Statement of Work (SOW)

21 July 2026

Project Title: Jack Mountain Multi-Use (JMMU) Range Upgrades, Repairs and Modernizations
For: *Fort Hood, Texas*

1.0 Background: Fort Hood is a world-class, commander-centric, combat-focused installation whose primary focus is supporting commanders preparing their units for assigned missions, overseas or domestically. Fort Hood is one of the largest United States military installations in the world and is the home of III Corps, 1st Cavalry Division, 13th Expeditionary Sustainment Command (13 ESC), First Army Division West, 3rd Cavalry Regiment, and other units. The installation serves as the primary Training Platform for the above units; however, Fort Hood also supports a variety of training units to include pre-deployment training site for all branches of our military preparing for a variety of operating environments including Iraq, Afghanistan, Kosovo, and Africa as well as preparing for our homeland defense missions. Fort Hood's commitment to training support excellence is also extended to law enforcement professionals and other Government agencies at the federal, state, and local levels.

1.1. Problem Statement: The Jack Mountain Multi-use (JMMU) Range capability is degraded and requires repairs and modernization to meet unit training requirements.

2.0 Scope: This Statement of Work (SOW) requires the procurement of material and labor to design and execute repairs and modernization of the JMMU Range on Fort Hood, Texas. These repairs and modernization include some level of work on the following range infrastructure:

BASE BID Tasks:
Task 1: Preconstruction Activities.
Task 2: Repair and Modification of four (4) Moving Armored Targets (MAT) emplacements MAT54, MAT56, MAT58 and MAT60.
Task 3: Repair and Modification of one (1) MAT emplacement MAT52.
Task 4: Repair and Modernization of one hundred (117) Stationary Infantry Target (SIT) at eighteen (18) Clusters.
Task 5: Repair and Modernization of fifty-six (56) Stationary Armor Target (SAT) emplacements:
Task 6: Repair and Modernization of three (3) Stationary Armor Target (SAT)/Stationary Infantry Target (SIT) combination Cluster.

OPTIONAL TASKS:
[Option Task #1] At Four (4) MATs, replace timbers with concrete panels for MAT Mover Safe-Haven 3 concrete panels per MAT, with one top timber.
[Option Task #2] At Four (4) MATs, replace every 5 set of timbers with concrete panels at

each MATs Total 30 Concrete panels with one top timber at each MAT.
[Option Task #3] At Four (4) MATs, replace every timber section with concrete panels at each MATs Total 152 Concrete panels with one top timber at each MAT.
[Option Task #4] Furnish and install Two (2) FASIT BOI MAT Target Equipment.
[Option Task #5 Install Four (4) Sump Pumps systems.
[Option Task #6] Replace three (3) Range Limit Markers (RLMs) North of MAT52, at SAT531 and SAT528.
[Option Task #7] Repair One (1) SACON Trench System Command Bunker and Machine-gun Bunker (SACON and Roof Structure Repairs).
[Option Task #8] Replace timbers with Mafia Block/BIN Block at Fifty-Eight (58) SATs.
[Option Task #9] Grade thirty-one (31) drainage ditches and clear nine (9) culverts.
[Option Task #10] Install Four (4) gates.
[Option Task #11] Procurement ten (10) Portable Armored Target System for Live-Fire Training.
[Option Task #12: Install thirteen (13) Moving Infantry Target (MIT) emplacements:
[Option Task #13: Replace sixteen (16) Small Arms Range Firing Positions.

2.1 <u>Contractor qualifications</u>: Experience with Live Fire Range Design Build Projects, Military Experienced Master Gunner on staff and on site with the Additional Skill Identifiers (ASI): A8 - Master Gunner M1/M1A1 Tank or J3 - Bradley Fighting Vehicle System Master Gunner. Good understanding of Training Circular TC25-8.

2.2 <u>Proposal Requirements: Design and Construction Plan:</u> The Contractor's proposal shall include a comprehensive plan detailing their fast-track approach to achieving required design and material readiness for the commencement of physical construction onsite by **November 30, 2026.** This plan shall specifically address the following, leveraging a rapid design development methodology:

2.2.1 <u>Design-Build Rapid Design Development Plan:</u>

- Outline the Contractor's proposed rapid design development process, including key milestones, deliverables, and a detailed schedule for achieving 100% design completion by the specified date.
- Describe the iterative design review process with the Government, emphasizing how the Contractor will incorporate feedback efficiently to meet the aggressive timeline.
- Identify the resources (personnel, software, etc.) dedicated to the rapid design development phase to ensure timely completion.

2.2.2. <u>Material Procurement and Logistics Plan:</u>

- Provide a detailed plan for the procurement, fabrication, and delivery of all necessary materials to ensure they are ready for physical construction onsite by

November 30, 2026.

- Address long-lead time items and the strategies to mitigate potential delays.
- Describe the proposed staging and storage of materials, including any pre-construction activities that may occur prior to **November 30, 2026**.

2.2.3. <u>Construction Schedule and Phasing (Onsite):</u>

- Present a detailed schedule for the actual physical construction work onsite, commencing on **November 30, 2026**, and concluding on **April 30, 2027**. This represents a duration of **152 calendar days behind LOA**. Contractor will only have **60 calendar days forward of LOA starting 12 February 2027 thru 12 April 2027.**
- Schedule shall show phased work behind and Forward of the Limit of Advance (LOA). Behind the Limit of Advance (LOA) is protected from other range surface danger zones (SDZ), this the area occupied by the training unit. Forward of the Limit of Advance (LOA) is the area not occupied by the training unit and is affected by many other ranges surface danger zones (SDZ). The Limit of Advance (LOA) is further shown on "**EXHIBIT B - JMMU CLUSTER LOCATIONS FOR MIT LOCATIONS**", "**EXHIBIT D - Moving Armor Target MAT Locations**" and "**EXHIBIT L - JMMU RANGE SITE SUMMARY PCs AND CAMERA**"
- The schedule shall show how option tasks are to be performed in the event they are awarded.
- The schedule shall clearly delineate major construction phases, critical path activities, and estimated durations for each.

2.2.4. <u>Government Responsiveness Acknowledgment:</u> The Contractor acknowledges that the Government commits to providing responses to design submittals, review comments, and Requests for Information (RFIs) within three (3) business days of receipt. The Contractor's proposed plan shall demonstrate how their internal processes and schedule account for and leverage this commitment to maintain project momentum.

2.2.5. <u>Assumptions:</u> This proposal is predicated on a contract award date no later than **September 21, 2026.**

3.0 <u>Applicable Documents/References:</u> Training Circular (TC) 25-8 - Ranges, TC 25-1 - Training Land, Department of the Army Pamphlet 385-63 - Range Safety, Army Regulation (AR) 350-19 - The Army Sustainable Range Program, 18 United States Code (USC) § 1382 - Entering military, naval, or Coast Guard property, Department of Defense (DoD) Manual 5205.02 - DoD Operations Security (OPSEC) Program Manual, DoD 8570.01.M - Information Assurance Workforce Improvement Program, Huntsville Corps of Engineer Range Design Guide, Fort Hood Range Development Plan, Unified Facilities Criteria (UFC) 3-220-04FA – Backfill for Subsurface Structures, and Unified Facilities Guide Specifications (UFGS) 31 23 00.00 20 - Excavation and Fill. Texas Department of Transportation (TXDOT) Concrete Repair Manual.

4.0 <u>Tasks:</u>

4.1. Task 1: Preconstruction Activities:

4.1.1. Determine specific requirements for project site access by the Contractor.
4.1.2. Determine existing environmental and soil conditions, obtain "as-built" documents, and take photographs/surveys as required.
4.1.3. Determine distance and accessibility of utilities.
4.1.4. Obtain dig permit allowing thirty (30) calendar days for approval. SWPPP is not required for this project.
4.1.5. Identify stakeholders for the project and establish the communication matrix between the Contractor and the Government.
4.1.6. If any major discrepancies are determined, documentation shall be provided and discussed with all required stakeholders no later than five (5) calendar days from pre-construction site visit.
4.1.7. UXO Clearance not required.
4.1.8. Actual Physical Work on JMMU shall not begin before **30 November 2026 and shall be complete on 30 April 2027, 152 calendar days.**
4.1.9. Access to individual project sites is further limited to the following:

> **4.1.9.1. Behind the Limit of Advance (LOA) 30 November 2026 thru 30 April 2027 (152 calendar days).**
> **4.1.9.2. Forward of the LOA 12 February 2027 to 12 April 2027 (60 calendar days).** This includes four (4) Moving Armor Targets (MAT) Emplacements, MV54, MV56, MV58 and MV60 see EXHIBIT D - Moving Armor Target MAT Locations.pdf. Six (6) Stationary Infantry Targets (SIT) clusters C26, C28, C34, C36, C38, C40, four (4) with Moving Infantry Targets (MIT) see EXHIBIT B - JMMU CLUSTER LOCATIONS FOR MIT LOCATIONS.pdf, thirty-two (32) Stationary Armor Targets (SAT) 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528 and 530.See EXHIBITs B & L for location of LOA.

4.1.10. Additional access to the JMMU project sites, forward and behind the LOA, shall be allowed as follows:

> **4.1.10.1.** During mandatory shutdown periods. See EXHIBIT N – Mandatory Shutdown Times.
> **4.1.10.2.** Other periods not specified consistent with training requirements and prior coordination with the Contracting Officers Representative (COR).

