A close-up of a hole in a metal frame

Description automatically generated

Large scale combat operations main command post (lsco mcp)

Statement of Work

CPT G

13OCT2023

Approval Sheet

APPROVED BY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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# 1.0 Introduction

This STATEMENT OF WORK (“SOW”) is made and entered into by [customer] (“Customer”) and [team name] (“[team name]”) on \_\_\_\_\_\_\_\_\_, 20xx.

This document is not intended to serve as a requirements document, a design document, a project plan/schedule, or a ‘to do list’ of all tasks that must be undertaken to complete the project.

## 1.1 Background

How do Battalion Main Command Posts evolve to be mobile, redundant, and survivable with existing equipment on hand? The last twenty years of warfighting means in Counterinsurgency Operations (COIN) doesn’t directly translate to Large Scale Combat Operations (LSCO) conflicts with near-peer adversaries. LSCO focuses on massing combat power to attrit enemy forces and acquire territory to deny enemy advantage across the five domains of warfare: land, sea, air, space, and cyberspace. The process of military acquisitions is slow. Years even. If the threat of near-peer adversaries exists today, the military cannot delay fulfilling emerging requirements. Solutions to this problem set must be addressed with already appropriated equipment and capabilities.

## 1.2 Project Scope

* Minimum of eight MCP layout prototypes tested
* Eight separate Light Infantry Battalions will conduct the prototyping and testing
* Final design validation authorized by Forces Command (FORSCOM) through chain of command
* Construction plans, list of required materials, photographs, and step-by-step assembly instructions are published in an easy to digest and readily implementable format in accordance with Army Regulation 25-50 Preparing and Managing Correspondence
* Testing results, best practices and lessons learned final compilation published by Combined Arms Lessons Learned (CALL) for widest dissemination
* Mobile, redundant, and survivable MCP accepted design made available across total force
* No more than ten months allotted for testing, prototyping, data, and results capturing
* No more than two months allotted for final layout design product creation
* No more than two months allotted for final approval through chain of command
* Must not hinder unit deployability or readiness
* Budget for materials will adhere to existing preapproved budgets
  + Additional funds may be requested at two points – four and eight months from project initiation
* Changes in scope of requirements must be approved by Joint Readiness Training Center (JRTC) Commander
  + Approved changes in scope will result in revision to timeline and budget
* Air and space assets will be made available for image capture at least once a month from existing U.S. government organizations
* Electronic Warfare equipment and personnel will be made available for Electromagnetic emissions data capture at least once a month from Fort Johnson, LA organizations
* LSCO MCP Project will adhere to Command Post functions from Army Technical Publication 6-0.5 Command Post Organization and Operations
* Army Battle Command System (ABCS) communication and warfighting systems must be utilized
* A key development complete Infantry Captain will serve as subject matter expert on LSCO MCP Project Team for insight and compliance regulation

## Project Goals

* Retain warfighting capabilities – Do not decrease communication, synchronization, nor warfighting function capabilities.
* Reduce Electronic Warfare (EW) threat – The Electromagnetic (EM) fingerprint must be reduced or masked through terrain and emissions control.
* Flexible and modularity to fit needs of Commander – Minimize complexity and increase layout option combinations through modularity of fabricated products.
* Redundant capabilities – Communications systems must have backups for disruption mitigation.
* Doctrine change for Light Infantry – Supply lessons learned and best practices to impact the total fighting force.
* Circumvent acquisitions process – Use existing equipment to fulfill this emerging requirement without engaging in years long appropriations. Rethink the problem and use what we have on hand.
* Increase efficiency of displacement and establishment – Mobility equals survivability. Create checklists for tear-down and set-up of MCP with published time expectations.
* Practical “How-to” guide products – Organizational change takes time. Ensure the means to do so are readily at hand.

