herein.

HDR
Shall provide project management, civil engineering, environmental investigation, phasing, scheduling, and opinion of probable construction cost.

Brown & Phillips
Shall provide topographic survey and subsurface utility engineering.

Tierra SF
Shall provide geotechnical investigation.

Quantum Electrical Engineering
Shall provide electrical engineering, signage, and lighting design.

1. Phase 1A: Planning and Programming

1.1. Kickoff meeting. Consultant shall schedule and lead a project kickoff meeting with the DOA and design team. The CONSULTANT will provide written minutes from the meeting.
  1.1.1. Confirm proposed design schedule and milestone review dates
  1.1.2. Confirm construction budget and milestone dates for grant compliance.
  1.1.3. Define communication and quality procedures for the Project Management Plan.
  1.1.4. Discuss operational constraints to inform the field services and construction phasing approaches.

1.2. Consultant shall gather and review South Florida Water Management District (SFWMD) Environmental Resources Permit (ERP) conditions to identify water quality and attenuation requirements for the proposed changes to sub-basin boundaries.

1.3. Consultant shall prepare requirements for:
  1.3.1. Topographic Survey
  1.3.2. Subsurface Utility Engineering
  1.3.3. Geotechnical Investigation
  1.3.4. Wildlife Survey

1.4. Field Services Coordination Meetings. CONSULTANT will conduct two (2) meetings with DOA staff to coordinate the field investigations. Meetings will address safety, security, and operational impacts. CONSULTANT will host up to 2 weekly meetings with the field services team to coordinate schedules and track progress of the field work.

1.5. Field Services. The DOA will provide closure of Runway 10-28 and a DOA escort on site during the work in the movement area. HDR will provide secondary escort and observation of subconsultant field teams. HDR will obtain movement area driving and escort privileges for its field investigation team members. The investigation activities are anticipated to be performed in accordance with Table 1.

1.6. Topographic Survey. Consultant shall perform a topographic survey and subsurface utility engineering (SUE) of the work area through its subconsultant, Brown and Philips. See attached Brown and Phillips, Inc. task order for detailed scope.

1.7. Geotechnical Investigation. Consultant shall perform a geotechnical investigation of the project area through its subconsultant, Tierra SF. See attached Tierra SF, Inc. task order for detailed scope.

1.8. Environmental (Threatened and Endangered Species) Survey. CONSULTANT shall perform a field survey of Burrowing Owl nests and Gopher Tortoises within the Taxiway C1 project area. The purpose of the wildlife survey is to identify potential wildlife mitigation activities and permitting required prior to construction. Consultant shall prepare a draft memo summarizing its general observations and providing recommendations for mitigation of wildlife issues.

1.9. Site Observation and Pavement Visual Inspection. Upon receipt of the topographic survey, the CONSULTANT shall visit the project site to observe the condition of items in the work area and verify the completeness and accuracy of the survey. Consultant shall perform a visual observation of the airfield pavements within the project area to ascertain the general condition of the pavement and identify any areas within the project exhibiting structural or high-severity distresses. CONSULTANT shall schedule the visit during a typical operational period for the purpose of observing the operational function of the facility. The preference is to do the work after completion of the other field work items. However, DOA may require this task to be performed concurrently with other field work to minimize impacts to operations.

Table 1 Field Services Detail

Service	Consultant	Escort	Work Period	Duration
Topographic Survey	B&P - 2 staff	None	0800-1700, M-F	2 weeks
SUE Survey	B&P - 2 staff	1 DOA escort	0800-1700, M-F	1 week
Geotechnical Investigation	TSF - 3 staff HDR – 1 staff	1 DOA escort	0800-1700, M-F	2 days
Environmental Survey	HDR – 2 staff	1 DOA escort	0800-1700, M-F	1 day
Site Visual Investigation	HDR – 2 staff	1 DOA escort	0800-1700, M-F	1 day

1.10. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
1.11. Design Project Quality Program. CONSULTANT shall develop and execute a quality program for the project, defined by a Quality Management Plan (QMP) specifying quality assurance and quality control procedures, schedules, reviewers, and resources.
1.12. Project Management. CONSULTANT will provide project management which will consist of the development of a Project Management Plan (PMP) specifying scope monitoring, budget maintenance, client coordination, subconsultant coordination, project status/schedule updates, invoicing per COUNTY requirements, payment of subconsultants, DBE participation monitoring, and general project documentation.

2. Phase 1B: Conceptual Design

This phase is not part of this proposal. Conceptual design was performed under the previous Ramp Expansion Study task.

3. Phase 2: Schematic Design

Following Phase 1A Planning and Programming approval and upon receipt of the DOA Representative's written authorization to initiate Phase 2, CONSULTANT will prepare schematic design documents.

3.1. Preparation of plans as shown in Table 2.
3.2. Preparation of schematic design and construction schedule
3.3. Preparation of schematic opinion of probable construction cost (OPC)
3.4. Stormwater permitting
  3.4.1. Calculate changes to the sub-basins affected by the demolition of Taxiway D and construction of Taxiway C1.
  3.4.2. Coordinate and attend 1 pre-application meeting with the SFWMD in anticipation of submittal of letter modification to the airport conceptual ERP in a later phase of this task.
3.5. Conceptual Construction Safety and Phasing Plan (CSPP). CONSULTANT will produce safety and phasing plans to accompany the conceptual CSPP based on the DOA's template, modified for this project.
3.6. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
3.7. Preliminary Airfield Phasing Coordination Meeting. CONSULTANT shall coordinate and attend 1 meeting with a representative of DOA Operations leadership to develop general operational constraints during construction and collaboratively prepare a schematic phasing approach. The CONSULTANT will provide written note of the meeting and distribute to attendees.
3.8. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
3.9. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

4. Phase 3A: 60% Construction Documents

4.1. Preparation of plans as shown in Table 2.

4.2. Update of design and construction schedules
4.3. Preparation of design development OPC
4.4. Prepare draft technical specifications
4.5. Prepare draft Engineer's Report
4.6. Stormwater permitting
  4.6.1. Prepare calculations
  4.6.2. Prepare and submit a letter modification to the conceptual ERP to SFWMD
4.7. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
4.8. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
4.9. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

5. Phase 3B: 90% Construction Documents

5.1. Preparation of plans as shown in Table 2.
5.2. Update of design and construction schedules
5.3. Preparation of design development OPC
5.4. Prepare draft technical specifications
5.5. Consultant shall review Front End specifications provided by the DOA for alignment with the design documents and advise of potential conflicts between them.
5.6. Develop Engineer's Report
5.7. Final Construction Safety and Phasing Plan (CSPP). CONSULTANT will produce safety and phasing plans to accompany the final CSPP based on the DOA's template, modified for this project.
5.8. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
5.9. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
5.10. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

6. Phase 3C: 100% Construction Documents

6.1. Preparation of plans as shown in Table 2.
6.2. Prepare final construction schedule
6.3. Preparation of final OPC
6.4. Prepare final Project Manual consisting of technical specifications and HDR-edited project-specific information into the Front End specifications template provided by the DOA.
6.5. Prepare final Engineer's Report
6.6. Environmental (Threatened and Endangered Species) Survey Memo. CONSULTANT shall update the draft memo previously submitted to account for changes to the project scope and regulatory policy.
6.7. Design Team Coordination Meetings. CONSULTANT will conduct 3 design team coordination meetings during this phase to coordinate among the disciplines and subconsultant team members.
6.8. Submit phase deliverables. CONSULTANT will submit the phase deliverables from Table 3 for review comments and approval by the DOA.
6.9. Submittal review meeting. CONSULTANT shall coordinate and attend one (1) meeting at the DOA to review the submittal. The CONSULTANT will provide written minutes from the meeting.

Table 2 - Plan Submittal Schedule

TITLE	30%	60%	90%	100%
Cover Sheet	Preliminary	Updated	Final	Final
Drawing Index	Preliminary	Updated	Final	Final
General Notes, Legend, and Abbreviations	N/A	Preliminary	Final	Final
Summary of Quantities	Preliminary	Updated	Updated	Final
Project Area Plan (Overall Site Plan)	Preliminary	Updated	Final	Final
Staging and Access Plan	Preliminary	Updated	Final	Final
Safety Plan	Preliminary	Updated	Final	Final
Construction Phasing and MOT Plan	Preliminary	Updated	Updated	Final
Wildlife Management Plan	N/A	Preliminary	Updated	Final
Safety and Security Notes and Details	N/A	Preliminary	Final	Final
Topographic Survey	N/A	Final	Final	Final
Horizontal Control Plan	N/A	Preliminary	Updated	Final
Erosion Control Plan	N/A	Preliminary	Updated	Final
Erosion Control Details	N/A	Preliminary	Updated	Final
Demolition Plan	Preliminary	Updated	Updated	Final
Paving and Geometry Plan	Preliminary	Updated	Updated	Final
Typical Sections	Preliminary	Updated	Updated	Final
Paving Details	N/A	Preliminary	Updated	Final
Drainage Plan	N/A	Preliminary	Updated	Final
Drainage Profiles	N/A	Preliminary	Updated	Final
Summary of Drainage Structures	N/A	Preliminary	Updated	Final
Drainage Details	N/A	Preliminary	Updated	Final
Grading Plan	N/A	Preliminary	Updated	Final
Grading Profiles	N/A	Preliminary	Updated	Final
Pavement Elevation Plan	N/A	Preliminary	Final	Final
Pavement Marking Plan	Preliminary	Updated	Updated	Final
Pavement Marking Details	N/A	Preliminary	Updated	Final
Airfield Electrical General Notes, Legend, and Abbreviations	N/A	Preliminary	Final	Final
Airfield Electrical Demolition Plans	N/A	Preliminary	Final	Final
Airfield Lighting Plans	Preliminary	Updated	Final	Final
Airfield Signage Plans	Preliminary	Updated	Final	Final
Airfield Signage Schedule	N/A	Preliminary	Final	Final
Airfield Circuitry Plans	Preliminary	Updated	Final	Final
Ductbank Layout and Details	Preliminary	Updated	Final	Final
Airfield Lighting and Signage Details*	N/A	Preliminary	Updated	Final
Miscellaneous Electrical Details*	N/A	Preliminary	Updated	Final
Vault and Circuiting Schematics	N/A	Preliminary	Updated	Final

7. Phase 4: Bidding and Award of Contract

7.1. CONSULTANT will assist the COUNTY in conducting one pre-bid conference for the prime contract to share pertinent bidding and technical information and requirements with prospective bidders. Consultant will attend one site visit with prospective bidders.