4.1.11. The Contractor is encouraged to use attached EXHIBIT A – FTHOOD-JMMU-AERIAL.pdf and mobile APP "AVENZA Maps" to assist in navigation of the range. EXHIBIT A is a geo-referenced map.
4.1.12. All dimensions referenced in this document are for planning purposes and are to be considered "Approximate".
4.1.13. Conflicts between EXHIBIT P - ELECTRICAL AND COMMUNICATIONS and other EXHIBITS,

EXHIBIT P shall govern.
4.1.14. See EXHIBIT L - JMMU RANGE SITE SUMMARY PCs AND CAMERA.pdf for a quick reference of the site.

4.1.15. General Communications and Electrical:

The Contractor shall test all fiber optics between the Central Control Building and Power Centers and between Power Centers and targets prior to start of demolition work. Total of 2286 End to End fiber tests. Test Report to be submitted to government. At the conclusion of work, contractor shall test all active fiber optics between Central Control Building to the targets and all spare fiber optics between the power centers to the target. Final test report shall be submitted to the government. See EXHIBIT R - JMMU Target designation ref TAB E and TAB F, EXHIBIT F - CCMU JMMU 2001.pdf and EXHIBIT O – Summary Target Electrical and Communications.

4.1.15.1. At the completion of all electrical and communications work at the targets, the Contractor shall test all fiber between Power Centers and Targets. The Contractor shall also perform tests on all fiber repairs and new work that are not between Power Centers or Targets. Report shall be submitted prior to project completion.

4.1.15.2. Repair all six (6) fiber optic strands at each of the following targets.

4.1.15.2.1. C12 all fiber optics at 6 targets is to be repaired under this project (C12-4 fiber is good).
4.1.15.2.2. C16-4 and C16-7 fiber optics is to be repaired under this project.
4.1.15.2.3. C30 all fiber optics at 5 targets is to be repaired under this project (C30-3 & C30-4 fiber optics are good).
4.1.15.2.4. C32-4 and C32-7 need fiber optics repaired under this project.
4.1.15.2.5. C38-5 needs fiber optics repaired under this project.

4.1.15.3. Contractor shall replicate hot laminated fiber optic directory at the following Power Centers: PJ1B, PJ2A and PJ3B.

4.1.15.4. Contractor shall replicate hot laminated electrical directory at the following load centers: PJ4B, PJM4B, PJ4B and PJ6B.

4.2. Task 2: Repair and Modification of four (4) Moving Armored Targets (MAT) emplacements MAT54, MAT56, MAT58 and MAT60: Increase MAT wall height by removing in situ soil, ballast rock, and rails and reestablishing grade behind MAT wall to achieve required lower target mechanism position. Upgrade electrical and communication infrastructure. Current MAT wall height is not sufficient to protect target mechanisms and infrastructure is not sufficient to support requirements.

4.2.1. General Requirements:

4.2.1.1. Finish grade at MAT wall shall be 72", measured from the top of timber to the ground surface which the base of the elevated target rail system shall be installed. EXHIBIT C - JMMU MAT54 MAT56, MAT58 & AT60 CROSS-SECTION.pdf and EXHIBIT F - CCMU JMMU 2001 asbuilts.pdf, sheet CD-2, section D.
4.2.1.2. See EXHIBIT R - JMMU Target designation ref TAB A – Moving Armored Targets (MATs) for current target designation.
4.2.1.3. See EXHIBIT L - JMMU RANGE SITE SUMMARY of CRITICAL FACILITIES POWER CENTERS AND CAMERA LOCATIONS.pdf for a quick reference of the site.
4.2.1.4. Soil testing, compaction densities shall be required on this project. Samples may be obtained of existing material on range prior to actual start of physical construction.
4.2.1.5. Existing MAT berms and walls do not require upgrades and shall remain as they currently exist (with exception to MAT52, see TASK 3).
4.2.1.6. Targetry and rail installed by others.

4.2.2. Demolition:

4.2.2.1. Remove all target rail, bus bar system and railroad ties to be disposed of by contractor.
4.2.2.2. Remove 10-inches of rock ballast along the entire MAT wall, keep clean as much as possible, and stockpile on range NTE 500-meters from project site, at location provided the COR. See EXHIBIT C - JMMU MAT54 MAT56, MAT58 & AT60 CROSS-SECTION.pdf and EXHIBIT F - CCMU JMMU 2001 asbuilts.pdf, sheet CD-2, section D.
4.2.2.3. Remove 6" of sub-base along the entire length of MAT walls. This material shall be available for fill at other targets (MATs 52).
4.2.2.4. The Contractor shall remove all electrical and communications at the MAT wall as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS. All other electrical and communications not identified to be removed, shall be safe guarded.

4.2.3. Earthwork:

4.2.3.1. Compact MAT rail subgrade to 90% compaction density. Place geotechnical fabric at the sub-grade, then place 6" of flex-base compacted to 95% maximum density, with 2% slope away from MAT wall. Flex-base specifications (use TXDOT Specification Item 247, Flexible Base, Grade 1-2, Type A (https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/specs/2014/standard/s247.pdf).

4.2.4. Electrical and Communications Service/Distribution:

4.2.4.1. The Contractor shall safeguard existing Load Centers at the MATs.
4.2.4.2. New electrical and communications shall be designed in accordance with (IAW) Range Design guide (RDG). The Contractor shall install electrical and communication, as indicated in New electrical and communications shall be designed IAW Range Design guide (RDG). The

Contractor shall install electrical and communication, as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS and EXHIBIT J - Moving Armor Target (MAT) - Aug2017. If conflict between EXHIBIT P and EXHIBIT J, EXHIBIT P shall govern.

4.3. Task 3: Repair and Modification of one (1) MAT emplacement MAT52: Existing MAT52 consists of a protection berm without a wall at the target rail. The existing power center end consists of H-piles and timbers, see EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-2 (page 156 of 451) for "PLAN : EJM-1 MOVING TARGET. Install 72-inch tall MAT wall using BIN BLOCK and upgrade electrical and communication infrastructure.

4.3.1. Design: The Contractor shall design 72-inch of MAT52, reinforced concrete panels for H-Pile Power Center area and target protection berm with Bin Block/ Mafia Block.

4.3.2. General Requirements:

4.3.2.1. Finished wall height shall be 72", measured from the top of timber to the ground surface which the base of the elevated target rail system shall be installed. EXHIBIT J - Moving Armor Target (MAT) - Aug2017.pdf, sheets MAT-01 & MAT-02.

4.3.2.2. At the MAT Power Conter, all timbers shall be replaced with full height concrete panels.

4.3.2.3. Targetry and rail installed by others.

4.3.2.4. New MAT Wall shall protect existing target rail length.

4.3.3. Demolition:

4.3.3.1. Remove all existing timber MAT walls at the power center, H-piles to remain. There are 10-timbers between H-piles as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-2, detail D on page 156 of 451. Any un-used and un-damaged timber material shall be stacked neatly at 14R PV 18404 55597. The stack shall have dunnage underneath so that they may be moved using a forklift. Space bundles of timbers (8.6-feet x 8.6-feet x 4-foot high) with 12-foot clear space between bundles to reduce chance of fire spread. Damage timbers to be disposed by contractor.

4.3.3.2. There are three (3) GEO-LOCK Anchors installed using 3/4/-inch all thread which goes approximately 8-foot behind wall that will need to be dealt with during demolition and installation of new wall. The GOE-LOCK Anchors are no longer needed.

4.3.3.3. Remove all target rail, bus bar system and track railroad ties to be disposed of by contractor.

4.3.3.4. Remove 10-inches of rock ballast along the entire MAT wall, keep clean as much as possible, and stockpile on range NTE 500-meters from project site, at location provided the COR.

4.3.3.5. Remove 6" of sub-grade along the entire length of MAT rail. This material shall be available for use on MAT protective berms.

4.3.3.6. The Contractor shall remove all electrical and communications at the MAT wall as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS. All other electrical and communications not identified to be removed, shall be safe guarded.

4.3.4. Earthwork:

4.3.4.1. Compact old rail bed subgrade to 90% compaction.

4.3.4.2. Install 6-inches for flex-base at old rail bed and compact to 90% compaction.

4.3.4.3. Contractor may use material used to build a dam during range original construction in 2001 as shown on EXHIBIT D - Moving Armor Target MAT Locations.pdf, located at 14R PV 18769 54555, just East of SAT480 to build target protection berm and wall.

4.3.4.4. Compact MAT wall subgrade to 90% compaction density. Place geotechnical fabric at the sub-grade then place 6" of flex-base compacted to 95% maximum density, with 2% slope away from MAT wall. Flex-base specifications (use TXDOT Specification Item 247, Flexible Base, Grade 1-2, Type A (https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/specs/2014/standard/s247.pdf).

4.3.4.5. Install French drain rock (capillary rock) with filter fabric, behind concrete walls.

4.3.4.6. Soil testing, compaction densities shall be required on this project. Samples may be obtained of existing material on range prior to actual start of physical construction work.

4.3.4.7. BIN Block installation shall require Geo-grid reinforcement into the berm.

4.3.4.8. MAT Protection Berm shall be IAW EXHIBIT S - Target Protection - July 2017.pdf for both 120MM and 25MM Projectiles.

4.3.4.9. Minimum of 4-iches of topsoil shall be installed.

4.3.4.10. Turf shall be established to at least 90-percent before final acceptance using EXHIBIT M - Species List for Range Seed.

