



**US Army Corps
of Engineers®**
Middle East District



Products & Services

Middle East District



BUILDING STRONG®

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Middle East District Overview and Executive Summary

The U.S. Army Corps of Engineers (USACE) delivers projects, products, and services using a business model called the Project Management Business Process (PMBP), wherein we form a team to define and deliver your mission requirements. We are most successful as a team when we adhere to the following business rules:

- Each project has one project manager (PM) and one project delivery team (PDT). You, the customer, are an essential part of this team – after all, we are working for you, not the other way around.
- The fundamental document that guides project completion is the Project Management Plan (PMP). The best PMPs clearly identify what you need, when you need it, and how you want us to communicate project status to you.

The Middle East District (MED) employs about 400 professionals to serve you. We size our staff based on your mission requirements: the District does not have a fixed staff limit or rigid organizational structure. We are proud of our staff of registered engineers, architects, contracting professionals, and cost estimators, as well as our certified project management professionals, our attorneys and other professionally registered staff.

The Middle East District, like all USACE districts, is project funded. This simply means that you pay us for the services we provide you. Federal law prohibits us from either making a profit or suffering a loss. At the end of a given year, our expenses (salaries and benefits, facilities, supplies, rents, even janitorial services) must be equal to our income.

This project-funded, or pay-for-service, model is often new to people who are working with MED for the first time. We will work with you to determine if our services are provided at a flat rate that is determined by USACE headquarters, or at an “at-cost” rate. These details are part of the PMP. We are happy to provide you a full accounting of the funds you have entrusted with us. We return all available unneeded funds at the end of a project so you can use them elsewhere for your mission needs.



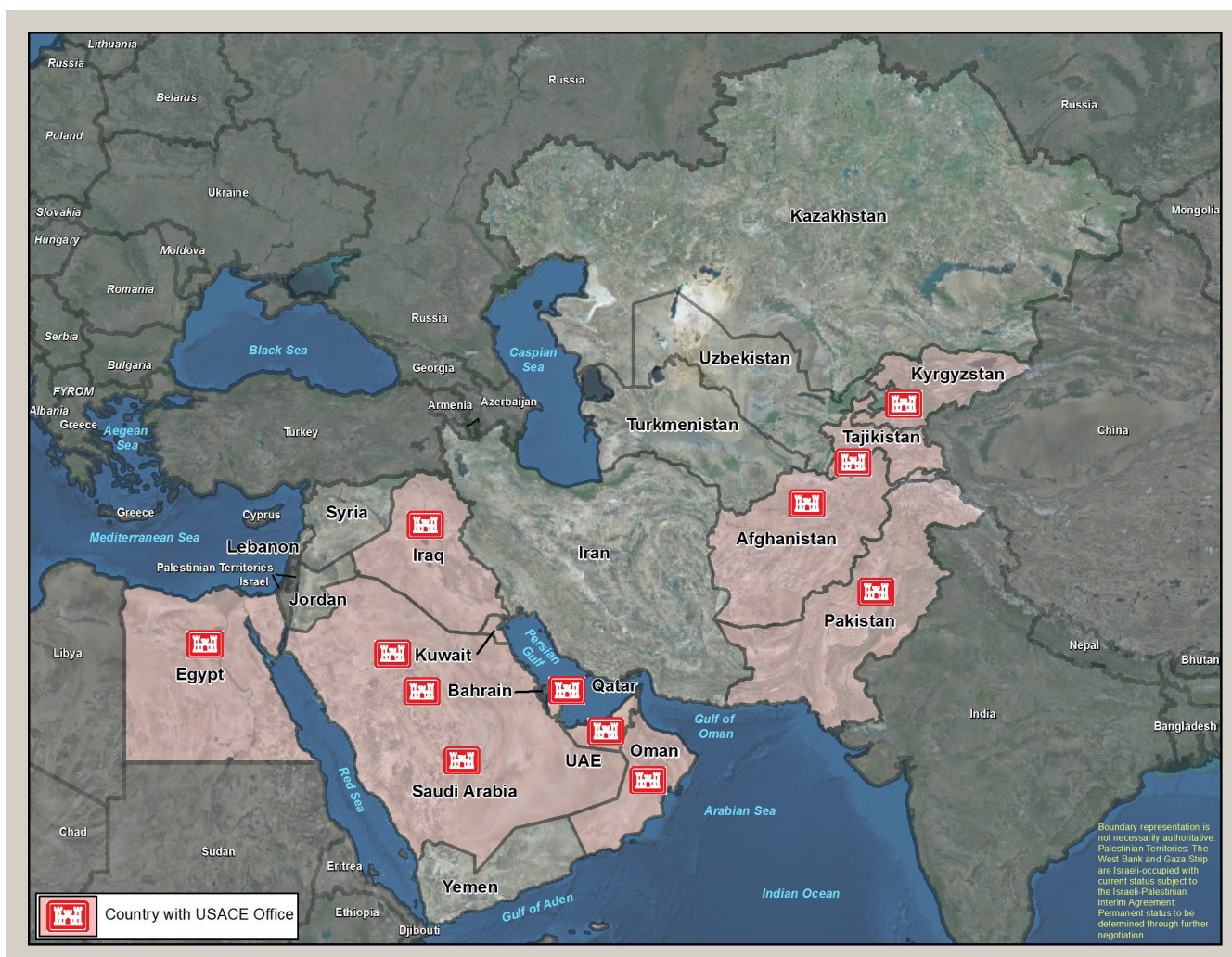
We have organized this Guide into three sections, which generally follow the natural progression of a typical project: planning and programming, engineering and design, and construction. Each section contains specific services that we provide to customers, and under each service you will find responses to each of these questions:

The Guide

- What is it?
- Who can use this service?
- How does it work?
- How can your organization get the maximum benefits from this service?

Each section also contains staff contact information. If something is unclear, please give us a call so we can help. An index follows this Overview and Executive Summary to allow you fast access to solutions for your mission requirements.

Where We Do Business



Programs and Project Management

The Middle East District program or project manager is your portal for all MED services. We assign a project manager immediately to help you develop the scope of services, and he or she will remain your primary point of contact throughout the life cycle of your project. Project managers manage scope, schedule, and budget; they are your primary interface with MED's professionals, representing your interests and acting as your advocate throughout the project. We assign a program manager when you have multiple related projects to ensure that we manage your work consistently and efficiently. Our program manager serves as your advocate as well. Communication is the number one responsibility of program and project managers.

Our program and project managers are a valuable resource in helping you receive the maximum benefit from the services that we provide. Our program manager will provide monthly updates, at a minimum, on the status of your program's progress and funding, and he or she will be available to hold line item reviews of your entire program as required. In short, we will provide project data as often as you need for your information requirements.

Additionally, the Programs and Project Management Division manages the annual customer survey. We welcome a forthright assessment of our services. Each year we make improvements based on your feedback about our performance, use the information you provide to look for opportunities to improve our processes and to increase the value of services we provide to you. Similarly, if you have any concerns with MED's performance any time during the year, we ask that you immediately contact the Deputy for Programs and Project Management or your program manager. We are here to serve you – to make sure you get projects and services on time and within budget to meet your mission's needs.



Agreement Development: Memorandum of Understanding, Memorandum of Agreement, and Support Agreements (DD Form 1144)

Aligning Middle East District services with our customers' requirements is the key to the successful accomplishment of every project. To ensure this success, we use Memorandum of Understanding (MOU), Memorandum of Agreement (MOA), and Support Agreements (SAs). These documents establish basic operating processes, assumptions, and constraints, while identifying your requirements for project management, engineering, design, construction, and other services. These agreements may be developed at a broad program level covering many projects that could span over several years.

- An MOU defines general areas of understanding between two or more parties. It explains what each party plans to do; however, what each party does is not dependent on what the other party does (e.g., does not require reimbursement or other support).
- An MOA defines general areas of conditional agreement between two or more parties; what one party does depends on what the other party does (e.g., one party agrees to provide support if the other party provides the materials).
- SAs are used when MED provides recurring support to another Department of Defense (DoD) or non-DoD federal activity. Support agreements are recorded on a DD Form 1144 and define the support to be provided by MED, specify the basis for calculating reimbursement charges for each service, establish the billing and reimbursement process, and specify other terms and conditions of the agreement.

U.S. government customers, non-military host nation government agencies and ministries, and eligible international organizations.