7.2. CONSULTANT will issue up to 3 addenda to interpret, clarify or expand the Bidding Documents.

7.3. CONSULTANT will prepare bid tabulation sheets and assist COUNTY in evaluating bids or proposals and in assembling and awarding contracts for construction, materials, equipment, and services.

7.4. CONSULTANT will issue a conformed set of plans and the project manual.

8. Phase 5: Construction Administration Services

This phase is not part of this task's work.

9. Project Design Schedule*

Phase	Duration
1A – Planning and Programming	9 weeks
1B – Conceptual Design	N/A
2 – Schematic Design	3 weeks
3A – 60% Construction Documents	2 weeks
3A – 90% Construction Documents	2 weeks
3A – 100% Construction Documents	2 weeks
4 – Bid and Award	Concurrent with Owner Bid Process
5 – Construction Administration	N/A

*See detailed schedule attached

Summary of Deliverables

Table 3. Deliverables by Phase

Task	Deliverables
Phase 1A – Planning and Programming	• Kickoff meeting minutes • Topographic survey (PDF, AutoCAD 2018 .dwg) • Geotechnical investigation report • Engineer's site observation notes • Draft environmental survey memo • All submittals in PDF format unless noted
Phase 2 – Schematic Design	• Plans (PDF, 1 hard copy 11x17 if requested) • Design and construction schedules • Opinion of probable construction cost • Pre-Application Meeting Minutes with SFWMD • Conceptual Construction Safety and Phasing Plan • Airfield phasing coordination meeting notes • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 3A – 60% Submittal	• Plans (PDF, 1 hard copy 11x17 if requested) • Design and construction schedules • Opinion of probable construction cost • ERP letter modification request • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 3B – 90% Submittal	• Plans (PDF, 1 hard copy 11x17 if requested) • Design and construction schedules • Opinion of probable construction cost • Technical specifications • Front end specification review comments • Final construction safety and phasing plan • Final environmental survey memo • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 3C – 100% Submittal	• Plans (1 hard copy 11x17 if requested, PDF, AutoCAD 2018 .dwg) • Construction schedule • Opinion of probable construction cost (PDF, Excel) • Project Manual (Front end and Technical specifications, 1 hard copy if requested, PDF, Word) • Front end specification information (Word) • Engineer's report • SFWMD ERP Letter Modification • Submittal review meeting minutes • All submittals in PDF format unless noted
Phase 4 – Bidding and Award of Contract	• Pre-bid meeting slides (PowerPoint) • Bid tabulation (Excel) • Award recommendation (PDF) • Conformed plans and project manual (1 hard copy 11x17 if requested, PDF, Word, AutoCAD 2018 .dwg)

Team Roles

Firm	Description
HDR	• Project management, civil engineering, environmental survey
Quantum Electrical Engineering*	• Electrical engineering, lighting, and signage
Brown & Phillips*	• Topographic survey • Subsurface utility engineering
Tierra SF*	• Geotechnical investigation

*DBE Firm

ASSUMPTIONS

- Design and construction funding may be provided by the Florida Department of Transportation (FDOT)
- Opinions of probable project cost or probable construction cost provided by CONSULTANT are made on the basis of information available to CONSULTANT and on the basis of CONSULTANT's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. However, since CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, or over the construction contractor(s') methods of determining prices, or over competitive bidding or market conditions, CONSULTANT does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost CONSULTANT prepares.
- Topographic survey, SUE, geotechnical investigation and wildlife survey are only for the Taxiway C1 work area.
- Pavement marking design for Runway 10-28 will be based on the published runway endpoint coordinates.
- The addition of Taxiway C1 is a minor change to the overall stormwater network. The work will only require a Letter Modification with the South Florida Water Management District (SFWMD).
- The stormwater modifications for Taxiway C1 do not require modifications to the existing stormwater infrastructure outside of the immediate project area.

EXCLUSIONS

- Wildlife permitting and relocation, if required, will be performed under a future construction services task.
- Evaluation or changes to Runway 10-28 existing geometry and layout

HDR Engineering, Inc.
PROJECT PROPOSAL - LNA RUNWAY 10-28 TREATMENT AND TAXIWAY C1 DESIGN

Task Authorization No. I-22-LNA-H-006 - Runway 10-28 Surface Treatment and Taxiway C1 Design										
	Contract Rate	$232.50	$188.46	$173.96	$127.40	$136.27	$129.24	$114.89	$101.48	
	Scope / Task Title	Sr. PM	PM	Civil Engineer	Environmental Scientist	Jr. Civil Engineer	Engineering Intern	Accountant	Sr. Admin Assistant	Total
Phase 1A - Planning and Programming (Lump Sum)										
1.1	Kickoff meeting		2			4				6
1.2	Permit review			1		3				4
1.3	Field investigation requirements		2			4	4			10
1.4	Field services coordination					2	2			4
1.5	Field services					4	16			20
1.8	Environmental survey and memo			50	4					54
1.9	Site visual observation		8				8			16
1.10	Submit deliverables						2			2
1.11	Quality program		4				4			8
1.12	Project management		15					10		25
	Phase 1A - Subtotal Hours	0	31	51	4	17	36	10	0	149
	Phase 1A - Subtotal Direct Labor Cost	**$0.00**	**$5,842.26**	**$8,871.96**	**$509.60**	**$2,316.59**	**$4,652.64**	**$1,148.90**	**$0.00**	**$23,341.95**
Phase 2 - Schematic Design (Lump Sum)										
3.1	plans		15	20			40			75
3.2	schedule		2	6						8
3.3	OPC		2	6			20			28
3.4	Stormwater permitting		5				15			20
3.5	CSPP			2						2
3.6	Design team coordination		4	4			4			12
3.7	Phasing coordination		8	8			6			22
3.8	Submit deliverables			2			5			7
3.9	Submittal review meeting		4				4			8
										0
										0
	Phase 2 - Subtotal Hours	0	40	48	0	0	94	0	0	182
	Phase 2 - Subtotal Direct Labor Cost	**$0.00**	**$7,538.40**	**$8,350.08**	**$0.00**	**$0.00**	**$12,148.56**	**$0.00**	**$0.00**	**$28,037.04**
Phase 3A - 60% Construction Documents (Lump Sum)										
4.1	plans		8	15			50			
4.2	schedule		2	2						4
4.3	OPC		2	5			12			19
4.4	specifications		8	25						33
4.5	engineer's report			10						10
4.6	stormwater permitting		6				12			18
4.7	Design team coordination		3	3			3			9
4.8	Submit deliverables						5			5
4.9	Submittal review meeting		3				5			8
	Phase 3A - Subtotal Hours	0	32	60	0	0	87	0	0	179
	Phase 3A - Subtotal Direct Labor Cost	**$0.00**	**$6,030.72**	**$10,437.60**	**$0.00**	**$0.00**	**$11,243.88**	**$0.00**	**$0.00**	**$27,712.20**
Phase 3B - 90% Construction Documents (Lump Sum)										
5.1	plans		10	20			20			
5.2	schedule		2	2						4
5.3	OPC		1	3			10			14
5.4	specifications		2	4						6
5.5	review front ends		3	10						13
5.6	engineer's report			5						5
5.7	CSPP			2						2
5.8	Design team coordination		2	2			2			6
5.9	Submit deliverables						4			4
5.10	Submittal review meeting		2				2			4
										0
	Phase 3B - Subtotal Hours	0	22	48	0	0	38	0	0	108
	Phase 3B - Subtotal Direct Labor Cost	**$0.00**	**$4,146.12**	**$8,350.08**	**$0.00**	**$0.00**	**$4,911.12**	**$0.00**	**$0.00**	**$17,407.32**
Phase 3C - 100% Construction Documents (Lump Sum)										
6.1	plans		10				15			
6.2	schedule		1							1
6.3	OPC		1				5			6
6.4	project manual			5						5
6.5	engineer's report			2						2
6.6	Final environmental memo				10					10
6.7	Design team coordination		2	2			2			6
6.8	Submit deliverables						2			2
6.9	Submittal review meeting		3				3			6
										0
	Phase 3C - Subtotal Hours	0	17	9	10	0	27	0	0	63
	Phase 3C - Subtotal Direct Labor Cost	**$0.00**	**$3,203.82**	**$1,565.64**	**$1,274.00**	**$0.00**	**$3,489.48**	**$0.00**	**$0.00**	**$9,532.94**