4.3.4.11. The existing service road shall remain as it currently exists.

4.3.4.12. Contractor to install drainage V-Ditch along north side of service road and install a culvert on south end of service road

4.3.5. Concrete:

4.3.5.1. MAT wall at power center area shall be constructed of full height concrete panels and H-Piles.

4.3.5.2. MAT wall at target rail bed area to be constructed using Bin Block/Mafia Block topped with a single timber. Block shall be installed geo-grid system to support wall into protection

berm.

4.3.5.3. The intent of the new MAT wall concrete assembly is if the wall gets damaged, easy replacement by removing the damaged concrete and replace with a new assembly.

4.3.6. Electrical and Communications Service/Distribution:

4.3.6.1. New electrical and communications shall be designed IAW Range Design guide (RDG). The Contractor shall install electrical and communication, as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS *and* EXHIBIT J - Moving Armor Target (MAT) - Aug2017. If conflict between EXHIBIT P and EXHIBIT J, EXHIBIT P shall govern.

4.3.7. Exterior Improvements:

4.3.7.1. Top of MAT wall shall be one top timber on top of concrete. Wood timbers shall be treated for direct ground contact or maybe from demoed timbers. Exception is the power center end shall be full height concrete panels.

4.4. Task 4: Repair and Modernization of one hundred (117) Stationary Infantry Target (SIT) at eighteen (18) Clusters: Upgrade electrical and communication infrastructure.

4.4.1. Demolition:

4.4.1.1. The Contractor shall remove all electrical and communications from the SIT walls as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS at the following SIT clusters: C12, C14, C16, C18, C20, C22, C24, C26, C28, C30, C32, C34, C36, C38, and C40. Total number of SIT emplacements is 105. All other electrical and communications not identified to be removed, shall be safe guarded. EXHIBIT R - JMMU Target designation reference 1995 2001 to current as of 3 24 2026.

4.4.2. Design: The Contractor shall design repairs and modernization of SITs consistent with EXHIBIT G - Moving Infantry Target (MIT) - Aug2017, EXHIBIT H - SIT Cluster November 2018 and EXHIBIT P - ELECTRICAL AND COMMUNICATIONS. Existing SIT coffins do not have an 18-inch front wall, Reference EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-6, detail 1 (page 160 of 451) shows 400mm (equals 15.75-inches) contractor to field verify. Also, locations of electrical and communications penetrations vary.

4.4.3. Concrete:

4.4.3.1.1. The Contractor shall repair concrete damage to the following concrete SIT coffins IAW EXHIBIT K - TXDOT Concrete Repair Manual crm.pdf : C12-1, 12-2, 12-3, 12-5, 12-6, 12-7, C14-1, C14-6, C14-7, C16-2, C16-3, C16-4, C16-5, C16-6, C16-7, C20-1, C20-2, C22-1, C22-2, C22-3, C24-1, C24-2, C30-5, C40-2, C40-4, C40-5, C40-6 and C40-7.

4.4.3.2. Preparatory required with COR and those performing the work prior to concrete repairs.

4.4.4. Earthwork:

4.4.4.1. All Cluster SITs to have concrete protection restored IAW the original design Reference EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-6, detail 1 (page 160 of 451) which shows timber being 1-inch higher than the SIT concrete coffin and a protection berm at Clusters C12 & C14 are 6.1Meters (equals 20-feet) and all others are 12.2Meters (equals 40-feet) with a 1-percent forward slope. Also, the flank sides of the concrete coffins to have earth protection as well.
4.4.4.2. Cluster C36 to have its existing drainage V-ditch regraded for 636-feet.
4.4.4.3. Minimum of 4-iches of topsoil shall be installed at disturbed areas (excluding drainage ditches).
4.4.4.4. Turf shall be established to at least 90-percent before final acceptance using EXHIBIT M - Species List for Range Seed.

4.4.5. Electrical and Communications Service/Distribution:

4.4.5.1. New electrical and communications shall be designed IAW Range Design guide (RDG) as shown in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.pdf
4.4.5.2. The contractor shall verify if locations of the load centers interfere with the Master Target Data Panels at SIT Emplacements. The Contractor shall determine if the concrete SIT emplacements need to be replaced or if the Contractor can relocate the power supply in the existing concrete emplacement. Current power supply penetration in the concrete emplacement shall not work since the Master Target Data Panels cannot sit any higher in the emplacement than shown. See EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.pdf. Existing SIT coffins front wall are 15.75-inches and not 18-inches. Similar conditions existed at some CCMU SITs adjacent range to JMMU that have been resolved.
4.4.5.3. The final enclosures shall be installed onto the floor of the emplacements, however final installation of enclosure's space at the top of the enclosure shall be less than or equal to` the space above the enclosures in the current target emplacements if enough space is present. Existing conditions shall be used for design instead of the top of box dimensions defined in the Range Design Guide.

4.4.6. Grounding:

4.4.6.1. Contractor to safeguard existing grounding rods and #6 bare copper ground conductor at each SIT as shown on EXHIBIT F - CCMU JMMU 2001.pdf sheet E-65, SIT detail (page 268 of 451) any missing grounds will need to be replaced under this contract IAW EXHIBIT P- ELECTRICAL AND COMMUNICATIONS.pdf and EXHIBIT H - SIT Cluster November 2018.

4.5. Task 5: Repair and Modernization of fifty-six (56) Stationary Armor Target (SAT) emplacements: Upgrade electrical and communication infrastructure. Current infrastructure is not sufficient to meet requirements. See EXHIBIT R - JMMU Target designation TAB C - Stationary Armored Targets (SATs) for original designation and current designation and data.

4.5.1. General Requirements:

4.5.1.1. Modernize electrical and communication of the following fifty-nine (59) SATs as indicated in EXHIBIT I - Stationary Armor Target (SAT) - Aug2017 and EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.

4.5.1.2. Priority of work shall be SATs forward of the LOA.

4.5.1.3. Targetry installed by others.

4.5.2. Demolition:

4.5.2.1. The Contractor shall remove all electrical and communications from SAT walls at the at the following fifty-nine (59) SATs. SATs behind the LOA 412, 414, 416, 418, 420/C62, 422, 424, 426/C64, 428, 430, 432, 434, 436, 438, 440/C66, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462 and 464. Total of 27 SATs. SATs forward of the LOA: 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528 and 530. Total of 32 SATs. Priority of work shall be SATs forward of the LOA. All other electrical and communications not identified to be removed, shall be safe guarded.

4.5.3. Earthwork:

4.5.3.1. The following SATs need existing drainage V-ditch graded: SAT454 for 405-feet, SAT458 & 460 combined 600-feet.

4.5.4. Electrical Service/Distribution:

4.5.4.1. New electrical and communications shall be designed IAW Range Design guide (RDG). The Contractor shall install new electrical, and communications as indicated and EXHIBIT I - Stationary Armor Target (SAT) - Aug2017 and EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.

4.5.4.2. Grounding: Contractor to safeguard existing grounding rods and #6 bare copper ground conductor at each SAT as shown on EXHIBIT F - CCMU JMMU 2001.pdf sheet E-65, SAT detail “STATIONARY ARMOR TARGET PLAN” and detail B (page 268 of 451) and EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.

4.6. Task 6: Repair and Modernization of three (3) Stationary Armor Target (SAT)/Stationary Infantry Target (SIT) combination Cluster: Upgrade electrical and communication infrastructure. Existing infrastructure is not sufficient to support requirements.

4.6.1. Modernize electrical and communication at the following combination SAT/SIT clusters: 420/C62, 426/C64 and 440/C66 as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS. These combination clusters consist of four (4) SITs and one (1) SAT per cluster for a total of twelve (12) SITs and three (3) SATs. See EXHIBIT R – JMMU Target Designation TAB B and TAB C.

4.6.2. Targetry installed by others.

4.6.3. Electrical and Communications Service/Distribution:

4.6.3.1. New electrical and communications shall be designed IAW Range Design guide (RDG). The Contractor shall install new electrical, and communications as indicated and EXHIBIT I - Stationary Armor Target (SAT) - Aug2017 and EXHIBIT H - SIT Cluster November 2018. Contractor to safeguard existing bare copper grounding conductor at each SIT.

4.6.4. Demolition:

4.6.4.1. The Contractor shall remove all electrical and communications from SAT and SIT walls at the following combination SAT/SIT clusters: 420/C62, 426/C64 and 440/C66 as indicated in EXHIBIT P - ELECTRICAL AND COMMUNICATIONS. These combination clusters consist of four (4) SITs and one (1) SAT per cluster for a total of twelve (12) SITs and three (3) SATs. All other electrical and communications not identified to be removed, shall be safe guarded.

4.6.5. Site Restoration: The Contractor shall provide all supervision, equipment, labor, tools, and furnish all materials, necessary to restore the construction site to preexisting conditions.

4.6.5.1. The Contractor shall use Fort Hood Range Seed Mix specifications. See EXHIBIT M - Species List for Range Seed. Watering plan shall need to be implemented until establishment of vegetation defined as 90% coverage after first mowing. Watering forward of LOA may be accomplished during mandatory shutdown reference EXHIBIT N – Mandatory Shutdown times.

