PROCUREMENT SENSITIVE

STATEMENT OF WORK

The US Department of State through the Bureau of International Narcotics and Law Enforcement (INL) provides funding and project management for the construction and renovation of corrections facilities in support of the Afghan General Directorate of Prisons and Detention Centers (GDPDC).

INL-Kabul Engineering coordinates with INL's Corrections System Support Program (CSSP) advisors and management to ensure proper design elements are included in these facilities to meet the needs of the GDPDC and provide safe, secure, humane, and sustainable facilities for the future security of Afghanistan

INL-K Engineering, positioned at the US Embassy-Kabul, oversees the design requirements, solicitation, contract award recommendations, and project management of construction/renovation projects that support GDPDC.

1. Project Background

Pol-i- Charkhi Prison was constructed between 1970 and 1980, and is the largest prison in Afghanistan. Decades of war and neglect have produced unsanitary and potentially unsafe conditions.

INL-K through the Regional Procurement Support Office (RPSO) awarded the construction contract for Pol-i-Charkhi prison renovation in June 2009. INL terminated the contract in November 2010.

The renovation project included the design and installation of two (2) wastewater treatment systems including septic tanks and absorption fields. The combined system design intended to service a maximum population of 3,500 individuals. Both leach field systems have been non-functioning since November 2011.

As of November 2014, approximately 7,500 inmates are under the control of the Ministry of Interior (MOI) / GDPDC at Pol-i-Charkhi. Due to the existing sanitation concerns, the US Department of State proposes to complete the original renovation project, including separate contracts for the design and construction of a Waste Water Treatment Facility (WWTF).

2. Project Scope

The purpose of this SOW is to provide the requirements for the design and specifications package to be used in the construction of a new WWTF at Pol-i-Charkhi Prison. The system shall be designed to meet the current and future needs of GDPDC inmates and staff at Pol-i-Charkhi Prison.

The successful design contractor will provide a complete design package with system plans, details, and design and equipment specifications for the construction of a new WWTF at Pol-i-Charkhi Prison. The design package shall include the Scope of Work (SOW), Bill of Quantity (BOQ), and a detailed cost estimate, and will be used to solicit proposals for the construction of the WWTF.

It is the intent of INL to work closely with GDPDC and CSSP in developing the system design, specifications, and capacity requirements. The successful bidder is strongly encouraged to offer alternative treatment solutions that will minimize the need for mechanical dependence, offer

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minimal required maintenance procedures, and be a sustainable, cost-effective facility that the GDPDC has the capability maintain successfully.

3. Location of Work:

Pol-i-Charkhi prison project site is located approximately 25 km east of Kabul, Afghanistan. The preferred location for the system as outlined on attachment 1.

4. Contractor Site Visit:

All interested bidders will have the opportunity to visit the proposed site. The Contracting Officer (CO) will notify interested bidders two weeks in advance of the proposed date for site visit. Interested bidders must register with the CO to attend, ONLY bidders that register to attend the site visit shall be allowed on the site. Only two (2) attendees from each interested company will be allowed.

5. Type of Contract:

5.1. This will be a fixed-firm-price contract. INL will award the design contract on a best value, technically acceptable basis. No additional sums will be payable to the contractor due to escalation in the cost of materials, equipment, security, transportation, or labor. Nor will there be any adjustment to the contract price because of fluctuations in currency exchange rates.

5.2. The single authority to approve modifications to the contract pricing or period of performance is the CO, located at the US Embassy Kabul. The contractor shall not deviate from the terms of the contract. Any deviation from the contract specifications or schedule by the contractor without written documentation and approval from the CO is a violation of the FAR 43.202 and 14 FAH-2 H-141.

If the selected contractor proceeds with any deviation to the specifications set forth in the contract documents and without written approval from the CO, they do so at their own risk.