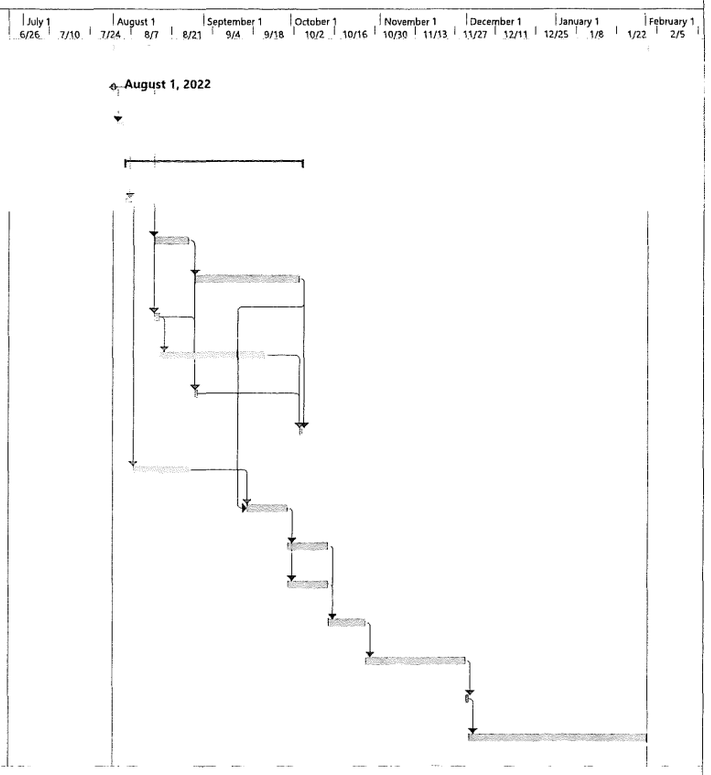
HDR Engineering, Inc.
PROJECT PROPOSAL - LNA RUNWAY 10-28 TREATMENT AND TAXIWAY C1 DESIGN

Task Authorization No. I-22-LNA-H-006 - Runway 10-28 Surface Treatment and Taxiway C1 Design										
	Contract Rate	$232.50	$188.46	$173.96	$127.40	$136.27	$129.24	$114.89	$101.48	
	Scope / Task Title	**Sr. PM**	**PM**	**Civil Engineer**	**Environmental Scientist**	**Jr. Civil Engineer**	**Engineering Intern**	**Accountant**	**Sr. Admin Assistant**	**Total**
Phase 4 - Bidding and Award of Contract (Lump Sum)										
7.1	prebid conference		8				8			
7.2	issue addenda		10				20			30
7.3	bid tabulation		6				2			8
7.4	conformed documents		2				8			10
										0
										0
	Phase 4 - Subtotal Hours	0	26	0	0	0	38	0	0	64
	Phase 4 - Subtotal Direct Labor Cost	**$0.00**	**$4,899.96**	**$0.00**	**$0.00**	**$0.00**	**$4,911.12**	**$0.00**	**$0.00**	**$9,811.08**
	Total HDR Labor Hours	**0**	**168**	**216**	**14**	**17**	**320**	**10**	**0**	**745**
	Total HDR Labor Weeks	**0**	**4.2**	**5.4**	**0.4**	**0.4**	**8.0**	**0.3**	**0.0**	**18.6**
	Total HDR Labor Cost	**$0**	**$31,661**	**$37,575**	**$1,784**	**$2,317**	**$41,357**	**$1,149**	**$0**	**$115,842.53**
Subconsultants (Lump Sum)								**DBE %**	**DBE**	**AMOUNT**
Tierra SF								5%	1	$8,085.00
Quantum Electrical Engineering								13%	1	$20,601.71
Brown & Phillips								11%	1	$18,291.54
									Subconsultants (Lump Sum)	**$46,978.25**
									DBE PARTICIPATION	29%
Reimbursables (Not to Exceed)										
Reproduction		# Drawings	# Pages	# Sets						
		@	@							
		$ 1.00	$ 0.20							
	Phase 1A - Planning and Programming									$ -
	Phase 2 - Schematic Design	20		1						$ 20.00
	Phase 3A - 60% Construction Documents	40		1						$ 40.00
	Phase 3B - 90% Construction Documents	40		1						$ 40.00
	Phase 3C - 100% Construction Documents	40	200	1						$ 80.00
	Phase 4 - Bidding and Award of Contract	40	200	1						$ 80.00
	Total Reproduction									$ 260.00
Postage/Delivery		# Packages	#Packages							
		@	@							
		$ -	$ -							
	Pavement Evaluation Report	0	0							$ -
	Total Postage/Delivery									$ -
Travel				Airfare @		Car @	Lodging @	Meals @	Parking	
		# People	# Days	$ -		$ 75.00	$ -	$ 40.00	$ 20.00	
		$ -	$ -							
	Task 1.8 Environmental Survey					$ 150.00	$ 200.00	$ 80.00	$ 40.00	$ 470.00
	Environmental scientist from Tampa	1	2			$ 150.00	$ 200.00	$ 80.00	$ 40.00	
									Reimbursables (Not to Exceed)	**$730.00**
Summary										
									Phase 1A - Planning and Programming (Lump Sum)	$23,341.95
									Phase 2 - Schematic Design (Lump Sum)	$28,037.04
									Phase 3A - 60% Construction Documents (Lump Sum)	$27,712.20
									Phase 3B - 90% Construction Documents (Lump Sum)	$17,407.32
									Phase 3C - 100% Construction Documents (Lump Sum)	$9,532.94
									Phase 4 - Bidding and Award of Contract (Lump Sum)	$9,811.08
									Subconsultants (Lump Sum)	$46,978.25
									Reimbursables (Not to Exceed)	$730.00
Total Basic Services Contract Value Task Authorization No. I-22-LNA-H-006 - RW 10-28 Surface Treatment and TW C1 Design										**$163,550.78**

End of Exhibit B

LNA Runway 10-28 Surface Treatment and Taxiway C1
Design Schedule

ID	Task Mode	Task Name	Duration	Task Calendar Days	Calendar Days from NTP	Start	Finish	Predecessors
0		**LNA RW 10-28 Surface Seal and TW C1 Design Schedule**	**127 days**	**185 days**	**185 days**	**Mon 8/1/22**	**Wed 2/1/23**	
1		**Notice to Proceed**	**0 days**	**0 days**	**0 days**	**Mon 8/1/22**	**Mon 8/1/22**	
2		**Project Setup**	**4 days**	**4 days**	**4 days**	**Mon 8/1/22**	**Thu 8/4/22**	1
3		**1A Programming**	**42 days**	**61 days**	**65 days**	**Fri 8/5/22**	**Tue 10/4/22**	
4		Project Kickoff	1 day	1 day	5 days	Fri 8/5/22	Fri 8/5/22	2
5		Survey/SUE Field Work	10 days	12 days	26 days	Mon 8/15/22	Fri 8/26/22	1FS+10 days
6		Survey Deliverable	25 days	36 days	64 days	Mon 8/29/22	Mon 10/3/22	5
7		Geotech field work	2 days	2 days	16 days	Mon 8/15/22	Tue 8/16/22	4FS+5 days
8		Geotech deliverable	25 days	36 days	52 days	Wed 8/17/22	Wed 9/21/22	7
9		Wildlife survey and engineer's visual inspection	1 day	1 day	29 days	Mon 8/29/22	Mon 8/29/22	5,7
10		Submit phase deliverables	1 day	1 day	65 days	Tue 10/4/22	Tue 10/4/22	6,8,9
11		**2 Schematic Design**	**15 days**	**19 days**	**26 days**	**Mon 8/8/22**	**Fri 8/26/22**	4
12		**3A 60% Construction Documents**	**10 days**	**14 days**	**60 days**	**Fri 9/16/22**	**Thu 9/29/22**	11,6FS-12 days
13		**Stormwater Permitting**	**10 days**	**14 days**	**74 days**	**Fri 9/30/22**	**Thu 10/13/22**	12
14		**3B 90% Construction Documents**	**10 days**	**14 days**	**74 days**	**Fri 9/30/22**	**Thu 10/13/22**	12
15		**3C 100% Construction Documents**	**9 days**	**13 days**	**87 days**	**Fri 10/14/22**	**Wed 10/26/22**	13,14
16		**Bid Advertisement**	**22 days**	**35 days**	**122 days**	**Thu 10/27/22**	**Wed 11/30/22**	15
17		**Bid Opening**	**1 day**	**1 day**	**123 days**	**Thu 12/1/22**	**Thu 12/1/22**	16
18		**FAA AIP Funds Application**	**42 days**	**62 days**	**185 days**	**Fri 12/2/22**	**Wed 2/1/23**	17



Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

Updated:Thu 1/6/22

Subconsultant Contract

Quantum Electrical Engineering

Electrical Design

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Quantum Electrical Engineering, ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated _____, 2021, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: 1
PROJECT NAME: LNA Runway 10-28 Seal and New Taxiway C1

PART 1.0 PROJECT DESCRIPTION:

The Palm Beach County (COUNTY) Department of Airports' (DOA) Palm Beach County Park Airport (LNA) is served by the 3,489' x 75' primary Runway 10-28. Runway 10-28 was constructed in 1965 and last rehabilitated/relocated in 2007.

The FDOT Pavement Management Program (PMP) Reports from the early 2010s advised that major rehabilitation of LNA's Runway 10-28 would be required in 2020. However, Runway 10-28 was assigned a Pavement Condition Index (PCI) of 78 in the most recent PMP Report dated November 2019. A PCI of 78 is considered 'Satisfactory' and does not warrant major rehabilitation per se. PCIs of 65 and lower on general aviation facilities typically indicates a need for major rehabilitation. HDR Engineering, Inc. (Consultant) completed a visual assessment of the pavement condition of Runway 10-28 and submitted a Pavement Evaluation Report to the DOA in April 2021. The report concluded that although the 2019 PCI data rated the runway pavement in "Satisfactory" condition, the 2021 re-inspection data showed a decline in the PCI resulting in a "Fair" rating. The decline indicated an acceleration of the rate of deterioration, in agreement with pavement performance models. The current PCI of 69 is below the Minimum Service Level PCI of 75 and above the critical PCI of 65. FDOT policy recommends that airports maintain the Minimum Service Level PCI with a combination of localized maintenance and repair and timely major rehabilitation. Due to the lack of structural distresses and light-duty traffic demands, the report recommended maintenance activities only, primarily the application of an asphalt seal surface treatment to restore the ride quality, surface binder, and fine aggregate. This treatment may extend the life of the runway pavement by up to 5 years.