4.7. Bid Options:

4.7.1. Option Task 1: At four (4) MATs, replace timbers with concrete panels for MAT Mover Safe-Haven 3 concrete panels per MAT, with one top timber. Total 12 reinforced concrete panels and top timber. The location of the panels will be at the charging station, indicated by the COR. Charging station installed by others. There are 10-timbers between H-piles as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-2, detail D on page 156 of 451. Top timber to extend at least

1-inch above H-pile as indicated on EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-3, detail 6 on page 157 of 451. Bottom of concrete panel to sit on bearing shelf on H-pile as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-3, detail 10 on page 157 of 451. Any un-used and un-damaged timber material shall be stacked neatly at 14R PV 18404 55597. The stack shall have dunnage underneath so that they may be moved using a forklift. Space bundles of timbers (8.6-feet x 8.6-feet x 4-foot high) with 12-foot clear space between bundles to reduce chance of fire spread. Damage timbers to be disposed of by the contractor. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded.

4.7.2. Option Task 2: At four (4) MATs, replace every 5th set of timbers with concrete panels at each MATs Total 30 Concrete panels with one top timber at each MAT. Total 120 reinforced concrete panels and top timber. There are 10-timbers between H-piles as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-2, detail D on page 156 of 451. Top timber to extend at least 1-inch above H-pile as indicated on EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-3, detail 6 on page 157 of 451. Bottom of concrete panel to sit on bearing shelf on H-pile as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-3, detail 10 on page 157 of 451. Any un-used and un-damaged timber material shall be stacked neatly at 14R PV 18404 55597. The stack shall have dunnage underneath so that they may be moved using a forklift. Space bundles of timbers (8.6-feet x 8.6-feet x 4-foot high) with 12-foot clear space between bundles to reduce chance of fire spread. Damage timbers to be disposed of by the contractor. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded.

4.7.3. Option Task 3: At Four (4) MATs, Replace every timber section with concrete panels at each MATs Total 152 Concrete panels with one top timber at each MAT. Total 608 reinforced concrete panels and top timber. If this is awarded, option tasks 1 and 2 are not required. Existing timbers are to be used as top timbers. There are 10-timbers between H-piles as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-2, detail D on page 156 of 451. Top timber to extend at least 1-inch above H-pile as indicated on EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-3, detail 6 on page 157 of 451. Bottom of concrete panel to sit on bearing shelf on H-pile as indicated EXHIBIT F - CCMU JMMU 2001.pdf sheet CD-3, detail 10 on page 157 of 451. Any un-used and un-damaged timber material shall be stacked neatly at 14R PV 18404 55597. The stack shall have dunnage underneath so that they may be moved using a forklift. Space bundles of timbers (8.6-feet x 8.6-feet x 4-foot high) with 12-foot clear space between bundles to reduce chance of fire spread. Damage timbers to be disposed of by the contractor. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded.

4.7.4. Option Task 4: Furnish and install, Two (2) FASIT BOI MAT Target Equipment. Repair by Replacement, two (2) Moving Armor Target (MAT) systems on one (1) range. The contractor shall procure, install and integrate two (2) MAT mechanisms and associated track ensuring they can operate with the current Targetry Range Automated Control and Recording (TRACER) systems and are able to integrate forward to the new system (TRACER 2) as part of FASIT II compliance. All target mechanisms shall be protected from direct aviation fire in accordance with TC25-8 and existing conditions. No work on MAT Wall or Berm is required for this work. The length of rail replacement shall be in kind as existing. see EXHIBIT AA – DMMU MAT System locations and

existing conditions. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). 180 calendar days will be allowed in additional time under this contract for this activity only.

4.7.4.1. The Moving Armor Target System consists of a fully automated self-propelled carriage on a rail system, enabling the target silhouette to traverse smoothly from right to left and vice versa at different speeds and directions. Rugged and weather resistant. Support full size target silhouettes. The MAT system shall be versatile, capable of adjusting to curved layouts and terrain elevation variances. See EXHIBIT Q – TC25-8 Minimum MAT Specification Requirements.

4.7.4.2. Work includes deinstalling all equipment and infrastructure to include rails and associated equipment and disposal of non-government salvage equipment to the electrical breaker load center panel and fiber optic at the emplacement. Government will remove the existing MAT carriages and will be government salvage.

4.7.4.3. The rail system and charging docking stations located at Dalton Mountain Multi-Use (DMMU) range shall be disassembled, palletized and moved to the front of the range by the contractor as government salvage. Total of two (2) MATs.

4.7.4.4. The contractor shall prepare the locations for installation to include the required surfaces and anchoring for full MAT function.

4.7.4.5. For sustainability purposes, the MAT System shall be by Future Army System of Integrated Targets (FASIT), U.S. Army system of record.

4.7.4.6. MAT batteries shall be lithium-Ion. Also, docking station on the rail system to recharge these batteries without removing them. Each MAT emplacement has power and data. Data controls shall be wirelessly connected between the mover and emplacement.

4.7.4.7. FASIT COMPLIANCE: All hardware, including connectors and cables are compliant to the stated and derived requirements of the FASIT Performance Specification. The system interoperates with the control software via the FASIT PD ICD.

4.7.4.8. BATTLE EFFECTS SIMULATOR (BES): The MAT system shall be BES compatible.

4.7.4.9. CONVENTIONAL HIT COUNTING: The armor silhouette shall be equipped with contact hit sensors that count all mechanical hits on the silhouette by an incoming projectile. The sensors record the hits of all calibers of live-fire ammunition. The sensors record subsonic and supersonic ballistic strikes of all calibers of live-fire ammunition and even training ammunition. The sensors include hit detection sensitivity adjustment It enables the adjustment of hit sensitivity so that only impacts from a projectile above an established threshold are counted as a hit. The sensors support single shot and burst mode. In the burst mode, a burst of fire is counted as a single hit.

4.7.4.10. BUILT-IN-TEST STATUS IDENTIFICATION: The target system provides local Built-In-Test {BIT) status identification, an initial status information and operational feedback to the control system. A display at the target system shows maintenance information (e.g. target type & firmware version, BIT status, COM address & COM status. supply voltage, error messages, status of the contact hit sensor, total hit count, target holder position). The display enables the troubleshooting of the system to isolate faults before extended maintenance services shall be done.

4.7.4.11. TARGET CONTROLLER: The system uses a target controller for communication with the range control network. The controller includes firmware that enables precise configuration of the system. Various settings to modify training scenarios such as presentation time, hits to kill or the hit counting mode can be programmed manually at the system or with the control system.

4.7.4.12. Government Acceptance Testing (GAT) full functionality test from the tower of each MAT Using Targetry Range Automated Control and Recording (TRACR) version one consisting of:

4.7.4.12.1. Moving & Stopping.
4.7.4.12.2. Lifting and lowering the target silhouette.
4.7.4.12.3. Lowering the silhouette after registration of a hit.
4.7.4.12.4. Lowering the silhouette after registration of a predefined number of hits.
4.7.4.12.5. Lowering the silhouette after registration of a hit and automatically re-exposing the silhouette.
4.7.4.12.6. Forward and Reverse movement at varying speeds.
4.7.4.12.7. Stop and braking performance.
4.7.4.12.8. Track limits detection.
4.7.4.12.9. Expose, conceal, and hit direction.
4.7.4.12.10. Concurrent activities (exposing and movement).

4.7.4.13. Conduct a functional test of each MAT to ensure communications, performance, and compatibility between the target and TRACR range control system is satisfactory. The contractor shall coordinate with the COR to observe the testing, if desired.

4.7.4.14. Conduct a functional test of each MAT to ensure communications, performance, and compatibility between the target and TRACR range control system is satisfactory. The contractor shall coordinate with the COR to observe the testing, if desired.

4.7.4.15. The contractor shall supply a two (2) year warranty that includes all parts and labor. The warranty does not include acts of God (fire, floods, lightning, tornadoes, etc.).

4.7.4.16. Assistant COR for this Task Option will be Chad C. Walker with Range Operations. 254-553-6397, E-mail: chad.c.walker3.civ@army.mil

4.7.4.17. The contractor shall schedule installation of MAT systems a minimum of 6 months out so that the range may be properly scheduled and surface danger zone (SDZ) deconflicted. This will be in the form of a schedule showing installation by range and MAT showing duration.

4.7.4.18. Remove ballast, remove 6-inches of subgrade and install 6-inches of flex base for the entire rail area.

4.7.5. Option Task 5: Replace Sump Pumps Systems at four (4) locations: (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded. See EXHIBIT R – JMMU Target designation TAB D – Drainage (ditches, culverts & sump pumps).

4.7.5.1. At Power Center PJ4A, Install new sump basin with grate, sump pump, all plumbing and electrical wiring, conduit and outlet (non-GFCI) to sump pump. Install plumbing union fitting at sump pump.

4.7.5.1.1. Sump pump shall be cast iron, submersible, Trash Water Pump, minimum 3,000 GPH, 1/2 HP, 2-inch discharge, with float switch.
4.7.5.1.2. Sump Basin shall be a minimum 30-gallon capacity, with metal grate.

4.7.5.2. At Power Center PJ5A, remove existing sump pump system, Remove 8-inches of existing grade within the entire Power Center area, install geotechnical fabric, install 6 inches ballast rock, install new sump basin, pump, electrical wiring, conduit, outlet (non-GFCI) to pump, all plumbing. Install union at sump pump. Sump pump may be relocated to area with more room.