6. Period of Performance & Liquidated Damages:

The period of performance will be 180 days from the receipt of Notice to Proceed (NTP). Prior to receipt of NTP, Contractor shall submit and obtain CO approval of the design and submittal schedule.

The project schedule is a key parameter of this project. Completion of the design, according to the milestones, is critical to success of the project as a whole. Liquidated damages will be part of this contract. If the contractor fails to complete the work within the time specified, the contractor shall pay liquidated damages to the Government

If the contractor fails to deliver the project milestone packages according to Table 8.1 in this document, the Contractor shall pay Liquidated Damages to the US Government for 0.1% of

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the total contract amount for each calendar day of delay. Liquidated damages shall continue until INL engineering approves the delayed design deliverable package.

7. Site Access:

Upon notification of contract award, the contractor shall:

7.1. Provide INL with work schedule and access needs in order to complete the site investigation within 30 days of contract award.

7.2. Coordinate with GDPDC and INL project COR for access to the site.

7.2.1. Provide INL and GDPDC 24 hours-notice of changes to scheduled work activities and communicate on a daily basis with the designated representative from the GDPDC prison officials to coordinate scheduled work activities

7.3. Comply with all GDPDC security requirements for access into the secure perimeter of the prison.

7.4. Comply with GDPDC internal security protocol while performing testing under the terms and conditions of this task order.

7.5. Be responsible for vetting and badging employees for gaining access into the prison compound.

7.6. Ensure that employees are not allowed to walk outside their designated work area without a prison escort.

7.7. Comply with all direction by the prison officials during an institution emergency (i.e. escapes, fire, work stoppages, etc.)

7.8. The Contractor shall provide all required documentation and identification for all personnel, materials, tools, equipment and vehicles entering or exiting the prison facility to complete all work delineated herein.

7.9. All Contractor personnel shall wear readily visible identification and clothing that will easily distinguish them to prison guard force as construction personnel.

7.10. The contractor shall organize with GDPDC and arrange all facilities to all personnel entering or exiting to the prison during construction period.

8. Specific requirements:

8.1. Geotechnical test and reporting:

The Contractor shall obtain soil exploration, testing and evaluation from a professional geotechnical engineer. Determine the extent of exploration and testing based on recommendations with the geotechnical engineer, structural engineer (for foundations), civil engineer (for pavements, wells, septic systems, etc.), local storm water permitting agency (if applicable for detention ponds), and Government reviewers. Soils investigation (sampling, testing and evaluation) must be in accordance with UFC 3-220-01.

8.1.1. Geotechnical inspection and testing of the area designated for installation of the treatment system. (Attachment 1)

8.1.2. Geotechnical investigation shall include but is not limited to the following:

8.1.2.1. Specific gravity of soil solids (ASTM D 854)

8.1.2.2. Grain size analysis (ASTM D 422)

8.1.2.3. Unconfined compressive strength of cohesive soil (ASTM D 2166)

8.1.2.4. Direct shear tests (ASTM D 3080)

8.1.2.5. Standard penetration tests (ASTM D 1586) or EPA

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8.1.2.6. Standard Test Method for Infiltration Rate of Soils (soil percolation test) (ASTM D3385-09)

8.1.2.7. Laboratory compaction characteristics using modified effort (ASTM D 1557)

8.1.3. Identify soil classification (USCS) (ASTM D2488).

8.1.4. Topographic survey of the existing site.

8.1.5. Investigative properties and compaction testing of the soil

8.1.6. Investigate existing leach field(s) soil and prepare report with specific recommendations for removal of existing contaminated soils

8.1.7. Investigate and report on the condition of existing septic tank(s) in the leach field area

8.2. Site Survey/Plan:

The contractor shall prepare a survey for the proposed construction area. (Attachment 1.1) The site survey shall include the following:

8.2.1. Existing waste water discharge point from the prison perimeter wall

8.2.2. Existing Staff Barracks WWTF limits

8.2.3. Roads and sidewalks

8.2.4. Drainage ditches

8.2.5. Existing structures located within the building area

8.2.6. Force protection structures/Guard stations

8.2.7. Generator facilities

8.2.8. Visible and underground utilities

8.2.9. Overhead obstructions

8.2.10. Any and all standard survey requirements for a WWTF

8.3. Existing waste water delivery systems:

8.3.1. Contactor shall include a detailed plan for the connection point of the existing discharge system and the new treatment system

8.3.2. Contractor shall include detailed elevation plans for the existing discharge system and the connection point to the new treatment system

8.3.3. Contractor shall propose remediation, removal or reuse of existing septic tank(s)

8.3.4. Contractor shall take special care and attention to <u>not</u> encroach or negatively impact the performance of the existing Staff Barracks WWTF system

8.4. System design criteria:

8.4.1. The approved system shall provide treatment of black and gray water for a maximum of 12,000 prison inmates and GDPDC staff members

8.4.2. The system design package shall be based on International waste treatment standards and codes - *See 8.5 and References 14*

8.4.3. Effluent discharge plan shall include plan to use effluent for irrigation during growing season and diversion to the nearest receiving stream

8.4.4. Effluent discharge must meet the World Health Organization standards and United States EPA(Environmental Protection Agency) standards for effluent discharge

8.4.5. The system shall be designed with a useful lifespan of 40 years

8.4.6. The contractor shall provide complete structural, electrical, and mechanical design calculation for all parts and assemblies of the new WWTF

8.4.7. Contractor shall provide design documents according to Table 8.1

8.4.8. The Influent, physical, biological and chemical design load characteristics and criteria shall meet all specifications and codes - *See 8.5 and References 14*

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8.4.9. The treatment facility structures, mechanical, electrical, plumbing, and mechanical equipment shall be designed to withstand and survive damage from a one hundred (100) year flood

8.4.10. The facility structures, mechanical, electrical, plumbing, and mechanical equipment shall be designed to withstand seismic activity in accordance with the Seismic Zones 2 through 4 and per International Building Code/International Code Council (IBC/ICC) Seismic design categories and codes

8.4.11. All plants and equipment shall be provided with an alternate source of electric power or pumping capability to allow continuity of operation during power failures and scheduled service or maintenance shutdowns

8.4.12. The contractor shall provide effective safety measures for all personnel and visitors as per OSHA safety standards.

8.4.13. System design shall specify regular analytic tests required to determine operational efficiency. Such as PH, Oxygen etc.

8.4.14. System design shall include a "pre-screen" system to remove debris, garbage, and non-treatable items before entering the treatment system.

8.4.15. The design and product shall be compatible with the environment and existing proposed facilities

<u>The designer shall propose a treatment system that meets the following criteria:</u>

8.4.16. Requires minimum maintenance procedures to maintain operation

8.4.17. Requires minimal spare parts and equipment

8.4.18. Can be maintained with spare parts and equipment that is readily available locally

8.4.19. Provide a contingency plan for successful delivery of critical facility components in the event of a system malfunction or shutdown

8.4.20. Operations and maintenance training processes can be easily grasped by GDPDC staff

8.4.21. Operational flexibility allowing for the bypass of process units and controls in the event of plant shutdown

8.4.22. Provide a labor pool of skilled WWTF operators that are readily available and in close proximity to system location

8.4.23. The designer shall provide specific examples of these design factors and the successful operation of the proposed system in other third world country installations

8.4.24. Design of the system is not limited to the preceding criteria. The contractor is encouraged to propose designs and/or systems that will effectively and efficiently meet the capacity to use, maintain, and meet the needs of the user

8.5. Design Specifications:

The system design shall also comply with, but is not limited to, the following specifications and codes:

8.5.1. UFGS – United Facilities Guide Specifications

8.5.2. UFC – United Facilities Criteria

8.5.3. IBC – International Building Code

8.5.4. International Code Council

8.5.5. USEPA – United States Environmental Protection Agency

8.5.6. NEC 2011 – National Electrical Code

8.5.7. IMC 2012 – International Mechanical Code

8.5.8. IPC – International Plumbing Code

8.5.9. NFPA 70

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9. Submittals/Deliverables:

9.1. Submittal requirements for this design contract shall be as follows:
Table 8.1

Description		Quantity	Submission Date	Deliver To
Site Inspection and Access Schedule	100%	2 sets A3 and 2 electronic disk files in DWG and PDF	Contract Award plus 30 days	CO and COR US Embassy Kabul
Preliminary design report/Preliminary Site Plan /Site survey	10 % complete	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 30 days	CO and COR US Embassy Kabul
Concept Design	35% complete	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 60 days	CO and COR US Embassy Kabul
System Design Package	65% complete	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 90 days	CO and COR US Embassy Kabul
System Design Specifications/Equipment Cut Sheets/ Construction Submittal Schedule	65% complete	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 90 days	CO and COR US Embassy Kabul
Test and Commission Procedures Manual	50% Complete	3 sets A3size and three electronic disk files in Word and PDF	DNTP plus 120 days	CO and COR US Embassy Kabul
Operations and Maintenance Procedures Manual	50% Complete	3 sets A4 size and 2 electronic disk files in Word and PDF	DNTP plus 120 days	CO and COR US Embassy Kabul
System Design Package	99% complete	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 150 days	CO and COR US Embassy Kabul
Clear for construction design documents/Final Site Plan	100% complete construction documents	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 170 days	CO and COR US Embassy Kabul
System Design Specifications/Equipment Cut Sheets/ Construction Submittal Schedule	100% complete	2 sets A3 and 2 electronic disk files in DWG and PDF	DNTP plus 170 days	CO and COR US Embassy Kabul

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Test and Commission Procedures Manual	100% Complete	3 sets A4 size and two electronic disk files in Word and PDF	DNTP plus 170 days	CO and COR US Embassy Kabul
Operations and Maintenance Procedures Manual	100% Complete	3 sets A4 size and two electronic disk files in Word and PDF	DNTP plus 170 days	CO and COR US Embassy Kabul

Design package submittals shall include:

9.2. Title page
9.3. Site plan/ detailed area map
9.4. Drawing index
9.5. Plan, elevation, isometric, and section views that illustrate all required demolition activities
9.6. Conceptual plan in accordance with the treatment calculations to service the prison population maximum 12,000
9.7. Plan, elevation, isometric, and section views that illustrate the design of the proposed new system
9.8. Floor plans @ 1:100 scale
9.9. Security features
9.10. Key plans @ 1:50 and 1:20 scale
9.11. 99% design submission shall include a comprehensive project description
9.12. 99% design submission shall include a comprehensive report on energy usage requirements for the system
9.13. 99% design submission shall include a comprehensive quality management and scheduled maintenance report for the system

10. <u>Testing and Commissioning Support:</u>

10.1. The design contractor shall support the successful construction contractor in the testing and commissioning of the system at the project conclusion and system start-up.
10.2. The design contractor shall develop and deliver a Testing and Commissioning procedures manual for the system start-up process.

11. <u>Operations and Maintenance Support:</u>

11.1. The design contractor shall provide the following O & M support:
11.1.1. Develop the O&M training manual for the WWTF system

12. <u>Contract General Conditions:</u>

12.1. The contractor shall attend the INL sponsored site visit prior to submitting a proposal. The site visit will be held on **<u>TBD</u>**
12.2. Additional procedures shall be submitted to the CO in approved RFI format for formal response to all bidders, a minimum of two weeks before proposal due date.
12.3. The CO/COR shall not accept RFI's on the design solicitation after **<u>TBD</u>** date – two weeks prior to proposal due date.