The draft LNA Future Airport Layout Plan (ALP), dated July 2020, calls out a Runway Incursion Mitigation (RIM) improvement to Runway 10-28. In its existing condition, the alignment of Taxiway D is not desirable because it provides a direct connection between the south ramp and Runway 10-28. To mitigate this condition, the ALP calls for the removal of Taxiway D between Taxiway A and Taxiway C. A new connector designated Taxiway C1 is proposed between Taxiways A and C 280 feet west of existing Taxiway D.

In Figure 1 below, the Runway 10-28 surface treatment is shown in magenta, the new Taxiway C1 is shown in blue, and the partial removal of Taxiway D is shown in red. The COUNTY wishes for the Consultant to proceed with design and production of construction documents for the work.

HDR will perform programming, design, and bid phase services as a task order under its Professional Services Agreement (PSA) with the DOA. The project outcome will be the creation of design documents that enable the DOA to bid, select a contractor, and construct the project. Specific project components are:

- Runway 10-28 improvements
    - Pavement surface preparation and marking removal where required
    - Emulsified asphalt slurry seal surface treatment
    - New pavement markings per current FAA standards
- Existing Taxiway D
    - Demolition of existing Taxiway D connector between Taxiway A and Taxiway C
    - Removal of existing markings on adjacent Taxiway A and apron leading to the demolished segment of Taxiway D.
    - Renaming of remaining pavement section of Taxiway D to an alpha numeric designation (Taxiway A2).
- New Taxiway C1
    - New pavement section
    - New electrical, lighting, and signage
    - New pavement markings per current FAA standards.
    - New grading and stormwater to accommodate pavement expansion

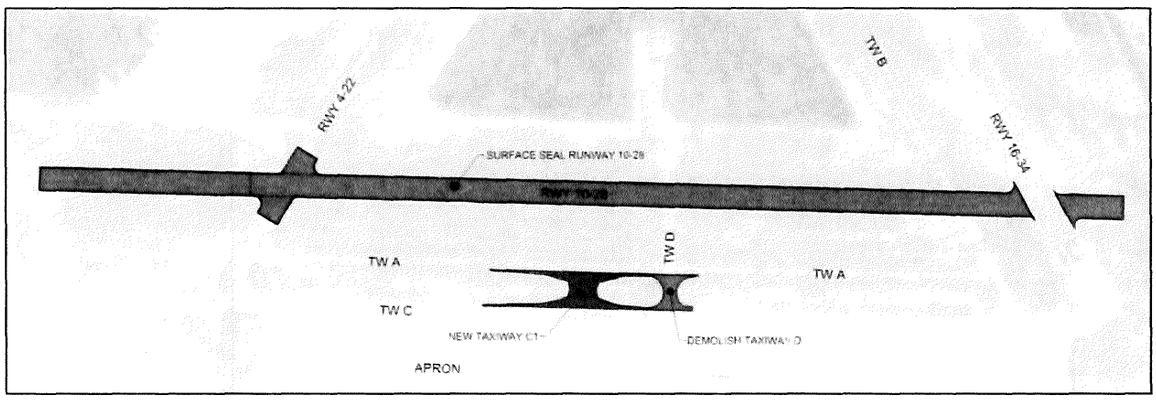


Figure 1 – General Scope Depiction

Subconsultant shall support HDR in developing contract documents for the electrical, lighting, and signage design associated with the development of the new Taxiway C1 connector and the demolition of Taxiway D between Taxiways A and C.

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will provide engineering design of electrical, lighting, and signage components of the project.

The following services will be provided:

1. Meetings:
    a. Site visit verification of survey
    b. Kickoff meeting via conference call
    c. 4 design progress meetings
    d. Virtual meetings with the DOA after each progress submittal
2. Construction Schedule - Subconsultant will review HDR's proposed construction schedule at each milestone and advise of any revisions needed due to the Subconsultant's scope of work.
3. Opinion of Probable Cost (OPC) - Subconsultant will provide quantities and unit costs of work items shown in Subconsultant's design documents.
4. Technical Specifications- Subconsultant will provide technical specifications relevant to its scope of work and coordinate with HDR to align any shared specifications, e.g. structural concrete for sign and light bases.
5. Engineer's Report - Subconsultant will provide relevant information to Subconsultant's portion of the Engineer's Report.
6. Design Plans – Subconsultant will provide the following items related to the scope of work:
    a. Electrical demolition and installation notes
    b. Electrical demolition plans
    c. Lighting and signage layout plans
    d. Lighting circuitry plans
    e. Electrical details to support the proposed electrical design
    f. Airfield Electrical Vault equipment modifications if required to support the additional lighting.
    g. Advise HDR of the electrical, signage, and lighting constructability within the proposed construction phasing for each progress submittal. Subconsultant shall advise HDR of lead times and predecessors for submittal approval, materials shipping, and civil-related construction critical path items.
7. Bid Phase:
    a. The Subconsultant shall attend the pre-bid meeting. The Subconsultant shall respond to questions from prospective bidders.
    b. The Subconsultant shall provide supplemental information to prospective bidders as required during the bidding process through the issuance of addenda
    c. The Subconsultant shall review all bids to determine the most responsible and responsive bidder and provide the DOA with a recommendation for award of the construction contract.
8. Subconsultant will utilize ProjectWise software to share common files and information. The purpose of ProjectWise is to reduce the opportunity for error when HDR incorporates Subconsultant's deliverables into the master project documents. The following is an incomplete list of files that are expected to be shared between HDR and the Subconsultant.
    a. AutoCAD sheet set manager
    b. Opinion of Probable Cost Excel file
    c. Plan sheet quantity table Excel file
    d. Technical specifications Word file

e. Engineer's Report Word file

9. Subconsultant's Project Design Schedule:
    a. Schematic Design
    b. 60% Construction Documents
    c. 90% Construction Documents
    d. 100% Construction Documents
    e. Bid and Award

The following deliverables will be provided:

- Plans
    - PDF unsigned 11x17 and 22x34 at schematic/60/90/100 percent
    - PDF digitally signed/sealed 11x17 and 22x34 at conformed documents.
    - CADD files in AutoCAD 2020 format at schematic/60/90/100/bid conformed percent complete
- Specifications in Word format at 60/90/100/bid conformed percent
- Electrical bid line items and cost estimates in excel format at 30/60/90/100 percent
- Engineer's Report sections in Word format at 30/60/90/100 percent
- Signing and sealing HDR supplied plans at HDR Office for bid phase, if requested.

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

PART 4.0 HDR'S RESPONSIBILITIES:

Contract administration.

PART 5.0 PERIODS OF SERVICE:

Subconsultant will provide services concurrent with the schedule stated in HDR's task order with the DOA.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $20,601.71. Subconsultant acknowledges that the amount is not a guarantee of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the lump sum amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit B

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

_____	HDR ENGINEERING, INC.
"Subconsultant"	"HDR"
BY: _____	BY: _____
NAME: _____	NAME: _____
TITLE: _____	TITLE: _____
ADDRESS: _____	ADDRESS: _____
_____	_____

Exhibit A
Work Breakdown Fee Schedule

PALM BEACH COUNTY DEPARTMENT OF AIRPORTS - LNA RUNWAY 10-28 SEAL AND NEW TAXIWAY C1
QUANTUM ELECTRICAL ENGINEERING, INC.
SCOPE FEE SUMMARY
FEE PROPOSAL ELECTRICAL DESIGN to HDR 10/29/2021

Rate	$161.54	$144.23	$138.46	$69.23	$132.69	$46.15			
	Proj. Mgr.	Prof. Eng	Proj. Eng	CADD/Tech	Field Eng.	Clerical	Total		TOTAL
PHASE OF WORK	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Expenses	TASK COST
Meetings									
Progress Conference calls (1hr)		4					4		$576.92
Subtotal	**0**	**4**	**0**	**0**	**0**	**0**	**4**		**$576.92**
30% Design Deliverable Phase									
Kickoff and Design Review Mtgs DOA and HDR		2					2		$288.46
Discovery & Record Review		2					2		$288.46
Electrical Design Plans & Details		8	8	16			32		$3,369.20
Specifications, Bid Items & Cost Estimates, Engineering Report		2				2	4		$380.76
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**16**	**8**	**18**	**0**	**2**	**44**		**$4,753.80**
60% Design Deliverable Phase									
Design Review Mtgs DOA and HDR		1					1		$144.23
Field Investigation		4					4		$576.92
Electrical Design Plans & Details		8	16	24			48		$5,030.72
Specifications, Bid Items & Cost Estimates, Engineering Report		4	4			4	12		$1,315.36
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**19**	**20**	**26**	**0**	**4**	**69**		**$7,494.15**
90% Design Deliverable Phase									
Design Review Mtgs DOA and HDR		1					1		$144.23
Electrical Design Plans & Details		4	8	16			28		$2,792.28
Specifications, Bid Items & Cost Estimates, Engineering Report		1	4			1	6		$744.22
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**8**	**12**	**18**	**0**	**1**	**39**		**$4,107.65**
100% Design Deliverable Phase									
Design Review Mtgs DOA and HDR		1					1		$144.23
Electrical Design Plans & Details		2	4	4			10		$1,119.22
Specifications, Bid Items & Cost Estimates, Engineering Report		1	2			1	4		$467.30
QA/QC & Comment Incorporation		2		2			4		$426.92
Subtotal	**0**	**6**	**6**	**6**	**0**	**1**	**19**		**$2,157.67**
Bid & Award									
Attend Pre-Bid Meeting		1					1		$144.23
RFI Responses		4	2	4		1	11		$1,176.91
Review of Bid Results & Recommendation		1				1	2		$190.38
Subtotal	**0**	**6**	**2**	**4**	**0**	**2**	**14**		**$1,511.52**
Grand Total Hours	**0**	**59**	**48**	**72**	**0**	**10**	**189**		**$20,601.71**
Grand Total Labor Cost	**$0.00**	**$8,509.57**	**$6,646.08**	**$4,984.56**	**$0.00**	**$461.50**			