4.7.5.2.1. Sump pump shall be cast iron, submersible, Trash Water Pump, minimum 3,000 GPH, 1/2 HP, 2-inch discharge, with float switch.
4.7.5.2.2. Sump Basin shall be a minimum of 30-gallon capacity, with metal grate, weep holes installed at the ballast line to allow ballast to act as French drain.
4.7.5.2.3. Ballast rock to be crushed rock without any fines, 3/4-inch to 1-inch size.

4.7.5.3. At Power Center PJ5B, remove existing sump pump system, Remove 8-inches of existing grade within the entire Power Center area, install geotechnical fabric, install 6 inches ballast rock, install new sump basin, pump, electrical wiring, conduit, outlet (non-GFCI) to pump, all plumbing. Install union at sump pump. Sump pump may be relocated to area with more room.

4.7.5.4. Sump pump shall be cast iron, submersible, Trash Water Pump, minimum 3,000 GPH, 1/2 HP, 2-inch discharge, with float switch.
4.7.5.5. Sump Basin shall be a minimum of 30-gallon capacity, with metal grate, weep holes installed at the ballast line to allow ballast to act as French drain.
4.7.5.6. Ballast rock to be crushed rock without any fines, 3/4-inch to 1-inch size.

4.7.5.7. At Power Center PJ7B, remove existing sump pump system, Remove 8-inches of existing grade within the entire Power Center area, install geotechnical fabric, install 6 inches ballast rock, install new sump basin, pump, electrical wiring, conduit, outlet (non-GFCI) to pump, all plumbing. Install union at sump pump. Sump pump may be relocated to area with more room.

4.7.5.8. Sump pump shall be cast iron, submersible, Trash Water Pump, minimum 3,000 GPH, 1/2 HP, 2-inch discharge, with float switch.
4.7.5.9. Sump Basin shall be a minimum of 30-gallon capacity, with metal grate, weep holes installed at the ballast line to allow ballast to act as French drain.
4.7.5.10. Ballast rock to be crushed rock without any fines, 3/4-inch to 1-inch size.

4.7.6. Option Task 6: Replace three (3) Range Limit Markers (RLMs) Northeast of MAT52, at SAT531 and near SAT528. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded. See EXHIBIT Y - Range Limit Marker Design.

4.7.6.1. Demo and replace: three (3) RLMs. At SAT531 at 14R PV 20783 56217, near SAT528 at 14R PV 20988 55445 and one Northeast of MAT52 at 14R PV 18103 56270.
4.7.6.2. RLMs at 531 and NE of MAT52 to be 16-foot tall. RLM near 528 to be 25-foot tall.
4.7.6.3. All RLM shall be made of heavy-duty aluminum and allowed to be tilt-down with balanced counterweight for maintenance activities.
4.7.6.4. All RLM signs shall be surfaced with marine grade plywood to facilitate attachment (stapling) of passive thermal devices by others. The aluminum arrow shall be wrapped with TXDOT approved orange reflective signage wrap.
4.7.6.5. Provide ten (10) new RLM Lights L-810(L), MKR-LTG1-0IR with external dusk to dawn controller for each, to replace any non-functional lights. Unused lights will be turned over to the government.

4.7.7. Option Task 7: Repair One (1) SACON Trench System Command Bunker and Machine-gun Bunker (SACON and Roof Structure Repairs). (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). Shock-Absorbing Concrete (SACON). No additional time will be added to POP if the option is awarded. See EXHIBIT Z – JMMU SACON Trench System Repairs.

4.7.7.1. Contractor shall provide the services of a licensed manufacturer of SACON, to make field repairs to the trench system located at 14R PV 18498 55667. License is furnished by the patent holder for the SACON which is held by the U.S. Army Corps of Engineers. Similar to Terran Corporation.
4.7.7.2. Furnish and install certified SACON Superficial walls as indicated in EXHIBIT Z the superficial SACON to extend above the sandbags.
4.7.7.3. Superficial SACON shall be capable of withstanding impacts from 5.56mm and 7.62mm ammunition from standard issue service rifles.
4.7.7.4. The timber, wood and roof damage repairs may be performed by anyone qualified. All wood products replaced shall be exterior treated for direct ground contact. The roof does not need to be watertight.

4.7.7.5. Replace all sandbags of the roof areas.

4.7.8. Option Task 8: Replace timbers with Mafia Block/BIN Block at Fifty-Eight (58) SATs. SAT522 has already had its timbers replaced with BIN Block/Mafia Block under a previous project. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded. The same constraints apply for when allowed to be forward of the Limits-of-Advance (LOA). See EXHIBIT I - Stationary ArmorTarget (SAT) - Aug2017

4.7.8.1. Contractor to remove fifty-nine (59) Battlefield Effects Simulator (BES) & twelve (12) SIT brackets, to be turned over to the government as government salvage.
4.7.8.2. Contractor to safeguard grounding rods and grounding conductors.
4.7.8.3. Size of finished SAT emplacement shall be no smaller than existing SAT emplacement.

4.7.9. Option Task 9: Grade thirty-one (31) drainage ditches and clear nine (9) culverts. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded.

4.7.9.1. Drainage ditches shall be graded as a V-ditch IAW EXHIBIT R - JMMU Target designation ref TAB D - Drainage (ditches culverts and sump pumps), at Thirty-one (31) locations for a total of 15,541-liniar feet.
4.7.9.2. Culverts identified in EXHIBIT R - JMMU Target designation ref TAB D - Drainage (ditches culverts and sump pumps), shows 9 culverts that are clogged for a total of 3,066-liniar feet and approximately 8 area-inlets. Contractor to field verify culvert diameters. Methods similar to hydro-jetting may be needed.

4.7.10. Option Task 10: Furnish and install Four (4) gates. Design to be same as installed at CCMU See EXHIBIT U - Gate Design. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded. Gates shall be painted yellow. Gates shall be installed at the following locations on JMMU near West Range Road:
4.7.10.1. 14R PV 15652 57009.
4.7.10.2. 14R PV 15896 57190.
4.7.10.3. 14R PV 15935 57225.
4.7.10.4. 14R PV 15960 57243.

4.7.11. Option Task 11: Procurement ten (10) Portable Armored Target System for Live-Fire Training. The contractor shall provide a complete, turnkey Portable Armored Target System. This includes the delivery, integration, and testing of all hardware, software, and networking components required to field a fully functional system. The system shall consist of ten (10) portable armored targets, a ruggedized mesh Wi-Fi network, and ruggedized tablets for command and control, all fully integrated with the Government-Furnished TRACR II software. See EXHIBIT X - Portable HSAT Specifications. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). Deliverables to be delivered by 1 November 2026.

4.7.11.1. Background. Fort Hood, Texas requires a portable live-fire target system to establish

temporary training ranges in various locations. This capability is essential for enhancing soldier marksmanship and tactical readiness in diverse operational environments. The system shall be rapidly deployable, remotely controlled, and integrate with the existing Army standard for range control software, Targetry Range Automated Control and Recording (TRACR) II.

4.7.11.2. Applicable Documents. The following documents, of the issue in effect on the date of solicitation, form a part of this SOW to the extent specified herein.

4.7.11.2.1. MIL-STD-810G: Department of Defense Test Method Standard for Environmental Engineering Considerations and Laboratory Tests.

4.7.11.2.2. TRACR II ICD: Targetry Range Automated Control and Recording II Interface Control Document (to be provided as GFI).

4.7.11.3. Requirements. The contractor shall provide all personnel, equipment, materials, and services necessary to deliver the integrated target system defined in the following sections. See

4.7.11.3.1. Task 1: Hardware Procurement and Delivery.

4.7.11.3.1.1. Portable Armored Targets:

4.7.11.3.1.1.1. The contractor shall deliver ten (10) portable FASIT compliant armored targets.

4.7.11.3.1.1.2. Each target shall be capable of being transported and set up by no more than two (2) personnel.

4.7.11.3.1.1.3. Targets shall feature a "pop-up" and "fall-down" or similar actuation mechanism controllable via the network.

4.7.11.3.1.1.4. Each target shall be self-powered, using rechargeable batteries with a minimum operational life of 24 continuous hours See EXHIBIT X - Portable HSAT Specifications. All necessary charging equipment shall be provided for each target. Each target shall come with lithium-ion type battery.

4.7.11.3.1.1.5. Targets shall be capable of lifting 400-pound target on their own without a concrete slab as a counterweight.

4.7.11.3.1.1.6. Each target shall have an integrated power function to control power on and off for thermals as commanded from the Control Tablet to a separate power supply.

4.7.11.3.1.2. Portable Armored Target Protection Coffins:

4.7.11.3.1.2.1. Each target shall have portable armor protection coffin consisting of AR500 steel plate with lifting eyes. The AR500 plate steel shall be ¾-inch thick on the sides and 1-inch on the front. The front shall be tilted 45-degrees from the ground. See EXHIBIT T - Portable Armored Target Protection.

4.7.11.3.1.2.2. AR500 Steel has a Brinell Hardness Number (BHN) is between 477–534, It is high-carbon, abrasion-resistant alloy steel—not mild steel—that resists surface deformation from projectiles.

4.7.11.3.1.2.3. Mill Test Reports (MTR) from the manufacturer shall be submitted to the government to verify the BHN range after materials are received by the contractor.

4.7.11.3.1.3. Ruggedized Mesh Wi-Fi Network:

4.7.11.3.1.3.1. The contractor shall deliver one (1) complete mesh Wi-Fi network system. Shall be 902-928 MHz, with MAC addressing.