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12.4. The contractor shall identify to the Contracting Officer contact details for the following project management personnel:
- 12.4.1. Project Manager
- 12.4.2. Project Engineer (Geotechnical)
- 12.4.3. Project Engineer (Structural)
- 12.4.4. Project Engineer (Civil)
- 12.4.5. Project Engineer (Mechanical)
- 12.4.6. Quality Control/Environmental Officer

12.5. The contractor shall provide, with the proposal, the following information on for all project management team member submitted:
- 12.5.1. Updated resume or CV
- 12.5.2. Relevant work history, including references and contact information (email and phone contact details)
- 12.5.3. Relevant work history, minimum five years verifiable work experience within engineering discipline submitted

12.6. The contractor shall identify by name one Project Manager (PM) to oversee the entire design package of the WWTF system

12.7. The PM shall meet the following requirements:
- 12.7.1. Produce all contract documents and reports.
- 12.7.2. Have a minimum ILR (Interagency Language Roundtable) Level 3 English, speaking and writing language proficiency.
- 12.7.3. Possess the ability to produce clear and concise design progress reports.
- 12.7.4. The approved PM shall be the POC for all reporting.

12.8. The contractor shall coordinate access to the compound with INL and GDPDC prison management

12.9. The contractor will be responsible to provide project staff background information for vetting and badging

12.10. Contractor will develop a site work plan to manage project staff access on the prison compound

12.11. The contractor shall notify the COR, in writing, 24 hours before any slippage in the design schedule or delay in submittal delivery.

12.12. The contractor shall immediately inform the CO and COR of any situation which could potentially expose the US Government to claim action from the contractor.

12.13. Monitor and review contract site conditions to identify potential unsafe practices and security concerns. When conditions of concern are observed, report conditions to the CO and COR.

12.14. Contractor shall coordinate with the CO, COR, Project Manager, and other members of the INL staff to achieve the highest possible priority and effectiveness in meeting the scope, schedule, and cost goals of the design projects.

12.15. The design contractor shall make the design staff available to INL and the WWTF construction contractor to consult and clarify design questions for the duration of the construction project. Design questions during construction phase shall be submitted in standard RFI format.

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13. References:

13.1. EPA 625/1-80-012, Design Manual: On-Site Wastewater Treatment Systems, October 1980
13.2. EPA 832-B-03-001, Guidelines for Management of Onsite/Decentralized Wastewater Systems, 2003
13.3. EPA Onsite Treatment Systems Technology Fact Sheet 11 (TFS-11), Recirculating Sand/Media Filters
13.4. EPA Onsite Wastewater Treatment Systems Technology Fact Sheet 10 (TFS-10), Intermittent Sand/Media Filters
13.5. EPA-625/1-81-013, Land Treatment of Municipal Wastewaters Process Design Manual, 1981
13.6. EPA-625/1-83-015, Design Manual for Municipal Wastewater Stabilization Ponds, October 1983
13.7. EPA-625/R-00/008, Onsite Wastewater Treatment Systems Manual, February 2002

14. Definitions:

- INL – International Narcotics and Law Enforcement
- GDPDC - Afghan General Directorate of Prisons and Detention Centers
- CSSP - Corrections System Support Program
- MoI - Ministry of Interior
- WWTF – Waste Water Treatment Facility
- T&C – Testing and Commissioning
- O&M – Operations and Maintenance
- USCS – Unified Soil Classification System
- ASTM – American Society for Testing and Material
- A&E - Architectural and Engineering
- CO – Contracting Officer – US Government official with the legal authority to enter into, administer, modify, and/or terminate contracts. The CO's warrant designates responsibilities and limits.
- COR - Contracting Officer's Representative – The designee of the project Contracting Officer. COR's authorized to monitor and enforce the contract but not make changes to the contract.
- FAR - Federal Acquisition Regulation
- INL-K/E - International Narcotics and Law Enforcement – Kabul – Engineering
- USEPA – United States Environmental Protection Agency