Our project manager will work with you to document the information required in the agreement. Agreements typically include the following project requirements:

- Objectives;
- Broad project scope, budget, and schedule requirements;
- Level of support that the District will provide;
- Roles and responsibilities;
- Financial arrangements, such as funding type, funding requirements, reimbursements, and payments; and,
- Legal framework for accomplishing the project.

By thoroughly documenting the objectives of the agreement at the highest level of both organizations, we develop the framework by which we will accomplish your projects. This framework defines expectations and provides continuity to projects as new members join the team.

What is it?

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

DD Form 1391 Preparation, Assistance, and Validation

A DD Form 1391 is a construction project programming document for U.S. Department of Defense customers only. The DD Form 1391 is used to establish scope, document the project budget, and justify construction requirements (U.S. Military Construction, Operations and Maintenance, etc.). In addition to the development of DD Form 1391s, the Middle East District also reviews and revalidates existing DD Form 1391s for scope and cost, at your request, to better assure that the most accurate data is going forward for programming.

What is it?

Planning & Programming

Who can use this service?

U.S. military customers.

How does it work?

The most thorough and complete DD Form 1391s are completed using the planning charrette method. Charrettes are intense collaborative efforts that bring the customers and users together with project managers, engineers, and architects to define the project requirements, estimate costs, and accomplish necessary coordination. Planning charrettes are discussed in greater detail on page 12 of this document.

You have two options: a planning charrette leading to a full DD Form 1391 or a simple front page DD Form 1391. The Department of Army requires charrettes for all Military Construction-Army projects. A front page DD Form 1391 is a limited effort suitable for initial project scoping and costing. Our services include:

- Requirements analysis including project proponent, user and staff interviews;
- Site planning;
- Basic economic analysis (detailed or extensive economic analyses require more effort);
- Programming cost estimates; and,
- DD Form 1391 preparation.

We are available to conduct technical reviews, gather data, and assist you in the DD Form 1391 submission process.

How can your organization get the maximum benefits from this service?

The best projects result from thorough planning and coordination, with the team documenting the scope and cost estimates in a DD Form 1391. The development of a quality DD Form 1391 requires the close coordination with project proponents and the end user to accurately identify user and project requirements. Your participation in this process is vital for determining accurate scope and costs.

Existing Conditions Maps

What is it?

Using your existing conditions maps, the Middle East District can help you develop a non-graphic database that inventories all of the existing features of your facility, base, or installation. Existing conditions maps may serve as the basis for development of a geographic information system.

Existing conditions maps typically include:

- Installation or site;
- Electrical distribution;
- Storm and sanitary sewer;
- Water distribution;
- Lighting;
- Tree and ground cover;
- Transportation; and/or,
- Development constraints.

Who can use this service?

All customers.

MED will obtain the services of an architect-engineer (A-E) firm for map preparation. The A-E firm conducts field surveys or compiles data from aerial photographs, digitizes the data, and prepares existing conditions maps. You will review the progress at various stages, with comments subsequently incorporated into the final product. We will update existing conditions maps when requested.

How does it work?

Existing conditions maps provide you with several benefits:

- Knowledge of the location of underground utilities can save you money and/or help you to avoid unanticipated outages.
- Up-to-date conditions maps provide you with a sound basis for master planning and future uses of your resources.
- Identification of challenges with building locations or real estate can help to avoid costly delays.

How can your organization get the maximum benefits from this service?

We recommend that you invest in computer-aided drafting and design equipment, as well as operators, to update and plot maps, or you may request our services to keep your maps current.

Foreign Assistance Act, Section 607

The Middle East District can provide services to civilian agencies and ministries of host nation governments under the authority of Section 607 of the Foreign Assistance Act. Section 607 programs allow friendly countries to acquire non-defense related goods and services from the United States. Agencies may acquire services such as studies, planning, design, engineering, and construction; procurement and delivery of equipment; facility operations and maintenance; or other related activities.

What is it?

Section 607 agreements are international agreements between the host nation and the U.S. government outlining work to be performed, defining relationships between agencies for accomplishing the work, and providing funding from either the host nation or the United States. In most cases, the host nation and the U.S. government implement Section 607 agreements following Foreign Military Sales procedures (page 10). For larger 607 programs, a memorandum of agreement (page 7) may be used. MED acts as the implementing agency for such agreements within our geographic area of responsibility.

Non-military host nation government agencies and ministries; eligible international organizations.

Who can use this service?