Subconsultant Contract

Brown & Phillips

Topographic Survey

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Brown & Phillips, Inc., ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated October 7, 2019, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: 3
PROJECT NAME: LNA Runway 10-28 Seal and New Taxiway C1

PART 1.0 PROJECT DESCRIPTION:

HDR will perform programming, design, and bid phase services as a task order under its Professional Services Agreement (PSA) with the DOA. The project outcome will be the creation of design documents that enable the DOA to bid, select a contractor, and construct the project. Specific project components are:

- Runway 10-28 improvements
  - Pavement surface preparation and marking removal where required
  - Emulsified asphalt slurry seal surface treatment
  - New pavement markings per current FAA standards
- Existing Taxiway D
  - Demolition of existing Taxiway D connector between Taxiway A and Taxiway C
  - Removal of existing markings on adjacent Taxiway A and apron leading to the demolished segment of Taxiway D.
- New Taxiway C1
  - New pavement section
  - New electrical, lighting, and signage
  - New pavement markings per current FAA standards.
  - New grading and stormwater to accommodate pavement expansion

Subconsultant will perform a topographic survey and subsurface utility engineering (SUE) with the use of HDR to develop base mapping for the preparation of engineering design documents. Limits of the work are depicted in Exhibit B 'Project Location/Extents'.

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will perform a topographic survey and subsurface utility engineering (SUE) with the intent to develop base mapping for the preparation of engineering design documents. Limits of the work are depicted in Exhibit B 'Project Location/Extents'.

The following services will be provided:

1. Subconsultant shall provide a survey party with an adequate number of movement area badged drivers to escort the party.
2. Set project benchmarks.
3. Set adequate project horizontal control and references. Establish baselines for Runway 10-28, Taxiway C1, Taxiway D, and Taxiway A. The Horizontal Datum will be NAD 83-90 (State Plane, East Coast, US Foot) and the Vertical Datum will be NAVD-88.
4. Perform a topographic survey within the project limits to include pavement edges, pavement markings, rock and other improved driving surfaces, and existing ground elevations to include apparent high and low points.
5. Provide a TIN file of the topographic surface.
6. Locate all above-ground features within the survey extents, including lights, signs (with description of sign faces), junction cans, etc. together with all evidence of below-ground features.
7. Dimensions of drainage structures, including grate size, box length, box width, box depth, box diameter, pipe size and material. Elevations of drainage structures, including rim, inverts, baffles, weirs, and bottom.
8. Map underground utilities with ground penetrating radar (GPR) and electromagnetic induction (EI) methods.
9. Perform GPR investigation of up to 4 geotechnical boring locations to clear the vicinity of buried utilities.
10. Obtain elevations within the survey limits using a 25-foot grid.
11. Locate and obtain surface elevations at soil borings.
12. Limited survey areas. As depicted in Exhibit B, there are project areas required a limited scope of survey
    a. Electrical, lighting, and signage. These areas require the horizontal location and extents of lighting, signage (with panel descriptions and orientations), and all surface evidence of existing electrical features, e.g. pull boxes, junction can plazas, etc. Surveyor shall provide horizontal location/extents of adjacent edge of full-strength pavement.
    b. Lighting. This area requires the horizontal location and extents of airfield lighting. Surveyor shall provide horizontal location/extents of adjacent edge of full-strength pavement.
13. Confirm horizontal and vertical control prior to construction.
14. Provide deliverables as specified herein.

The following deliverables will be provided:

- Electronic CAD files in AutoCAD Civil 3D in accordance with HDR CADD Specifications for Project Drawings (Exhibit D). Software version, survey sheet names, numbers, and borders shall be provided by HDR.
- One digitally signed/sealed PDF, 24x36 and 11x17
- One unsigned/unsealed PDF, 24x36 and 11x17
- Six (6) signed and sealed hard copies of survey 24x36 and 11x17.
- TIN surface in .xml format
- Points in ASCII PNEZD format.

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

PART 4.0 HDR'S RESPONSIBILITIES:

Contract administration

PART 5.0 PERIODS OF SERVICE:

Subconsultant will conform to the schedule in Exhibit C.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $18,291.54. Subconsultant acknowledges that the amount is not a guarantee of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit E

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

BROWN & PHILLIPS, INC. "Subconsultant"		HDR ENGINEERING, INC. "HDR"	
BY:		BY:	
NAME:	John E. Phillips, III	NAME:	
TITLE:	President	TITLE:	
ADDRESS:	1860 Old Okeechobee Road, Suite 509 West Palm Beach, FL 33409	ADDRESS:	

Exhibit A
Work Breakdown Fee Schedule

BROWN & PHILLIPS, Inc.
PROFESSIONAL SURVEYING SERVICES

EXHIBIT 'A'

Palm Beach County Park Airport (LNA) Runway 10-28 Seal and New Taxiway C1

Type of Survey: Topographic
Size:
Date: November 1, 2021

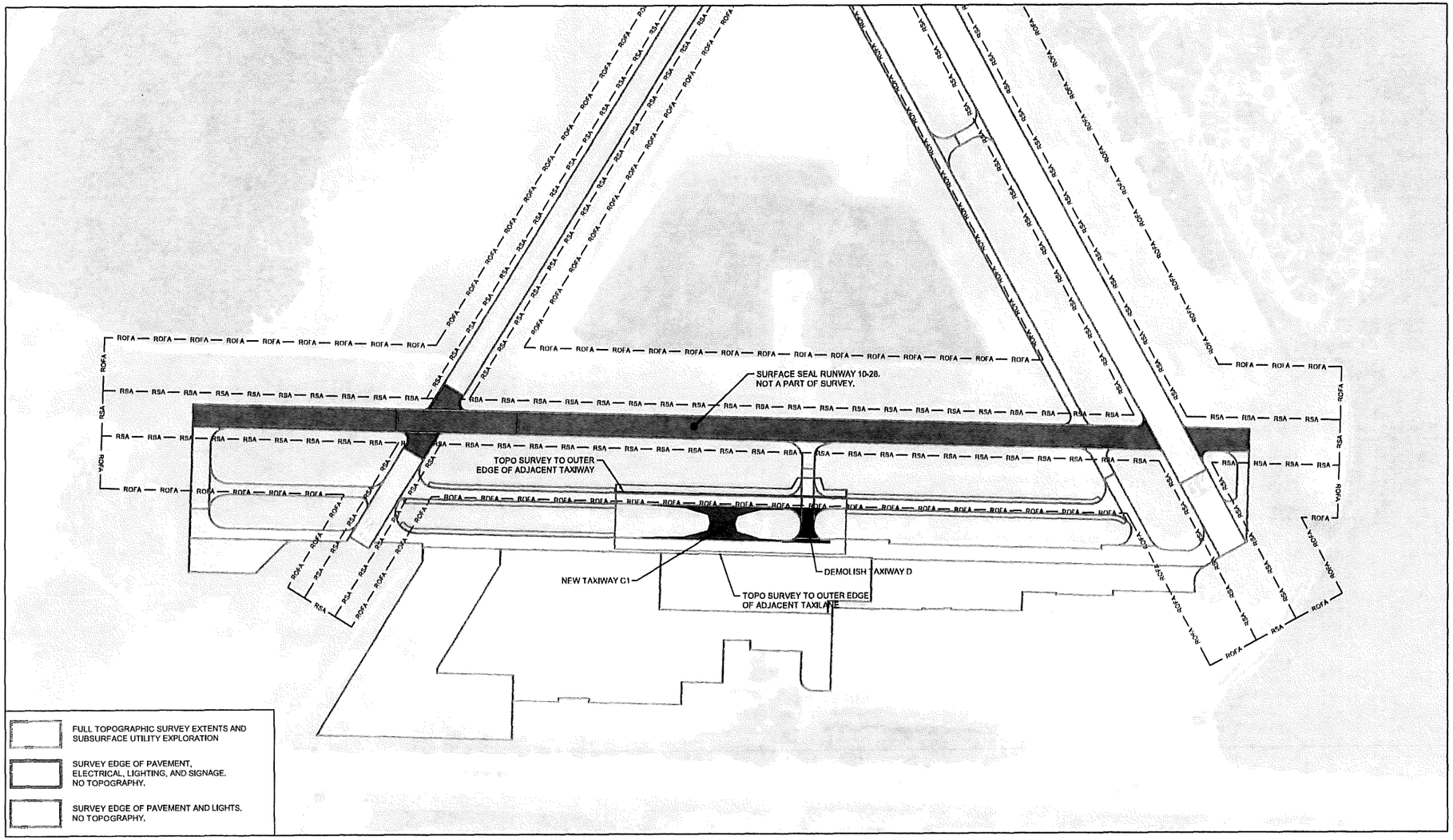
TASK	SURVEY CREW	CADD TECH	SURVEY TECH	PLS	COMMENTS
Meetings and Coordination				2	
Horizontal Project Network Control	4		2	0.5	Establish and tie-in control
Vertical Project Network Control	5		1		Set benchmarks along corridor
Baseline Layout- RW 10-28, Twy C1, Twy D, Twy A	8		2	0.5	Set points at 100 foot intervals
Blue Area - full topo Tie-In Improvements	6		2	0.5	Locate all above ground features
Cross Sections	16		8	1	25' grid - TIN file
As-builts	3		1		As-built drainage structures - rim, invert, material, pipe size, etc
Underground Utilities	4		2	0.5	Coordinate underground utilities and locate designates
Runway Markings	3		1		Tie in pavement markings
Locate and Obtain Elevations at Soil Borings	2		0.5		Maximum of 4 soil borings
Orange Area - limited topo Locate E/P, Electrical, Lighting and Signage	4		1		
Green Area - limited topo Locate E/P and Lights	12		2	0.5	
Topographic Survey		32	6	4	Prepare survey drawing and other deliverables
Confirm horizontal and vertical control prior to construction	8		2	1	Return prior to construction to flag control points
Total Hours:	75	32	30.5	10.5	
Rate/Hour	$140.90	$84.54	$84.54	$137.17	
Subtotal:	$10,567.50	$2,705.28	$2,578.47	$1,440.29	
Total Labor Cost:					$17,291.54