4.7.11.3.1.3.2. The network shall be comprised of ruggedized, weather-resistant nodes capable of outdoor operation in a variety of climates.

4.7.11.3.1.3.3. The network shall be self-forming and self-healing, providing reliable, low-latency connectivity for all 10 targets and control tablets over a minimum operational area of 2.5 km x 2.5 km.

4.7.11.3.1.3.4. The system shall include all necessary antennas, cabling, and power sources for a complete setup.

4.7.11.3.1.4. Ruggedized Control Tablets:

4.7.11.3.1.4.1. The contractor shall deliver five (2) ruggedized tablets for system control.

4.7.11.3.1.4.2. Tablets shall meet or exceed MIL-STD-810G standards for drops, water, and dust resistance.

4.7.11.3.1.4.3. Displays shall be sunlight-readable with a minimum screen size of 10 inches.

4.7.11.3.1.4.4. Each tablet shall be pre-loaded and configured with the necessary operating system and TRACR II control software.

4.7.11.3.1.4.5. Control Tablet shall have an integrated power function to turn thermal on and off.

4.7.11.3.2. Task 2: System Integration.

4.7.11.3.2.1. TRACR II Integration: The primary technical requirement of this contract is the seamless integration of all hardware with the Government-Furnished TRACR II software.

4.7.11.3.2.2. The contractor shall develop any necessary hardware interfaces, APIs, or software drivers to ensure the TRACR II software, running on the provided tablets, can command and control all target functions

4.7.11.3.2.3. Control functions shall include, at a minimum: individual target up/down, all targets up/down, and receiving hit-detection feedback from the targets. Shall also include controlling the target thermals on and off.

4.7.11.3.3. Task 3: Testing and Verification.

4.7.11.3.3.1. Factory Acceptance Test (FAT): Prior to shipment, the contractor shall conduct a FAT at their facility to demonstrate that the complete system meets all requirements of this SOW. The Government reserves the right to witness the FAT.

4.7.11.3.3.2. Site Acceptance Test (SAT): Following delivery, the contractor

shall conduct a SAT at a Government-designated location will be at Fort Hood Live-fire Range, to be determined. The SAT will demonstrate the full functionality of the system in a field environment, including ease of setup, network stability, live-fire and successful TRACR II control. At the conclusion of the SAT, the target systems will be transported to Range Operations, Building 56000 for inventory and receipt of targets system.

4.7.11.3.4. Task 4: Training. The contractor shall provide a 1 day training course for up to 10 Government personnel. The training shall cover system setup, operation, basic troubleshooting, and maintenance.

4.7.11.3.5. Task 5: Documentation & Warranty.

4.7.11.3.5.1. Documentation: The contractor shall deliver two (2) complete sets of technical manuals in both digital (PDF) and printed format. Manuals shall include operator instructions, maintenance procedures, and a complete parts list.

4.7.11.3.5.2. 4.5.2 Warranty: The contractor shall provide a minimum two (2) year warranty on all hardware and software components, covering defects in materials and workmanship.

4.7.11.4. Deliverables. The contractor shall deliver the following items in accordance with the project schedule:

	Item	Quantity
01	Portable Armored Targets	10
02	Ruggedized Mesh Wi-Fi Network System	1
03	Ruggedized Control Tablets (with software and data plan)	2
04	System Integration (TRACR II)	1
05	Factory Acceptance Test (FAT) Report	1
06	Site Acceptance Test (SAT)	1
07	Training Course	1
08	Technical Manuals	2 Sets
09	Lithium-Ion Batteries	10 Sets
10	AR500 portable armored target protection coffin	10

4.7.11.5. Period of Performance. The total period of performance for this option task shall be six (6) months from the date of award. All deliverables shall be completed within this timeframe.

4.7.11.6. Assistant COR for this Task Option will be Chad C. Walker with Range Operations. 254-553-6397, E-mail: chad.c.walker3.civ@army.mil

4.7.11.7. Government-Furnished Information/Equipment (GFI/GFE). The Government will provide the following to the contractor:

4.7.11.7.1. Access to a Government test site for the Site Acceptance Test (SAT).

4.7.11.7.2. Technical points of contact for the TRACR II program office.

4.7.12. Option Task 12: Install thirteen (13) Moving Infantry Target (MIT) emplacements: Design and Construct MIT emplacements at specified SIT Clusters. Existing SIT Clusters do not meet gunnery engagement requirements and require the addition of MIT emplacements. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). No additional time will be added to POP if the option is awarded.

4.7.12.1. Demolition:

4.7.12.1.1. Remove a total of thirteen (13) SITS, one of the outside SITS to facilitate construction of MITs at each of the following SIT clusters: C12-7, C14-1, C16-1, C18-1, C20-1, C22-7, C24-7, C28-7, C30-7, C32-7, C34-1, C36-7 and C40-7. Ref: EXHIBIT B - JMMU CLUSTER LOCATIONS FOR MIT LOCATIONS.pdf and EXHIBIT E – Cluster MIT V-Shape Formation.

4.7.12.2. Design: The Contractor shall design thirteen (13) Moving Infantry Targets (MIT) emplacements consistent with EXHIBIT G - Moving Infantry Target (MIT) - Aug2017, EXHIBIT H - SIT Cluster November 2018, EXHIBIT P - ELECTRICAL AND COMMUNICATIONS and EXHIBIT B - JMMU CLUSTER LOCATIONS FOR MIT LOCATIONS.pdf and

4.7.12.3. General Requirements:

4.7.12.3.1. Construct Thirteen (13) 15-meter concrete MITs, one (1) at the following thirteen (13) SIT cluster target numbers: C12-7, C14-1, C16-1, C18-1, C20-1, C22-7, C24-7, C28-7, C30-7, C32-7, C34-1, C36-7 and C40-7. Priority work locations forward of LOA shall be: C26, C28, C34, C36, C38, and C40. See attached EXHIBIT B – JMMU Cluster locations for MITs and EXHIBIT F - CCMU JMMU 2001 asbuilts.pdf.

4.7.12.3.2. The MIT shall be constructed at one (1) of the outside SITs of the cluster replacing one (1) of the SITs.

4.7.12.3.3. MITs shall be required to be at the same elevation as the SIT cluster targets.

4.7.12.3.4. MITs shall be constructed of concrete. The top of wall shall be protected with treated timber, plus Dura-Bloc minimum dimensions 24" long X 12" wide X 9" high. Dura-Block shall be EXP variant which offers enhanced fire-extinguishing properties.

4.7.12.3.5. MITs shall be 15-meters in length with additional space for electrical and communications.

4.7.12.3.6. Targetry and Rail installed by others.

4.7.12.4. Earthwork:

4.7.12.4.1. Establish grade so the MITs have 0% to 2% slope maximum in the direction of travel and facilitate proper drainage consistent with existing SIT Cluster emplacements.

4.7.12.4.2. Soil testing, compaction densities shall be required on this project. Samples may be obtained of existing material on range prior to actual start of physical construction.

4.7.12.4.3. Minimum of 4-iches of topsoil shall be installed at disturbed areas.

4.7.12.4.4. Turf shall be established to at least 90-percent before final acceptance using EXHIBIT M - Species List for Range Seed.

4.7.12.5. Electrical and Communications Service/Distribution:

4.7.12.5.1. Electrical and communications used for SIT shall be used for new MIT. EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.

4.7.13. Option Task 13: Replace sixteen (16) Small Arms Range Firing Positions: Design and Replace Small Arms Qualification Firing Positions. (PLEASE PROPOSE SEPARATELY IN PRICE PROPOSAL). Contractor shall perform actual physical work onsite starting 4 January 2027 and conclude on 5 February 2027 for this activity only, 33 Calendar days. The exact range for this work will be identified at award. Range is located on Fort Hood. The exact range will be one of the following: CLEAR CREEK RIFLE ALPHA (CCRA), CLEAR CREEK RIFLE BRAVO (CCRB), PILOT KNOB RIFLE ALPHA (PKRA), BLACK GAP RIFLE CHARLIE (BGRC) or QUALIFICATION TRAINING RANGE (QTR). See EXHIBIT CC - EXISTING CONDITIONS PHOTOS.

4.7.13.1. Demolition: all sixteen (16) existing concrete firing positions shall be demolished and removed from Fort Hood. For existing asbuilt drawings CLEAR CREEK RIFLE ALPHA (CCRA) is the same as shown in EXHIBIT FF - PKRA FIRING POSITION ASBUILT DRAWING. CLEAR CREEK RIFLE BRAVO (CCRB) see EXHIBIT EE - CCRB FIRING POSITION ASBUILT DRAWING. PILOT KNOB RIFLE ALPHA (PKRA) see EXHIBIT FF - PKRA FIRING POSITION ASBUILT DRAWING. BLACK GAP RIFLE CHARLIE (BGRC) see EXHIBIT DD - BGRC FIRING POSITION ASBUILT DRAWING and for QUALIFICATION TRAINING RANGE (QTR) see EXHIBIT GG - QTR FIRING POSITION ASBUILT

DRAWING.

4.7.13.2. Design and Construction: The Contractor shall design and construct sixteen (16) modified firing positions IAW EXHIBIT BB - Firing Positions Revision 6. New firing positions to allow the barricade to be located at the concrete slab and allow firers to shoot from all positions at the concrete slab location. Top wall elevation of firing positions shall be same as existing. The new centerline and front wall location (firing line) of the walk in foxhole shall be the same as existing.