Contact the Deputy for Programs and Project Management, your designated program manager if you are already a customer, or the U.S. Embassy in your particular area. Informal exchanges should precede the formal request for assistance. We highly recommend that you ask us to develop a planning and programming report (page 11) which documents the key project information that should be agreed upon before you formally initiate your request for services through a Letter of Request. MED will assign a project manager to work with you to process your request and to provide a range of options tailored to address your requirements. Each option will include a scope of work, a preliminary schedule, and a budgetary cost estimate, along with advantages and disadvantages. Once your project requirements are defined, approved, and funded through a Letter of Acceptance or memorandum of agreement, your project manager will lead the team in accomplishing the project and delivering the services requested.

How does it work?

Engage us early in your planning process so that we can bring our broad experience to assist your team in defining the problem and offering workable solutions. This initial effort will enable the joint team to clearly define the general scope(s) of any proposed Section 607 agreement and thereby more effectively manage your project's scope, budget, and schedule.

How can your organization get the maximum benefits from this service?

Foreign Military Sales Services

What is it?

The Middle East District has extensive expertise in Foreign Military Sales (FMS) programs. The U.S. Department of Defense FMS program allows friendly countries to acquire goods and services from the United States, including from the U.S. Army Corps of Engineers. Either the host nation or the U.S. government funds FMS projects, which may include design, engineering, and construction; procurement and delivery of equipment; facility operations and maintenance; or other related activities.

Who can use this service?

Host nation military customers.

How does it work?

Contact the Deputy for Programs and Project Management, your designated program manager if you are already a customer, or the U.S. Embassy in your particular area. Informal exchanges should precede the formal request for assistance. We highly recommend that you ask us to develop a planning and programming report (page 11) which documents the key project information that should be agreed upon before you formally initiate your request for services through a Letter of Request. MED will assign a project manager to work with you to process your request and to provide a range of options tailored to address your requirements. Each option will include a scope of work, a preliminary schedule, and a budgetary cost estimate, along with advantages and disadvantages. Once your project requirements are defined, approved, and funded through a Letter of Acceptance, your project manager will lead the team in accomplishing the project and delivering the services requested.

How can your organization get the maximum benefits from this service?

By engaging us early in your planning process and clearly defining the requirements in the FMS agreements, we can more effectively manage your project's scope, budget, and schedule.

Master Plans

What is it?

Master Plans are documents that describe the overall development scheme of a base, complex, project, or installation using narrative, tabular, photographic, and graphic descriptions and maps. The master plan is used to plan and coordinate the development of the base, complex, project, or installation, and it provides information used for the detailed design of specific projects. The Middle East District has in-house and contract capabilities to prepare complete master plans or any of their supporting documents including:

- Mission and visioning studies;
- Land use maps and plans;
- Area development plans;
- Future development plans;
- Existing condition and development constraints mapping;
- Utility studies (including privatization);
- Facility utilization surveys;
- Project and movement sequencing plans;
- Traffic studies;
- Installation design guides;
- Housing community plans; and,
- Real property master plan digests.

All customers.

Who can use this service?

MED will work with you to identify master planning needs and to develop a cost-effective strategy for achieving those needs. We will prepare plans with our in-house expertise or use one of our architect-engineer (A-E) indefinite delivery contracts. When an A-E firm is used, we will coordinate closely with you when we prepare the statements of work, develop cost estimates, negotiate with the contractor, manage the contract, and perform quality assurance to ensure that the products and services meet your needs.

How does it work?

Master planning services prepare you to make informed decisions for managing your base, complex, project, or installation. Master plans allow you to identify challenges with building locations, real estate, utilities, and infrastructure early to avoid costly delays.

How can your organization get the maximum benefits from this service?

Planning and Programming Documents

A Planning and Programming (P&P) report may be developed for any customer or type of project. The P&P report is used to establish the scope of work, identify the functional criteria, document the project budget, and justify construction requirements.

What is it?

- The P&P report may serve as the primary project programming document for non-U.S. military customers.
- A DD Form 1391 – a construction project programming document for U.S. Department of Defense customers – also functions as a P&P document. In some instances, a P&P report may further supplement a DD Form 1391. DD Form 1391s are discussed in greater detail on page 7 of this document.

All customers.

Who can use this service?