## 1.4 Project Objectives

|  |  |
| --- | --- |
| **Objective** | **Measurement** |
| Configuration Management | Version control photographs, documents, and test output dated and input into Microsoft Team weekly |
| Knowledge Management | Information and data kept in totality, organized in Microsoft Team by descending dated folders weekly |
| Timeline Management | Project Management team monitors timeline adherence every Tuesday and Thursday |
| Up to date photographs | Photographs uploaded daily |
| Stakeholder Interviews | Three interviews conducted weekly with stakeholders from preapproved list of interviewees and questions |
| Prototype evolution history cataloged | Last step prior to next prototype construction iteration is data capture uploaded onto Microsoft Team |
| MCP site establishment and displacement timed | Collect start and end times for intermediately operationally capable (IOC), and fully operationally capable (FOC) |
| EM testing | Each prototype is tested by EW team for EM signature at three intervals: site arrival, IOC, and FOC |
| Notional Opposing Force Testing | Each prototype iteration is reconnaissance and penetration tested by notional opposing force to test survivability during a 24-hour period |
| Satellite, fixed wing, and rotary wing imagery of known testing sites | Each prototype iteration is photographed by satellite, fixed wing, and rotary wing systems to test concealment during a 24-hour period |
| Forced EM emission control | Each prototype iteration is ordered to reduce EM fingerprint by 80% to test command and control capabilities with reduced systems during a 24-hour period |
| Outside Expert Analysis Input | Each prototype iteration is evaluated by a combat veteran who has graduated Command General Staff College and is versed on LSCO. Analysis captured and published to Microsoft Team at completion of each iteration |
| Project status touchpoints | Conducting monthly on first Monday of each month via Microsoft Teams |

## 1.5 Project Clients and End Users

Identify the project client and what end users you will be working with.

## 1.6 Responsibilities

List the responsibilities of each team member and client involved.

## 1.7 Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date Modified** | **Author** | **Reason for Change** |
| 1 | 15SEP2023 | CPT G | Project Scope |
| 2 | 06OCT2023 | CPT G | Project Schedule |
| 3 | 13OCT2023 | CPT G | Project Budget |
|  |  |  |  |

# 2.0 Business Requirements

## 2.1 Project Deliverables

List relevant deliverables here.

## 2.2 Other Project Activities

List relevant project activities, if any, that are required to support any deliverables.

## 2.3 Project Standards

### 2.3.1 Internal

This project uses [company name]’s internal operating procedures (OP) in order to maintain a consistent software procedure and development methodology across all projects. These OP’s can be found and referenced on the company intranet.

### 2.3.2 External

List external standards being used for this project.

## 2.4 Funding Source/Project Sponsor

Indicate the source of funding for this project.

## 2.5 Project Conceptual Estimate

The LSCO MCP Project encompasses 86 weeks of effort from foundational conceptualization and contracts to Command Post Doctrine Publication. 14 Personnel including a Military Liaison will provide the means for LSCO MCP mobility, redundancy, and survivability. The anticipated cost is $519,150 after Army specific equipment requirements are returned.

### 2.5.1 Project Scale

The LSCO MCP Project is a large undertaking requiring 14 personnel with a total investment of 7800 hours over 20 months.

### 2.5.2 Project Critical Resources

|  |  |  |
| --- | --- | --- |
| Personnel Role | Technology | Logistics |
| Designer | Projectors | Materials Delivery |
| Administrative | Computers | Fuel |
| Army Captain | Printers | Materials |
| Writer | Scanners | .75” x 4’ x 8’ plywood |
| Project Manager | Cloud Data Storage | 2” x 4” x 8’ wood studs |
| Contractors | \*1523 Radios | Screws and Hardware |
| Legal | \*TSM Radios | Power Tools |
| Indirect | \*JBC-P | Tables |
| Office Rent | \*OE-254 | Acetate |
| Office Supplies | \*Power Amplifiers | Maps |
| Utilities | \*KGV-72 |  |
| Software Licenses | \*SKL |  |

### 2.5.3 Project Effort and Duration

Project effort and duration requirements.

