F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **2**

21. TITLE AND LOCATION *(City and State)*

Building 373 Dynamometer Facility and Equipment Upgrades | Contract No. W9126G-11-D-0005 | Task Order No. 0028 | Red River Army Depot, Texarkana, TX

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2017	2018

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE Fort Worth District	Lynn Ray (now with SWD) Kip Browning (RRAD)	469-487-7064 903-334-3232

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

This $22M project is to design the update and renovation of Building 373. The dynamometer facility (Bldg 373) at Red River Army Depot is includes areas for rebuild and test and reassembly of the vehicles and equipment. The dynamometers are used to test the engines and transmissions rebuilt in the MSSC shop. Each new engine dynamometer will be served from a new centralized diesel fuel storage and delivery system as well as new centralized oil, ATF and coolant distribution and collection systems. The engine dynamometers will use electrically generated eddy current resistance. Heat rejection from the engines and the dynamometers will be by a new cooling water supply loop and cooling tower. Engine exhaust will be through appropriate new muffler systems in each cell.

Our team provided project management, multi-discipline A-E Design developing Design-Bid-Build plans, SpecsIntact specifications, design analysis, energy modeling, and coordination of several specialty equipment subconsultants. The MII CWEs were prepared for the 65%, 95% and 100% design packages. The multi-discipline design team included:

- Architecture,
- Civil Engineering
- Structural Engineering & ATFP Compliance
- Mechanical Engineering
- Fueling Design
- Electrical Engineering
- Communications Design
- Landscape Architecture
- Interior Design/CID/SID

Project Details

Size: 14,000SF
Construction Value: $22,000,000
Total Fee: $1,161,820
Offeror's % of Work: 70%

Relevant Factors

- ✓ USACE/SWF Task Order
- ✓ Fee Over $1 M
- ✓ Located In TX
- ✓ Completed Since 2016
- ✓ Major Renovation
- ✓ Design Bid Build
- ✓ Value Engineering
- ✓ Construction Phase Services
- ✓ Commissioning

Our team facilitated splitting the project into three construction packages:

- Building renovation
- Equipment and installation including process piping systems
- Selective building demolition, reconstruction, and installation of a new cross-drive transmission dynamometer.

A feasibility study and cost estimate was prepared comparing the design options for cooling water requirements. The outcome of the study determined the project could accommodate the same cooling system for both new and relocated transmission dynamometers. We prepared design of the heat rejection cooling water loop.

Sustainability and Energy Efficiency: The project followed the UFC 1-200-02 and the Army LEED implementation Guide. The mechanical engineers prepared a energy model and compared final design elements to ensure the HVAC system met ASHRAE 90.1 focusing specifically on the energy efficiency of the large motors and HVAC loads. Other elements to meet LEED and LCCA payback requirements per UFC 3-200-02 were revised such as facility layout, daylighting and lighting controls. Our team prepared the design plans for the new dynamometer equipment, including fluid management and cooling, overhead cranes, and all utilities.

The design-bid-build construction package included consideration of all current UFCs, IBC, NFPA, IEEE and the Red River Army Depot Architectural Compatibility and Interior Design Standards. All submittals were coordinated with the government reviewers via Dr. Checks.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Huitt-Zollars, Inc.	Fort Worth, TX	Designer and Architect-Engineer of record for architectural, civil, structural, MEP, communications/data/security systems (RCDD) engineering, civil engineering, surveying