The most thorough and complete P&P reports are completed using the planning charrette method. Charrettes are intense collaborative efforts that bring the customers and end users together with project managers, engineers, and architects to define the project requirements, estimate costs, and accomplish necessary coordination; planning charrettes are discussed in greater detail on page 12 of this document.

How does it work?

The Middle East District is available to conduct technical reviews, gather data, and fully develop the P&P report. Our services include:

- Data gathering;
- Requirements analysis, including project proponent, user, and staff interviews;
- Site planning;
- Basic economic analysis (detailed or extensive economic analyses require more effort); and,
- Programming cost estimates.

The best projects result from thorough planning and coordination, with the team documenting the scope and cost estimates in a P&P report. The development of a quality P&P report requires close coordination with project proponents and the end user to accurately identify user and project requirements. Your participation in this process is vital for determining accurate scope and costs.

How can your organization get the maximum benefits from this service?

Planning & Programming

Planning Charrettes

What is it?

A planning charrette is an intensive planning process used to develop a thorough and complete planning and programming (P&P) report (page 11) or DD Form 1391 (page 7). P&P reports and DD Form 1391s are collectively referred to as planning documents. Planning charrettes are collaborative efforts that bring the stakeholders together with project managers, engineers, and architects to define the project requirements and estimate costs. Requirements include identification of project sites, utility connection locations, basic floor plans, building/facility staffing, functional criteria, and other localized factors that may influence project costs.

The planning documents – produced by a planning charrette – identify the scope of the project, provide an estimate of project costs, and justify all types of construction (U.S. Military Construction, Operations and Maintenance, Non-Appropriated Funds, Foreign Military Sales [page 10], etc.). These documents are the basis for project authorization and budgeting. Once a project is approved, a design charrette (page 23) should be conducted to refine the requirements and gather details for the full project design.

Who can use this service?

All customers.

How does it work?

The Middle East District will tailor its support to meet your needs. We will deploy a technical team to meet with the stakeholders to develop a planning document that covers scope, site planning, schedule, and cost estimates, including options for project delivery with advantages and disadvantages. We will develop the draft P&P report or DD Form 1391 for your review and then address and incorporate your comments. The planning charrette process is highly encouraged because it provides for a detailed, focused planning effort before the project is authorized and/or funded. For Foreign Military Sales and Foreign Assistance Act projects, planning charrettes (and the resulting P&P report) should be completed before the international agreement is signed since the key project information should be agreed upon before the project is formally initiated.

How can your organization get the maximum benefits from this service?

A good planning charrette requires close coordination with project proponents and various stakeholders to accurately identify all basic requirements. You get the greatest benefit from this service by ensuring that the right stakeholders participate, such as the end user, project proponent, fire department, and force protection personnel. Our ability to develop a comprehensive P&P report or DD Form 1391 depends on our ability to determine complete information. We are available to conduct technical reviews, gather data, and assist in the submission process.

Program and Project Management Plan

What is it?

A Program and Project Management Plan (PMP) documents the project plan at the beginning of the project and is used to document changes during the life of the project. The Middle East District project manager and the design, construction, contracting, and legal team – in conjunction with you – develop the PMP. It is a tool used to transform your project objectives and goals into a clear and concise plan for success. The PMP clarifies all coordinated actions to successfully plan, accomplish, monitor and control, and closeout a program or project while meeting your objectives effectively, efficiently, and safely.

Who can use this service?

All customers.

Our project manager will facilitate the team's planning efforts, document all information in the PMP, and update the plan as required. The plan contains the following:

- Your objectives: a definition of project success, project scope, budget, schedule requirements;
- Planning considerations: basic assumptions, risks, constraints;
- Financial arrangements: funding type, funding requirements, reimbursements, payments, etc.;
- Detailed design criteria: requirements, standards, codes, etc.; and,
- Considerations: customer, team members, internal stakeholders, external stakeholders.

In addition to the considerations listed above, the PMP can include various sub-management plans:

- Roles and responsibilities;
- Work Breakdown Structure/Schedule;
- Quality Management Plan;
- Acquisition Plan;
- Risk Analysis and Risk Management Plan;
- Safety Management Plan;
- Change Management Plan;
- Communication Plan;
- Value Management Plan;
- Integrated Management Plan; and,
- Closeout Plan.