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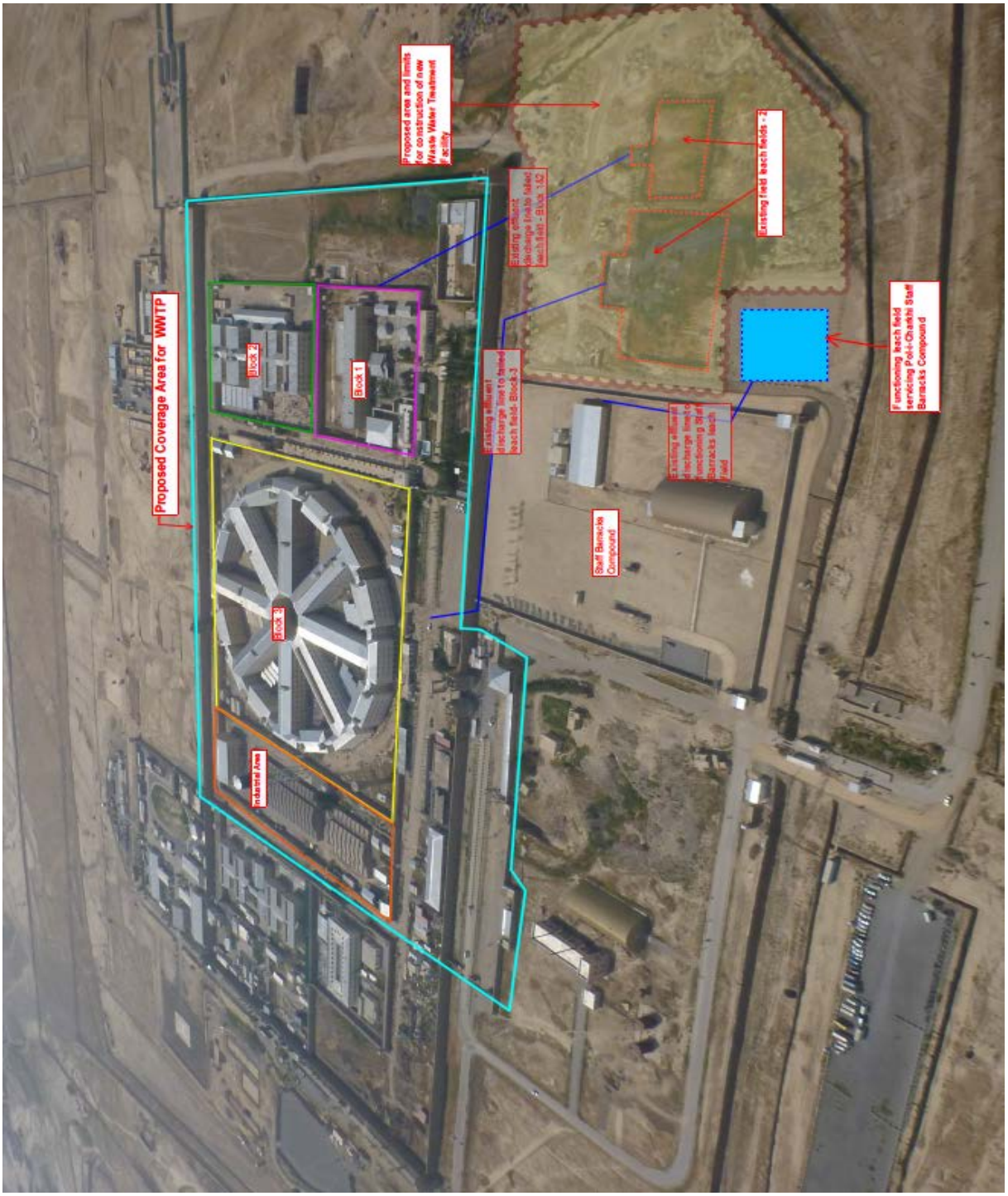
PROCUREMENT SENSITIVE

Attachment #1



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