|  |  |
| --- | --- |
| **Effort** | **Duration** |
| **Gathered Prototype Data** | **32 weeks** |
| **Design Approval Authorization Memorandum** | **4 weeks** |
| **Construction Plans** | **4 weeks** |
| **List of Required Materials (subsequent production)** | **3 weeks** |
| **Prototype Photographs** | **8 weeks** |
| **Step-by-Step Assembly Instructions** | **4 weeks** |
| **Testing Results Edited and Published by CALL** | **12 weeks** |
| **Best Practices Edited and Published by CALL** | **12 weeks** |
| **Technical Circulation Published with Complete Approved Design** | **12 weeks** |
| **Compile and Organize Results** | **8 weeks** |
| **Comprehensive Design with Data Backed Results in Presentation Format** | **4 weeks** |
| **FORSCOM Approval** | **8 weeks** |
| **Overlay Training Schedule with Testing Schedule** | **1 week** |
| **Expense Report** | **2 weeks** |
| **Scope Change Request** | **2 weeks** |
| **Revision of Timeline and Budget** | **2 weeks** |
| **Additional Funds** | **2 weeks** |
| **Aerial Photographs** | **8 weeks** |
| **Satellite Photographs** | **8 weeks** |
| **Map Overlay with EM Emissions Results** | **8 weeks** |
| **Memorandum of Completion** | **2 weeks** |
| **Memorandum of Understanding** | **2 weeks** |
| **Service Member Orders for Project Team Member** | **72 weeks** |

### 2.5.4 Personnel Resource Estimates

List personnel roles and number of positions required.

|  |  |
| --- | --- |
| **Personnel Role** | **Number Required** |
| Designer | 2 |
| Administrative | 2 |
| Contractor | 1 |
| Army Captain / Military Liaison | 1 |
| Logistician | 1 |
| Photographer | 1 |
| Knowledge Management | 1 |
| Pilot | 1 |
| Electromagnetic Analyzer | 1 |
| Writer | 1 |
| Editor | 1 |
| Project Manager | 1 |

### 2.5.5 Project Cost

Estimated cost for each personnel role and tally of the total personnel cost.

|  |  |
| --- | --- |
| **Personnel Role** | **Cost** |
| Designer | ($25/hr) \* (740 hours) = $18,500 |
| Administrative | ($20/hr) \* (1300 hours) = $26,000 |
| Contractor | ($30/hr) \* (520 hours) = $15,600 |
| Army Captain / Military Liaison | ($35/hr) \* (1160 hours) = $40,600 |
| Logistician | ($20/hr) \* (280 hours) = $5,600 |
| Photographer | ($20/hr) \* (440 hours) = $8,800 |
| Knowledge Management | ($30/hr) \* (1000 hours) = $30,000 |
| Pilot | ($35/hr) \* (160 hours) = $5,600 |
| Electromagnetic Analyzer | ($35/hr) \* (160 hours) = $5,600 |
| Writer | ($20/hr) \* (600 hours) = $12,000 |
| Editor | ($25/hr) \* (440 hours) = $11,000 |
| Project Developer | ($25/hr) \* (1200 hours) = $30,000 |
| Project Manager | ($40/hr) \* (1000 hours) = $40,000 |
|  | **Total Personnel Role Cost = $249,300** |

|  |  |
| --- | --- |
| **Technology** | **Cost** |
| Projectors | $600 |
| Computers | $14,000 |
| Printers | $600 |
| Scanners | $500 |
| Cloud Data Storage | $900 |
| \*1523 Radios | \*$6,000 |
| \*TSM Radios | \*$10,000 |
| \*JBC-P | \*$5,600 |
| \*AFATDS | \*$2,000 |
| \*DCGS | \*$2,000 |
| \*OE-254 | \*$2,200 |
| \*Power Amplifiers | \*$6,400 |
| \*KGV-72 | \*$900 |
| \*SKL | \*$7,000 |
| \*DAGR | \*$2,400 |
| \*WINTAK | \*$4,600 |
| \*CPCE Small Server | \*$8,800 |
| Electromagnetic Surveys | $32,000 |
|  | **Total Technology Cost = $106,500** |
|  | **\*\*$57,900 Refundable when Army Equipment returned to unit** |