4.7.13.3. Earthwork: The contractor shall import all topsoil and establish vegetation using seed IAW EXHIBIT M - Species List for Range Seed.

4.9.1. Site Visit and Kickoff Meeting: The Contractor shall coordinate a site visit and kickoff meeting (Date TBD) within five (5) calendar days after Notice to Proceed to establish the project communication matrix in preparation of an expeditious site adaptation and construction schedule. The SOW and conceptual drawings, if included in this SOW, shall be reviewed and clarifications made to establish the site adaptation and construction process timelines as well as the document exchange process requirements. The Contractor shall verify existing conditions affecting this project. This may be accomplished through field inspections, discussions with appropriate personnel, and by checking previous work and "as-built" drawings. If field inspections indicate minor discrepancies or missing information between the conceptual drawings provided and actual site conditions, the Contractor shall contact the Contracting Officer Representative (COR) immediately to report the discrepancies found. The Contractor shall provide written minutes of the kick-off meeting within three (3) business days.

4.9.2. The Contractor shall coordinate for and conduct a pre-design meeting during the kickoff meeting. This meeting shall provide the Contractor with final design directives from the COR. The Contractor shall provide minutes of the predesign meeting within three (3) business days after the meeting.

4.9.3. The Contractor shall provide 65% and 100% design construction documents in accordance with the contractors Proposal Rapid Design Development Plan. Upon receipt of Government comments or approval, the Contractor shall schedule a teleconference to discuss design comments and questions.

4.9.4. The Contractor shall schedule a teleconference if no resubmission is required. Resubmission shall only be required if major design changes are requested by email which may or may not require a cost modification.

4.9.5. Post 100% design approval, the Contractor shall submit a submittal register for approval and submit on major construction materials for Government approval. The Government will return approvals or comments within three (3) business days.

4.9.6. The Contractor shall provide a pre-construction schedule beginning after the pre-design meeting, delivered every first and third week of each month, and completes at the pre-construction meeting held prior to commencement of project construction.

4.9.7. The Contractor shall provide a construction schedule five (5) calendar days prior to commencement of construction and provide updates the first and third week of each month until the project has been completed.

4.9.8. The Contractor shall request and coordinate a pre-construction meeting prior to the start of construction. The Contractor shall provide written minutes of the meeting within three (3) business days.

4.10. Construction Compliance Inspection (CCI):

4.10.1. The Government will perform a Construction Compliance Inspection (CCI) to assess construction progress and to identify problem areas with target interface items early to avoid costly and extensive corrective actions and project delays at the Target Interface Inspection (TII). Target interface items include all portions of construction that physically connect to the target equipment or provide for the protection of the equipment. The US Army TRADOC Capability Manger Ranges (TCM-Ranges) will schedule the CCI in conjunction with the RTLP MCX (HNC), the applicable Corps of Engineers District, Program Executive Office for Simulation, Training, Ranges & Instrumentation (PEO-STRI) -Tank Automotive & Armaments Command (TACOM)-Warren, the Installation, and the Major Command (MACOM) when construction has reached the point that the following items can be checked, see EXHIBIT V - CCI-TII Checklist Instructions and EXHIBIT W - CCI-TII Checklist - CCI – TII Instructions and Checklist. A minimum of one (1) of each type of target emplacement (mock-up is acceptable if preferred by the Contractor) shall be complete, including the installation of all electrical power equipment, all data equipment including power and data cables and conduits prior to the beginning of the construction period. The Contractor submittals for electrical equipment shall be based on Government inspection of target emplacements provided. In all cases, the data termination racks, and samples of the power and data cables and associated connectors shall be on site and available for inspection, but they do not have to be installed. Space shall be shown for the master data panel(s) and cable trays or wireways for routing cables to range operating system(s). A CCI Checklist has been developed to conduct this inspection. Any “required” items noted during the CCI shall be corrected prior to continuing to the next phase all other items shall be corrected in a timely manner.

4.10.2. Target Interface Inspection (TII):

4.10.2.1. The Government will perform a Target Interface Inspection (TII) when all target equipment interface points are completed and ready for inspection (usually around 90% – 95% construction completion or about thirty (30) days prior to the end of construction), see EXHIBIT V - CCI-TII Checklist Instructions and EXHIBIT W - CCI-TII Checklist - CCI – TII Instructions and Checklist. The US Army TRADOC Capability Manger Ranges (TCM-Ranges) will schedule the TII in conjunction with the RTLP MCX (HNC), the applicable Corps of Engineers District, the installation, the MACOM, PEO-STRI TACOM-Warren, and the target installation Contractor. All target emplacements shall be complete, including the installation of all electrical power equipment, and all data equipment including power and data cables and conduits. Power cables shall be connected to all associated electrical equipment and tested. At the target emplacements, data cables shall be terminated/ connected in the

Master Target Data Panel (MTDP) and tested. At the range operations center, data cables shall be terminated/connected in the data termination rack (DTR) and tested. Cable tray(s) or wireway(s) for routing cables to range operating system(s) shall be installed. 120/240V, 20A circuits shall be installed in junction boxes near the master data panel or the data termination rack. A TII Checklist has been developed to conduct this inspection. Any items noted during the TII shall be corrected prior to close out of the construction contract.

4.10.3. Target Emplacement Mock-Up.

4.10.3.1. Provide two (2) mock target SIT emplacements with all required electrical power and communication equipment prior to purchase of any electrical materials for target emplacements. Both mock-up emplacements shall contain all electrical components assembled on plywood of the dimensions of a SIT emplacement. One (1) mock-up shall be constructed with the equipment required in an emplacement that contains a Master Target Data Panel and the other emplacement shall be constructed with the equipment required in an emplacement that contains a Target Data Panel. The mock-up shall also contain all conduit, conduit fittings, and cable seal fittings required in typical emplacements. Provide enough wire and cables to complete all terminations inside the data enclosures. The mock-up emplacements shall be retained on site for the duration of the construction contract.

4.11. Task 9: Acceptance Phase:

4.11.1. Upon substantial completion of primary construction and installation, the Contractor shall coordinate with the COR three (3) business days prior to schedule pre-final inspection of the project.

4.11.2. The Contractor, when complete shall coordinate with the COR three (3) business days prior and conduct a final acceptance of the project.

4.11.3. Upon Government acceptance by the appointed COR, the Contractor's one-year warranty start date shall be established, and the Government will assume full responsibility for the Contractor provided components.

4.11.4. If identified during Design, the Contractor shall provide "as-built" drawings within forty-five (45) calendar days of Government acceptance.

5. <u>Deliverables and Schedule of Items:</u>

Deliverable/Paragraph Reference	Transmittal Form and Quantity	Schedule	Deliver To
Project Kickoff Meeting Para 4.9.1.	Contractor format E-mail	No later than (NLT) five (5) calendar days post Task Order award	COR
Pre-Design Meeting Para 4.9.2.	Contractor format E-mail	During the kickoff meeting	COR

65% Design Para 4.9.3.	Contractor format E-mail	IAW contractors Proposal Rapid Design Development Plan	COR
100% Design Para 4.9.3.	Contractor format E-mail	IAW contractors Proposal Rapid Design Development Plan	COR
Submittal Register Para 4.9.5.	Contractor format E-mail	Post 100% design approval	COR
Pre-Construction Schedule Para 4.9.6.	Contractor format E-mail	Beginning after pre-design meeting, then every first and third week of each month, and completes at the Pre-construction meeting	COR
Construction Schedule Para 4.9.7.	Contractor format E-mail	five (5) calendar days prior to commencement of construction	COR
Pre-Construction Meeting Para 4.9.8.	Contractor format E-mail	prior to the commencement of construction	COR
Meeting Minutes Para 4.9.1, 4.9.2, and 4.9.8.	Contractor format E-mail	Within seven (3) business days post meeting	COR
Pre-final inspection Para 4.11.1	Contractor format E-mail	NLT three (3) business days prior to completion of primary construction	COR
"As-built" Drawings Para 4.11.4.	Contractor format E-mail	Forty-five (45) calendar days post Government acceptance	COR
Weekly Construction Reports	Contractor format E-mail	Upon the end of the first week of construction Until Government Acceptance of project	COR

6.0. <u>Place of Performance and Hours of Operation:</u>

6.1. Place of Performance. Tasks under this contract shall be performed at Government-owned facilities at Fort Hood, Texas.

6.2. Hours of Operations. The Contractor is permitted to work holidays and non-business hours as coordinated with COR.

7.0. **<u>Period of Performance (PoP):</u>** The PoP shall be from date of project award to **30 April 2027**. Actual Physical Construction Downrange **behind LOA 152 Calendar** days **beginning 30 November 2026** and completion date of physical work onsite **30 April 2027**. Forward of the LOA **12 February 2027 to 12 April 2027 (60 calendar days).** These dates are critical because work areas affect 8 other ranges.

8.0. <u>Travel:</u> N/A

9.0. <u>Contractor Excluded Responsibilities:</u>

9.1. Environmental Permits, to include a National Pollutant Discharge Elimination

System Permit (NPDES), or the State's equivalent, are not required by the Contractor.

9.2. Final electrical connection and upsizing of electrical or communication infrastructure installed to the emplacements.