Other Direct Costs:	**quantity**	**unit**	**cost/unit**	**total**	
Utility Targeting (GPR)	1	LS	$1,000.00	$1,000.00	
Total Other Direct Costs:					$1,000.00

TOTAL PRICE **$18,291.54**

Master Subconsultant Agreement 5 Rev. 6-2021

Exhibit B
Survey Extents



N

0 150' 300'

SURVEY EXTENTS EXHIBIT

RUNWAY 10-28 SEAL AND NEW TAXIWAY C1
PALM BEACH COUNTY - PALM BEACH COUNTY PARK AIRPORT (LNA)

DATE
10/22/2021

EXHIBIT NO.
1

Exhibit C
Schedule

MILESTONE DESCRIPTION	Date
Notice to Proceed	Week 1
Start of field work	Week 3
Completion of SUE field work	Week 4
Completion of survey fieldwork	Week 6
Delivery of Draft Survey	Week 9
HDR survey review (1 week)	Week 10
Delivery of Final Survey	Week 12

Exhibit D
HDR Survey Deliverable Requirements

HDR Survey Deliverable Requirements

The attached files may include Civil 3D Drawing Templates. Check with your HDR project contact to determine if a template drawing is required.

DIGITAL SURVEY DELIVERABLE SPECIFICATIONS

Unless specifically directed by the engineer, the following specifications shall be applied for all digital survey deliverables to HDR that are to be utilized for design projects.

DRAWING COORDINATE SYSTEM

The drawing file is to be in model space utilizing the coordinate system and vertical datum specified by the client/HDR. A separate document should also be supplied with any combined site scale factor and origin needed to convert coordinates from ground to grid if applicable.

PROPERTIES AND DRAWING ENTITIES

Electronic survey to be delivered in AutoCAD Civil 3D release 2018 format or other approved format. The drawing shall be layered in accordance with National CAD Standards (NCS). See attached AutoCAD template file containing layers provided by HDR.
Separate layer names should be used for all distinct objects surveyed. Do not group dis-similar items together on the same layer. For example, do not place line work and annotation on the same layer.
All properties of the AutoCAD entities in the drawing are to be BYLAYER (Absolutely No Exceptions Here). In other words, do not change the properties of individual entities. For example, do not place water items on the sanitary layer and just change the color, linetype, or lineweight of the entity. Any user defined blocks used in the drawing shall have all entities created on layer 0, and all other properties shall be set to BYLAYER.
All blocks, dimensions, mtext, mleaders used in the drawing will use the Annotative property wherever possible. An exception to this will be blocks used as point symbols. These blocks cannot have an annotative property.
Points and survey figures shall not be used to depict physical features. Features shall be depicted using blocks or linework. Points shall only be used for topographic information.

SURFACES

Creating an accurate existing surface model is critical to the overall design process. An accurate model extends past the requirements for the given contour interval stated by the Master Services Agreement. It is the intention of this model to be generated with breaklines. There must be breaklines at all breaks in grade along the site. This should include but not limited to ALL Tops, Toes, Swales, Crowns, Flow Lines, Face/Back of Curbs, Edge of Pavement and any other linear features. A surface given without breaklines will be a cause for immediate rejection and delay the project schedule.
Surfaces created with Civil 3D shall be created from Survey Points and 3D break lines (with preference to the use of Feature Lines) at a minimum. In the event the number of collected points exceeds 20,000, an external point file may be used for natural ground or spot shots. The external file shall be a separate comma delimited ASCII point file in PNEZD (Point Number, Northing, Easting, Elevation, and Description) format. The point file should then be linked to the existing ground surface and a note placed in the description of the surface giving the external file name.
Surfaces created from other software programs should include Survey Points and 3D Breaklines at a minimum. The drawing should include polylines representing contours, 3D Lines or 3D Faces representing the surface model.

SURVEY OBJECTS

Survey Figures should NOT be used in the drawing for 2D line work. Survey Figures do not allow for editing inside the design process. For example, proposed curb cuts cannot be placed because a figure cannot be edited without the survey database, so even changing a layer would be impossible. Therefore, any figure created should be converted to a 2D polyline at elevation (z-value) of '0'.
All points shall be inserted from a Survey Database thereby creating Survey Points and not Cogo Points. This will lock the point and prevent users from accidentally modifying survey data (location, elevation, and description.).
Parcels shall be made up of individual segments and not polyline segments. Parcel geometry should be clean with no overlapping segments, duplicate segments or vertical PI's. Parcels shall be of a single elevation of zero (0).

UNDERGROUND UTILITIES

At a minimum, the surveyor must supply both 2D and 3D linework. 3D polylines and/or Feature lines need to represent existing pipes from invert to invert. If the surveyor would prefer to use Civil 3D pipe and structure objects to represent existing utilities then they are free to do so. Rim or top elevations, measure downs or dips and top of nut elevations of water valves shall also be labeled as required by the project manager.

DOCUMENTATION

A list of bench marks including the reference datum, reference bench mark, an accurate description of each mark and its elevation. At least two of the permanent bench marks shall be located on or near the project outside the area of proposed construction where possible.
A separate comma delimited ASCII point file is required as a QA/QC step to check the drawing in the event we should experience difficulties. This file is to be a comma delimited PNEZD (Point Number, Northing, Easting, Elevation, and Description) ascii format.

Subconsultant Contract

Tierra SF

Geotechnical Investigation

MASTER SUBCONSULTANT AGREEMENT
ATTACHMENT B

TASK ORDER

This Task Order dated _____, 20__, pertains to an Agreement by and between Tierra South Florida Inc., ("Subconsultant"), and HDR Engineering, Inc. ("HDR"), dated October 3, 2019, ("Agreement"). Subconsultant shall perform Services on the Project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the Project described below.

TASK ORDER NUMBER: 3
PROJECT NAME: LNA Runway 10-28 Seal and New Taxiway C1

PART 1.0 PROJECT DESCRIPTION:

HDR will perform programming, design, and bid phase services as a task order under its Professional Services Agreement (PSA) with the DOA. The project outcome will be the creation of design documents that enable the DOA to bid, select a contractor, and construct the project. Specific project components are:

- Runway 10-28 improvements
    - Pavement surface preparation and marking removal where required
    - Emulsified asphalt slurry seal surface treatment
    - New pavement markings per current FAA standards
- Existing Taxiway D
    - Demolition of existing Taxiway D connector between Taxiway A and Taxiway C
    - Removal of existing markings on adjacent Taxiway A and apron leading to the demolished segment of Taxiway D.
- New Taxiway C1
    - New pavement section
    - New electrical, lighting, and signage
    - New pavement markings per current FAA standards.
    - New grading and stormwater to accommodate pavement expansion

Subconsultant will perform geotechnical investigation for the improvement areas.

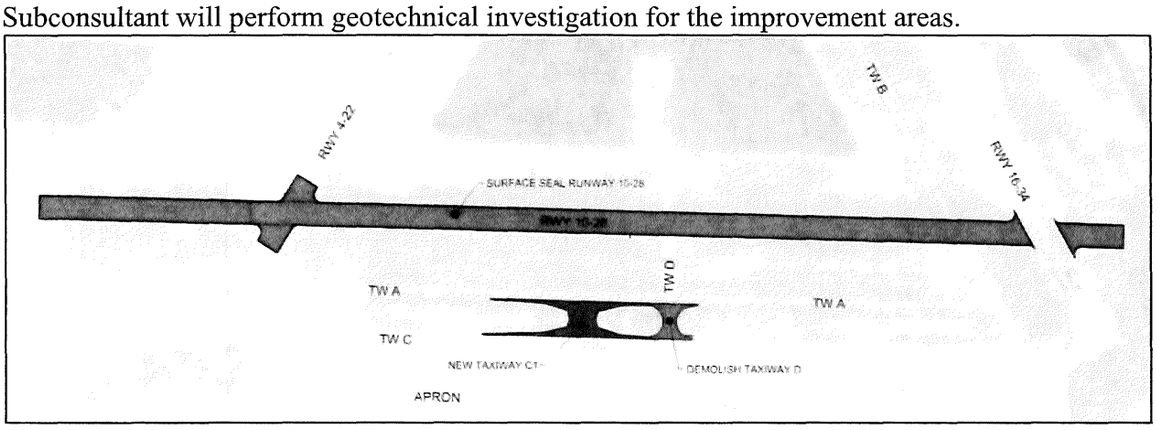


Figure 1 – General Scope Depiction

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY SUBCONSULTANT ON THE PROJECT:

Subconsultant will perform a geotechnical investigation with the intent to develop site condition information for the preparation of engineering design documents. Anticipated design features requiring geotechnical information include:

- Hot mix asphalt (HMA) new pavement sections
- Asphalt overlay of HMA pavements
- Pavement demolition
- Stabilized soil shoulders
- Earthwork cut and fill
- Dry retention basin for stormwater quality and attenuation
- Airfield signage and bases
- Electrical duct banks, junction can plazas
- Sodding and seeding

All work performed by subconsultant shall be in accordance with Advisory Circular (AC) 150/5320-6F 'Airport Pavement Design and Evaluation'.