|  |  |
| --- | --- |
| **Logistics** | **Cost** |
| Materials Delivery | $900 |
| Distinguished Visitor Travel | $12,000 |
| Distinguished Visitor Per Diem | $1,500 |
| Conference Hall Rental | $2,000 |
| Fuel | $18,000 |
|  | **Total Logistics Cost = $34,400** |

|  |  |
| --- | --- |
| **Materials** | **Cost** |
| .75” x 4’ x 8’ plywood | $5,000 |
| 2” x 4” x 8’ wood studs | $900 |
| Screws and Hardware | $1,200 |
| 2” x 2” x 12’ 18 gauge L Steel | $3,500 |
| Wood Glue | $100 |
| Polyurethane Sealant | $400 |
| Power Tools | $6,600 |
| Tables | $2,500 |
| Acetate | $200 |
| Maps | $150 |
|  | **Total Materials Cost = $20,550** |

|  |  |
| --- | --- |
| **Contractors** | **Cost** |
| Vehicle Mechanic | $4,000 |
| Railyard Workers | $8,000 |
| ABCS Integration Specialist | $3,500 |
| Legal | $7,500 |
|  | **Total Contractor Cost = $23,000** |

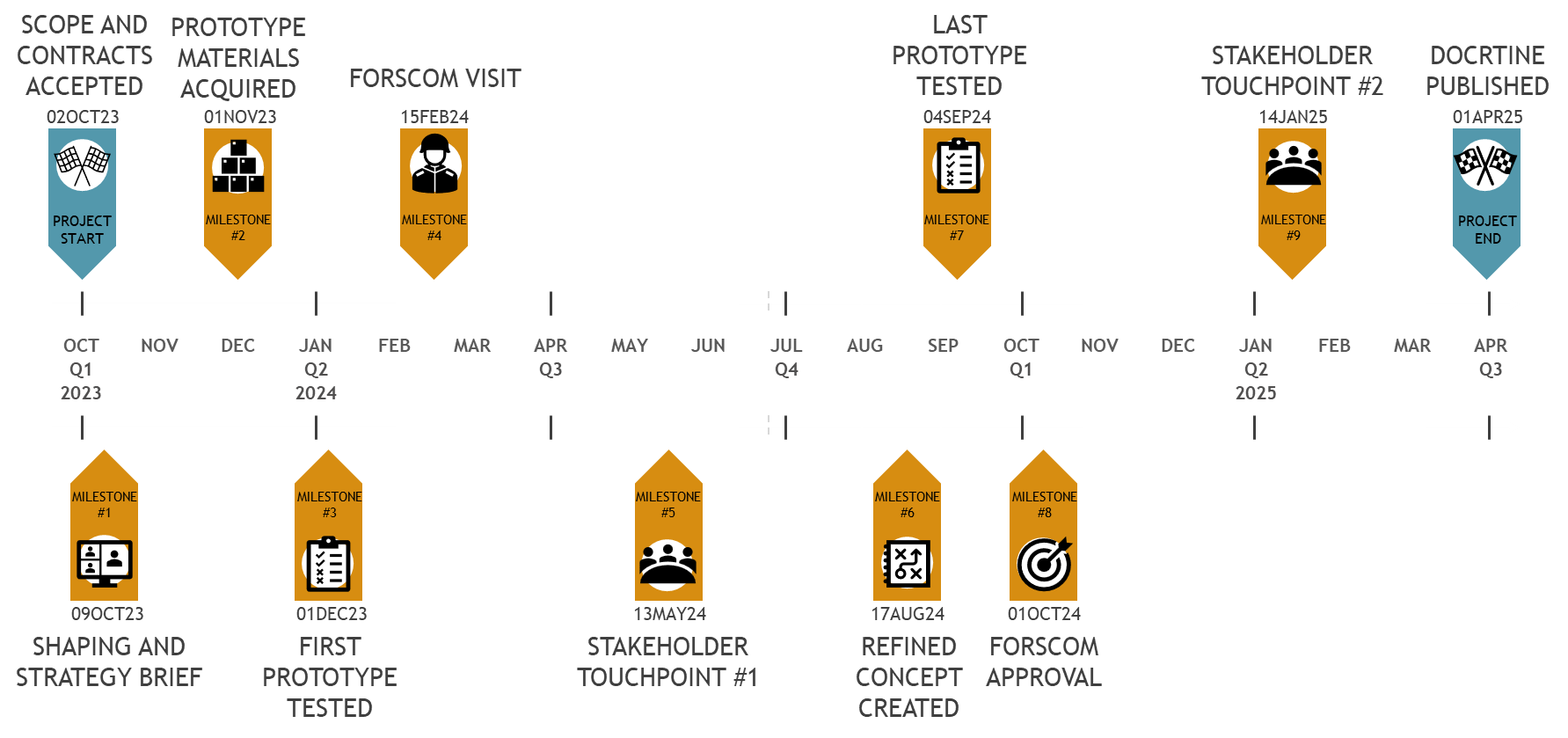
|  |  |
| --- | --- |
| **Indirect** | **Cost** |
| Office Rent | $27,000 |
| Office Supplies | $12,600 |
| Utilities | $16,200 |
| Vehicle Maintenance | $18,000 |
| Software Licenses | $5,000 |
|  | **Total Indirect Cost = $78,800** |