9.3. Testing, handling, and disposal of any hazardous materials.

10.0. **<u>Government Furnished Property (GFP) and Responsibilities:</u>** The Government will provide only the facilities, utilities, equipment, parts, supplies, and materials delineated in the SOW described herein as Government Furnished Property (GFP). GFP consists of facilities, utilities, equipment, materials, and information.

10.1. The Government will assist the Contractor with the identification and protection of existing utilities.

10.2. The Government will ensure there are no unexploded ordnance (UXO) in the construction area.

10.3. The Government will provide the Record of Environmental Consideration (REC).

10.4. Availability and Use of Utility Services:

10.4.1. In accordance with FAR Clause 52.236-14, Availability and Use of Utility Services, water and electricity are furnished by the Government for the Contractor's use at no charge and in the performance of construction work at the job site, but only to the extent that their use is necessary to complete the work and the utilities are readily available at the site. Any usage of these utilities beyond what is needed to complete construction work at the job site or exceeds that which is readily available at the job site, and approved for use by the Contracting Officer, shall be furnished by the Contractor at its own expense. These utilities are provided provisionally and only to the extent that is necessary to facilitate the work. This authority can be revoked if the Government witnesses that utilities are being wasted, e.g., lights being left on when no work is being done or water is being left on unattended for any extended amount of time. Failure of the Contractor to comply with this request to conserve and preserve these utilities will result in the Contractor entering into individual metering agreements at the job site and paying for the use of these utilities.

10.4.2. In reference to FAR Clause 52.236-10, Operations and Storage Areas, SHOULD the Contractor be AUTHORIZED to establish a field operations office or a temporary staging area under this contract, it shall be responsible for consumption of available utilities. Prior to commencement of work under the contract, the Contractor shall sign a utility metering agreement with the Directorate of Public Works Utilities Section, Bldg. 4612 on 77th Street and Santa Fe Avenue. Prior to final payment under the contract, the Contractor shall pay any outstanding utility charges and provide a copy of the paid invoice to the Contracting Officer as evidence of compliance. If the solicitation does not provide for such arrangements, and the Contractor did not receive separate approval for the establishment of such facilities/space from the Contracting Officer, no such authorization is assumed. Any costs incurred for the establishment of field operations

facilities after contract award are made solely at the Contractor's cost, and without compensation by the Government. There shall be no squatting on the job site.

11.0. RESERVED

12.0. Hazardous Information: All areas within the project footprint and adjacent areas are currently active with military personnel. The Government will deny non-contractor personnel access to the project area during all phases of construction. The Contractor shall remain vigilant to work within the construction area to reduce impacts on training exercises. There is no requirement to handle any hazardous material.

13.0. Personnel:

13.1. IAW 18 Unites States Code (USC) § 1382, the authority of any officer or person in command or charge thereof to control and deny an employee entry to all or part of the installation is absolute. If an employee is removed from the job site or dismissed from the premises, the Contractor is not relieved of the requirement to provide sufficient personnel to perform the services as required by this SOW. The individual removed or denied access has no right to appeal.

13.2. All personnel shall be able to read, write, speak, and comprehend the English language. The Contractor shall provide a workforce possessing the skills, knowledge, and training to satisfactorily perform the services required by this contract. Personnel performing work under this SOW shall not be considered employees of the Government.

14.0. Contracting Officer Representative (COR):

14.1. COR:
Name: Tim Bauman
Address: Building 4610, Engineer Drive, USAG Fort Hood, Texas 76544
Cell: 254-432-1386
E-mail: timothy.k.bauman.civ@army.mil

14.2. Assistant COR:
Name: Chad Walker
Address: Building 56000, Engineer Drive, USAG Fort Hood, Texas 76544
Cell: 254-553-6397
E-mail: chad.c.walker3.civ@army.mil

15.0. Security Requirements:

15.1. Employees selected for this SOW shall be able to pass all security requirements IAW the Provost Marshal Office (PMO) Policy to gain access to the installation.

15.2. All Contractors requiring access to installations shall complete AT level I awareness

training within thirty (30) calendar days after employee start date. Certificates of completion shall be submitted to the COR or to the Contracting Officer (KO). AT level I awareness training is available at http://jko.jten.mil/courses/atl1/launch.html.

15.3. All Contractor shall attend iWATCH training. This training will be used to inform employees of the types of behavior to watch for and instruct employees to report suspicious activity to the COR. This training shall be completed prior to beginning construction. The iWATCH training is available at http://www.myarmyonesource.com/familyprogramsandservices/iwatchprogram/default.aspx.

15.4. DoD Manual 5205.02, the Contractor shall complete Level I Operations Security (OPSEC) Awareness training available at https://securityawareness.usalearning.gov/opsec/. This training shall be completed prior to beginning construction.

16.0. Installation Access:

16.1. The Contractor shall be able to pass all security requirements IAW the PMO Policy to gain access to the installation.

16.2. The Contractor shall provide all information required for background checks to meet installation access requirements to be accomplished by the installation PMO, Director of Emergency Services, or Security Office.

16.3. The Government will assist the Contractor with installation access however, it is the Contractor's responsibility to gain lawful access to the installation IAW PMO policies.

17.0. Range Access:

17.1. All privately owned vehicles (POVS) shall have a valid vehicle access pass issued by Range Operations for the range and/or training area before the vehicle is to access. This pass is NOT the same as the Fort Hood Access Pass.

17.2. The Contractor employees (including subcontractors) requiring access to live fire range areas are to receive a range safety briefing and unexploded ordinance (UXO) orientation briefing prior to starting work on range. This briefing is performed by Range Operations.

17.3. The Contractor is responsible for ensuring employees (including subcontractors and vendors) maintain situational awareness of where they are located, and any restrictions/limitations as issued by Range Operations. In any event that there is not a clear understanding of any restrictions/limitations from Range Operations, the Contractor is to seek clarification and understanding with Range Operations prior to entering the range.

17.4. The Contractor is to contact Range Operations to request permission to enter the range and the area on the range that the Contractor shall be occupying at all times. Requests shall include the total number of persons occupying the range and phone number of the Contractor representative on the range. The Contractor shall report to Range Operations when changes in the number of persons on the range that are under the control of the Contractor and when the Contractor exits the range. The Contractor is to maintain available communications with Range Operations at all times while on the range. Range Operations Phone Number: (254) 287-3321

17.5. Access to Fort Hood's maneuver training area land and live fire training areas is prohibited without authorization from Fort Hood Range Operations IAW AR 350-19, chapter 4, AR 385-63, DA PAM 385-63, and FHR 350-40. Penalties for violations apply to military and civilian personnel and include the full range of statutory and regulatory sanctions, including criminal prosecution.

17.6. Range Operations is the operational control authority for all activities within the boundaries of Fort Hood maneuver training land and live fire areas (training Complex) and are regulated by Range Operations (Ref: FHR 350-40). This is not to be confused with contract authority.

APPENDIX A
Fort Hood, TX
Location

EXHIBIT A - FTHOOD-JMMU-AERIAL
EXHIBIT B - JMMU CLUSTER LOCATIONS FOR MIT LOCATIONS.pdf
EXHIBIT C – JMMU MAT54 MAT56, MAT58 & AT60 CROSS-SECTION.pdf
EXHIBIT D - Moving Armor Target MAT Locations.pdf
EXHIBIT E – Cluster MIT V-Shape Formation.
EXHIBIT F - CCMU JMMU 2001.pdf
EXHIBIT G - Moving InfantryTarget (MIT) - Aug2017.pdf
EXHIBIT H - SIT Cluster November 2018.pdf
EXHIBIT I - Stationary Armor Target (SAT) - Aug2017.pdf
EXHIBIT J - Moving Armor Target (MAT) - Aug2017.pdf
EXHIBIT K - TXDOT Concrete Repair Manual crm.pdf
EXHIBIT L - JMMU RANGE SITE SUMMARY PCs AND CAMERA .pdf
EXHIBIT M - Species List for Range Seed.docx
EXHIBIT N - Mandatory Shutdown times.
EXHIBIT O – Summary Target Electrical and Communications.
EXHIBIT P - ELECTRICAL AND COMMUNICATIONS.pdf
EXHIBIT Q – TC25-8 Minimum MAT Specification Requirements
EXHIBIT R - JMMU Target designation reference 1995 2001 to current as of 3 24 2026
- TAB A – Moving Armored Targets (MATs)
- TAB B – Clusters and Moving Infantry Targets (MITs)
- TAB C – Stationary Armored Targets (SATs)
- TAB D – Drainage (ditches, culverts & sump pumps)
- TAB E - Power Centers
- TAB F - Fiber Optics

EXHIBIT S - Target Protection - July 2017.pdf
EXHIBIT T - Portable Armored Target Protection
EXHIBIT U - Gate Design
EXHIBIT V - CCI-TII Checklist Instructions
EXHIBIT W - CCI-TII Checklist
EXHIBIT X – Portable HSAT Specifications
EXHIBIT Y - Range Limit Marker Design.pdf
EXHIBIT Z - SACON Repairs
EXHIBIT AA – DMMU MAT System locations and existing conditions.
EXHIBIT BB - Firing Positions Revision 6.
EXHIBIT CC - EXISTING CONDITIONS PHOTOS
EXHIBIT DD - BGRC FIRING POSITION ASBUILT DRAWING
EXHIBIT EE - CCRB FIRING POSITION ASBUILT DRAWING
EXHIBIT FF - PKRA FIRING POSITION ASBUILT DRAWING
EXHIBIT GG - QTR FIRING POSITION ASBUILT DRAWING