The following services will be provided:

Field Investigation:

- 2 SPT Borings to a depth of approximately 10 feet below ground surface. Describe material in accordance with Unified Soil Classification System (USCS) and any pavement courses encountered.
- 2 cores through existing taxiway pavement section
    - Describe material and measure thickness of pavement mat layers, base course, subbase, subgrade stabilization
    - Measure crack width and depth, delamination depth
    - Color photos of profile and top view of all cores with ruler for reference
- 1 Double-Ring Infiltrometer Tests (DRIT) in accordance with ASTM D3385 Standard Test Method for Infiltration Rate of Soils in Field as recommended in the FDOT Drainage Design Guide, January 2020

- Determine the depth to ground water and estimate depth to seasonal high ground water
- Obtain soil samples for laboratory testing. Samples shall be gathered from the soil layer anticipated to be the top layer of subgrade under the completed pavement section. HDR shall provide sample collection depth to the Subconsultant. (Sample to be adjacent to paved surfaces (i.e. no patching required))

Laboratory Testing:

- Perform testing on soil samples representing each distinctly different soil type or strata
- Follow ASTM D 421 Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
- ASTM D 422 Standard Test Method for Particle-Size Analysis of Soils
- ASTM D 2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D 4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- 2 Each - ASTM D 1883, Standard Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils (2 samples).
- ASTM D 1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
- ASTM D2974, Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils

Borings and test locations will be laid out on an exhibit by HDR and presented to Subconsultant prior to starting field work. Field work will be performed during the daytime by coordinating with Airport Operations. Significant coordination by Subconsultant will likely be required to perform the field operations. Field work will be performed by Subconsultant personnel with a security badge. The DOA will provide escort for all movement areas. Field work may require subconsultant field personnel to badged with the airport. If employee is not able to acquire a badge, HDR employee will provide escort as needed. All work will be coordinated with the Airport's Operations staff. A geotechnical engineer will evaluate the results of all drilling and testing.

Notes – access to the site assumed to be daytime. Completion schedule will be contingent to utility clearances for drilling access. Asphalt samples too thin for extraction gradation may need to be joined to other samples for testing.

Results of the field and lab work will be prepared in a report. The report will contain the following recommendations:

- Design subgrade bearing pressure for spread footings
- Subgrade preparation for spread footings
- Recommendations for pipe bedding and drainage structure foundations based on the observed soil conditions

Subgrade CBR recommendations for use in pavement design
The report will contain a project vicinity map, plan view showing the location of borings, basis and results of tests performed, detailed description of findings, recommendations, and an executive summary.

The following deliverables will be provided:

- Geotechnical investigation report
  - Unsigned PDF format
  - Digitally signed/sealed PDF format
  - Two hard copies, in color, signed and sealed by a registered professional engineer in the State of Florida
- Boring logs in AutoCAD DWG Format

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

If authorized in writing by HDR as an amendment to this Task order.

PART 4.0 HDR'S RESPONSIBILITIES:

Contract administration

PART 5.0 PERIODS OF SERVICE:

Subconsultant will conform to the schedule in Exhibit C.

PART 6.0 SUBCONSULTANT'S COMPENSATION FOR SERVICES:

- Lump Sum: HDR shall pay Subconsultant for all authorized and properly performed services at the rates attached hereto with a lump sum amount of $8,085.00. Subconsultant acknowledges that the amount is not a guarantee of minimum work or payment. Subconsultant shall notify HDR when it has reached 90% of the amount.

- Reimbursable Expenses: Included in the lump sum amount

PART 7.0 EXECUTED TASK ORDERS BETWEEN OWNER AND HDR ATTACHED HERETO AS REFERENCE.

Agreement provided in Exhibit C

PART 8.0 OTHER:

IN WITNESS WHEREOF, the parties have executed this Task Order as of the day and year first written above.

Tierra South Florida, Inc. "Subconsultant"		HDR ENGINEERING, INC. "HDR"	
BY:		BY:	
NAME:	Raj Krishnasamy, P.E.	NAME:	
TITLE:	President	TITLE:	
ADDRESS:	2765 Vista Pkwy, Ste 10 WPB, FL 33411	ADDRESS:	

Exhibit A
Work Breakdown Fee Schedule

Tierra South Florida Inc. Standard Hourly Rate Table
Palm Beach County Park/Lantana Airport (LNA)
TSF Proposal No. 2011-766LNA RW 10-28 and TW C1 (HDR)

CATEGORY	HOURLY RATE	UNIT	QUANTITY	FEES
Geotechnical Engineering/Inspections				
PROJECT MANAGER	$175.00	HOUR	2	$350.00
PRINCIPAL ENGINEER	$175.00	HOUR	8	$1,400.00
SENIOR ENGINEER	$150.00	HOUR	10	$1,500.00
PROJECT ENGINEER	$125.00	HOUR		
SENIOR TECHNICIAN	$75.00	HOUR	12	$900.00
CADD	$85.00	HOUR	6	$510.00
Field Investigation				
MOBILIZATION OF MEN AND EQUIPMENT				
TRUCK-MOUNTED EQUIPMENT	$350.00	DAY	1	$350.00
SUPPORT VEHICLE	$150.00	DAY	2	$300.00
STANDARD PENETRATION TEST BORINGS				
(BY TRUCK-MOUNTED EQUIPMENT)				
LAND: 0 - 50 FT DEPTH (DAY)	$13.00	LINEAL FOOT	20	$260.00
LAND: 0 - 50 FT DEPTH (NIGHT)	$18.00	LINEAL FOOT	0	$0.00
GROUT-SEAL BOREHOLES				
(BY TRUCK-MOUNTED EQUIPMENT)				
LAND: 0 - 50 FT DEPTH (DAY)	$6.00	LINEAL FOOT	20	$120.00
LAND: 0 - 50 FT DEPTH (NIGHT)	$7.00	LINEAL FOOT	0	$0.00
CASING ALLOWANCE				
(BY TRUCK-MOUNTED EQUIPMENT)				
LAND: 0 - 50 FT DEPTH (DAY)	$7.00	LINEAL FOOT	20	$140.00
LAND: 0 - 50 FT DEPTH (NIGHT)	$8.50	LINEAL FOOT	0	$0.00
FIELD PERMEABILITY TESTS (DAY)	$300.00	EACH	0	$0.00
FIELD PERMEABILITY TESTS (NIGHT)	$300.00	EACH	0	$0.00
DOUBLE RING INFILTRATION TEST	$500.00	EACH	1	$500.00
PAVEMENT CORES-ASPHALT	$225.00	EACH	2	$450.00
Laboratory Testing				
NATURAL MOISTURE CONTENT TESTS	$10.00	EACH	3	$30.00
GRAIN-SIZE ANALYSIS - FULL GRADATION	$65.00	EACH	2	$130.00
SINGLE SIEVE	$35.00	EACH		
ORGANIC CONTENT TESTS	$35.00	EACH	2	$70.00
ATTERBERG LIMIT TESTS	$75.00	EACH	1	$75.00
LAB CBR AND SAMPLE	$500.00	EACH	2	$1,000.00
BITUMEN EXTRACTION	$150.00	EACH	0	$0.00
BITUMEN GRADATION	$150.00	EACH	0	$0.00
Corrosion Series FM 5-550 through 5-553	$185.00	EACH	0	$0.00
				$8,085.00

NOTE - SEE CONTRACT RATE SHEET FOR OTHER RATES ON THE CONTRACT, IF NEEDED

Exhibit B
Schedule

Task	Days
TSF NTP	1
TSF Mobilization	7
TSF Field Work	2
TSF Laboratory Testing	7
TSF Draft Report Submittal	7
TSF Draft Report Review Period	7
TSF Update Draft Report	5
TSF Submit Final Report	5
	41

END OF EXHIBIT A

EXHIBIT B: DETAILED FEES, EXPENSES AND PAYMENTS

EXHIBIT B-I: Summary of Fees

This Amendment No. 2 as described herein, consists of multiple tasks. As summarized below, these initial efforts have an overall budget of $541,180.72.

LEVEL I TASKS:

TASK LEVEL / NO.	DESCRIPTION	LUMP SUM	REIMBURSABLE EXPENSES	TOTAL
I-22-F45-H-005	Terminal Ramp Expansion Design	$375,219.94	$2,410.00	$377,629.94
I-22 LNA-H-006	Runway 10-28 Surface Treatment Design	$162,820.78	$730.00	$163,550.78

GRAND TOTAL (AMENDMENT NO. 2)	**$541,180.72**

EXHIBIT B-II: Schedule of Payments

The Scope of Work to be completed by CONSULTANT as defined in Exhibit "A" consist of specific completion phases which shall be clearly identified on phase-by-phase basis upon submission to the COUNTY of certain "deliverables"[1] as expressly indicated below. Compensation for the work tasks stated herein shall be in accordance with the following schedule of payment.

The following is a list of projects in the Work Program No.1: Amendment No. 2:

LEVEL I TASKS:

Task I-22-F45-H-005 **Terminal Ramp Expansion Design**

Duration:	181 Working Days (~254 Calendar Days)
Compensation:	$377,629.94

Task I-22 LNA-H-006 **Runway 10-28 Surface Treatment Design**

Duration:	65 Working Days (~90 Calendar Days)
Compensation:	$163,550.78

TOTAL = $541,180.72

[1] "Deliverables" shall be defined as progress reports, prepared maps, bid documents, completed drawings, specific reports, work plans, documentation of meetings attended, assessment study reports, analysis reports, summary reports, recommendation reports and related draft reports and verifiable deliverables.

EXHIBIT C: PROPOSED SCHEDULES

Task I-22-F45-H-005 **Terminal Ramp Expansion Design**
Duration: 181 Working Days (~254 Calendar Days)

Task I-22 LNA-H-006 **Runway 10-28 Surface Treatment Design**
Duration: 65 Working Days (~90 Calendar Days)

EXHIBIT D – DISADVANTAGED BUSINESS ENTERPRISE COMPLIANCE

Table D-1 summarizes the estimated fee for each of our team members that are certified DBE firms for Amendment 2.