|  |  |
| --- | --- |
| **Other** | **Cost** |
| Satellite Imagery | $16,000 |
| PM Team Travel | $36,000 |
| PM Team Per Diem | $4,500 |
| Helicopter | $8,000 |
|  | **Total Other Cost = $64,500** |

## 

|  |  |
| --- | --- |
| **Categories** | **Total Cost** |
| Personnel Role | $249,300 |
| Technology | $106,500 |
| Logistics | $34,400 |
| Materials | $20,550 |
| Contractors | $23,000 |
| Indirect | $78,800 |
| Other | $64,500 |
| **Total** | **$577,050** |
| **\*\*Refundable** | **\*\*$57,900** |
| **Adjusted Total** | **$519,150** |

## 2.6 Schedule Requirements/Constraints

Please see attached Gantt Chart and Milestone Chart for schedule details (06.1\_Gantt Chart and 06.2\_Milestone Chart).

## 2.7 Resource Requirements/Constraints

## 2.8 Project Assumptions and Alternatives

### 2.8.1 Assumptions

### 2.8.2 Project Alternatives

## Risk

Project risks are events that may impact the project’s ability to meet stakeholder goals and requirements. Every project should integrate “Project Risk” into their project plan. The following categories are potential risks (every risk should be addressed by a risk mitigation plan).

* Company Legal Liability.
* Compliance with “Due Diligence” in regard to industry best practices.
* End-User acceptance.
* Loss of funding due to over budget incurred costs.
* Internal resource allocations.
* Timeframe over-runs due to delays.
* Risk event abandonment (risk events must have “risk owners”)

# 3.0 Project Success Criteria

Delivering project deliverables on time and on budget are traditional success factors; consider including the tangible results required by both the project sponsor and all stakeholders. A project may be on time and under budget; however, if the project is of low quality and on time, then the stakeholder goals are no met.   
The following are elements must be taken into consideration for a successful project:

* Project incurred costs fall within the required budget.
* Project deliverables are delivered within the specified timeframe.
* All results meet the established KPIs, if any, as defined by the project scope.
* All success criteria must be measurable and quantitative.

# Attachments