Firm	Amendment 2 Totals	% of Amendment 2
Tierra SF	$32,455.00	6%
Quantum Electrical Engineering	$42,322.64	8%
Brown & Phillips	$67,295.83	12%
TOTALS	$142,073.47	26%

Table D- 1: DBE Firms, Scheduled Payments, Scheduled % of Fee

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Table D-2 summarizes the estimated fee for each of our team members that are certified DBE firms for the Total Contract.

Firm	Base (R2019-1157) Totals	Amendment 1 (R-2021-1024) Totals	Amendment 2 Totals	Total Fees	% of Total Contract
Tierra SF	$51,397.33	$0.00	$32,455.00	$83,852.33	6%
Brown & Phillips	$87,727.23	$0.00	$67,295.83	$155,023.06	12%
Quantum Electrical Engineering	$0.00	$0.00	$42,322.64	$42,322.64	3%
TOTALS	$139,124.56	$0.00	$142,073.47	$281,198.03	21%

Table D- 2 DBE Firms, Scheduled Payments, Scheduled % of Total Fee

SCHEDULE 1(A)
LIST OF PROPOSED DBE FIRMS
(Professional Services)

LOI/SOQ Project Description: Airport Civil Consulting Services for Palm Beach County Department of Airports

Name of Respondent: HDR Engineering, Inc.

Change Order/Task/Amendment No. (if applicable): Amendment 2

Contact Person: Cody Parham

E-mail Address: cody.parham@hdrinc.com

Address: 1475 Centrepark Blvd, Suite 230, West Palm Beach, FL 33401

Phone No.: (561) 209-6641 Fax No: (561) 209-6606

Name, Address & Phone No. of DBE Firm	Description of Type of Work	Classification (Check applicable box)	Percentage of DBE Participation			
			Black	Hispanic	Women	Other (Please Specify)
Quantum Electrical Engineering, Inc. 2755 Vista Parkway, Suite I-9 West Palm Beach, FL 33411 (561) 210-9224	Electrical engineering design services	☐ Prime Consultant ☑ Subcontractor ☐ Supplier ☐ Manufacturer	____ %	____ %	8 %	____ %
Tierra South Florida Inc. 2765 Vista Parkway, Suite 10 West Palm Beach, FL 33411 561-687-8536	Geotechnical investigation services	☐ Prime Consultant ☑ Subcontractor ☐ Supplier ☐ Manufacturer	____ %	____ %	____ %	6 (asian) %
Brown & Phillips, Inc. 1860 Old Okeechobee Road, Suite 509 West Palm Beach, FL 33409 (561) 615-3988	Topographic survey services	☐ Prime Consultant ☑ Subcontractor ☐ Supplier ☐ Manufacturer	12 %	____ %	____ %	____ %
		☐ Prime Consultant ☐ Subcontractor ☐ Supplier ☐ Manufacturer	____ %	____ %	____ %	____ %

Total Percentage of DBE Participation: 26 %

Notes:

1. The percentages listed on this form for each DBE Firm must be supported by the percentages included on Schedule 2(A), "Letter of Intent to Perform as a Disadvantaged Business Enterprise", in order to be counted toward attainment of the DBE goal.
2. Firms identified on this form must be certified as a DBE by the State of Florida's Unified Certification Program. Certification status can be verified on the Florida Department of Transportation's Biznet website at https://www3.dot.state.fl.us/EqualOpportunityOffice/biznet/mainmenu.asp.
3. If materials or supplies are proposed to be purchased from a DBE regular dealer, the undersigned acknowledges that only sixty percent (60%) of the proposed expenditure will be counted toward attainment of the DBE goal.

By signing this form the undersigned Respondent is committing to utilize the above referenced DBE Firms on the Project and that the Respondent will monitor the DBE Firms to ensure that the work is actually performed by the by the DBE Firms.

By: _____ Date: 4/29/2021
Signature

Melanie E. Fowler, Vice President
Print Name/Title of Person Executing on Behalf of the Respondent

SCHEDULE 2(A)
LETTER OF INTENT TO PERFORM AS A DISADVANTAGED BUSINESS ENTERPRISE
(Professional Services)

LOI/SOQ Project Description: Airport Civil Consulting Services for Palm Beach County Department of Airports

Change Order/Task /Amendment No. (if applicable): Amendment 2

Name of Prime Respondent: HDR Engineering, Inc.

Name of DBE Firm: Tierra South Florida, Inc.

The undersigned is certified as a Disadvantaged Business Enterprise by the State of Florida's Unified Certification Program. Check one or more classifications as applicable:

□ Black □ Hispanic □Women ☒Other (Please Specify) Asian

□ Prime Consultant ☒ Subcontractor □ Manufacturer □ Supplier

The undersigned is prepared to perform the following described work in connection with the above-referenced project (specify in detail the particular work and/or parts thereof to be performed):

Geotechnical Investigation Services

(Additional Sheets may be used as necessary.)

Total Percentage of Participation by DBE Firm for this Project: 6 %

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If the undersigned intends to subcontract any portion of the work described above to another subcontractor, please complete the following:

N/A	N/A %	□ DBE Certified
(Name of Subcontractor)	(Percentage of work to be subcontracted)	□ Non-DBE

The undersigned affirms that it has the resources necessary to perform the work described above without subcontracting the work to another subcontractor, except as noted above.

Raj Krishnasamy
Printed Name of DBE Subcontractor

By: _____
Signature

Date: April 28, 2022

SCHEDULE 2(A)
LETTER OF INTENT TO PERFORM AS A DISADVANTAGED BUSINESS ENTERPRISE
(Professional Services)

LOI/SOQ Project Description: Airport Civil Consulting Services for Palm Beach County Department of Airports

Change Order/Task /Amendment No. (if applicable): Amendment 2

Name of Prime Respondent: HDR Engineering, Inc.

Name of DBE Firm: Brown & Phillips, Inc.

The undersigned is certified as a Disadvantaged Business Enterprise by the State of Florida's Unified Certification Program. Check one or more classifications as applicable:

X Black ☐ Hispanic ☐Women ☐Other (Please Specify) _____

☐ Prime Consultant X Subcontractor ☐ Manufacturer ☐ Supplier

The undersigned is prepared to perform the following described work in connection with the above-referenced project (specify in detail the particular work and/or parts thereof to be performed):

Topographic Survey Services

(Additional Sheets may be used as necessary.)

Total Percentage of Participation by DBE Firm for this Project: 12 %

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If the undersigned intends to subcontract any portion of the work described above to another subcontractor, please complete the following:

N/A	N/A %	☐ DBE Certified
(Name of Subcontractor)	(Percentage of work to be subcontracted)	☐ Non-DBE

The undersigned affirms that it has the resources necessary to perform the work described above without subcontracting the work to another subcontractor, except as noted above.

Brown & Phillips, Inc.
Anthony Brown, CEO
Printed Name of DBE Subcontractor

By: _____
Signature

Date: 4/28/2022

SCHEDULE 2(A)
LETTER OF INTENT TO PERFORM AS A DISADVANTAGED BUSINESS ENTERPRISE
(Professional Services)

LOI/SOQ Project Description: Airport Civil Consulting Services for Palm Beach County Department of Airports

Change Order/Task /Amendment No. (if applicable): Amendment 2

Name of Prime Respondent: HDR Engineering, Inc.

Name of DBE Firm: Quantum Electrical Engineering, Inc.

The undersigned is certified as a Disadvantaged Business Enterprise by the State of Florida's Unified Certification Program. Check one or more classifications as applicable:

□ Black □ Hispanic ☒ Women □ Other (Please Specify) _____

□ Prime Consultant ☒ Subcontractor □ Manufacturer □ Supplier

The undersigned is prepared to perform the following described work in connection with the above-referenced project (specify in detail the particular work and/or parts thereof to be performed):

Electrical Engineering Design Services

(Additional Sheets may be used as necessary.)

Total Percentage of Participation by DBE Firm for this Project: 8 %

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If the undersigned intends to subcontract any portion of the work described above to another subcontractor, please complete the following:

N/A	N/A %	□ DBE Certified
(Name of Subcontractor)	(Percentage of work to be subcontracted)	□ Non-DBE

The undersigned affirms that it has the resources necessary to perform the work described above without subcontracting the work to another subcontractor, except as noted above.

Quantum Electrical Engineering, Inc.
Printed Name of DBE Subcontractor

By: Amy L. Champagne-Baker Amy L. Champagne-Baker 2022.04.28 16:36:34 -04'00'
Signature

Date: 04/28/2022

Attachment No. 2

Airport General Consulting Professional Services - 2018					
RFP #: DOA-18-2B - Civil					
Date: November 29, 2017					
Marketplace: BC, PBC, MDC					
DBE Project Goal: 20% - adjusted for past participation					
NAICS Description	**NAICS Code**	**Estimated Percentage of**	**Available DBE**	**Total Available**	**Weighted Percentage**
Engineering Services	541330	70.00%	149	1286	8.11%
Architectural Services	541310	0.00%	40	667	0.00%
Construction Management	236220	15.00%	239	815	4.40%
Testing Services	541380	2.50%	12	92	0.33%
Land Surveying & Mapping	541370	2.50%	24	144	0.42%
Planning Services	541320	10.00%	15	166	0.90%
Other Consulting Services	541690	0.00%	64	571	0.00%
Total		**100.00%**			**14.16%**

General Consulting Services Contracts	**DBE Participation (to date)**
R2006-2418	21%
R2009-1643	31%
R2011-1333	29%
R2014-0031	13%
Median Participation	25%
Adjustment for Past Participation	20%
DBE Project Goal	**Percentage**
	20%