The early investment of the team's efforts planning for the successful delivery of your project saves time and money and ensures the project meets your objectives. The project manager facilitates the team as it develops the PMP to reflect your project requirements.

How does it work?

How can your organization get the maximum benefits from this service?

Program Management

A program is a group of related projects managed in a coordinated way to gain consistency and efficiencies. Program management is the centralized coordinated management of a program to achieve the program's strategic objectives and benefits. It provides a beneficial, efficient, and expeditious approach for performing related projects. Without program management, natural inconsistencies and inefficiencies could occur in the management of related individual projects.

What is it?

All customers.

Who can use this service?

When you have several similar or related projects, the Middle East District will assign a program manager who will be responsible for managing your program according to your requirements. Early in the program development, our program manager will work with you to ensure that we clearly understand your programmatic management needs, which could include:

How does it work?

- Frequency of meetings;
- Participation in key decisions;
- Participation in design reviews;
- Presentations;

Planning & Programming

- Recurring financial status reviews;
- Program reviews; and,
- Other events that promote clear communications between you and MED.

How can your organization get the maximum benefits from this service?

Program management yields benefits in time, cost, and quality resulting from the synergy of coordinated project delivery. In the contingency environment, the MED program manager provides continuity to your program as forward-deployed personnel rotate through the area of operations. We maintain project visibility and an understanding of issues that arose 6, 12, or 18 months earlier. Additionally, the program manager can better assist the project delivery team in making decisions based on lessons learned.

Project Management

What is it?

Project management is the application of knowledge, skills, tools, and techniques to determine activities necessary to meet the requirements of a specific project. Project management focuses the team's efforts on scope, schedule, budget, and quality, while providing focused communication with you. The Middle East District provides project management services for both U.S. and host nation projects.

Who can use this service?

All customers.

How does it work?

When MED accepts a project, we will assign a project manager who leads an interdisciplinary team to deliver your project in an efficient, economical, and expeditious manner. The project manager will spearhead your project through design, advertisement, construction, and closeout. The project manager will establish and maintain detailed, clear, and concise communications with you to ensure that we are accomplishing the project to meet all your requirements.

The project manager will lead the project delivery team to accomplish the following:

- Provide detailed design criteria;
- Award a design contract or coordinate design by an in-house or other U.S. Army Corps of Engineers team;
- Manage the project through various design phases and reviews;
- Perform design reviews with you to monitor project status;
- Coordinate biddability, constructability, operability, and environmental reviews;
- Monitor and manage funding;
- Coordinate with host nation officials;
- Develop a solicitation package for construction contract proposals;
- Monitor/manage the quality assurance program, schedule, and cost during construction; and,
- Close out the project when it is complete.

How can your organization get the maximum benefits from this service?

We offer full life cycle project management services. You benefit the most from this service by participating as an active member of the project delivery team. As an active member, you may attend team meetings, work with the team to make the best project decisions, and ensure that the right stakeholders participate in developing project criteria. The project manager also coordinates with multiple customers and agencies, ensuring that we meet all U.S. and host nation standards and criteria.

Project Acquisition Planning

Acquisition planning is a process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated into a plan. The acquisition plan is then used to determine the appropriate contracting methods and tools to fulfill your requirements. The Middle East District works with you to answer these questions:

- Do you know your complete project scope?
- What is the period of performance?
- Do you need to include option periods or option items?
- Do you want a separate design or do you want the construction contractor to be responsible for the design?
- Is funding available?
- What are the available contracting tools?
- What are your considerations for cost, risk, and time trade-off as we select the most appropriate acquisition strategy?

Your responses to these questions will help form the basis of the appropriate source selection evaluation method.

All customers.

Our project manager – in concert with the project delivery team – will work with you to collectively ensure we choose the appropriate acquisition strategy. The project delivery team will take your requirements, document the acquisition strategy, and develop a project management plan (which includes an acquisition plan) to deliver the construction or services you need. An acquisition plan is required for all construction and service acquisitions over \$100,000. The acquisition plan addresses the technical, business, management, and other significant considerations that control an acquisition and includes specific contracting milestones.

MED awards construction and service contracts using the negotiated contracting method as opposed to the sealed bidding method to minimize or mitigate the level of risk associated with sealed bidding. Sealed bidding involves publicly opening competitive bids with the resulting contract awarded to the lowest bidder, while the negotiated contracting method allows for the flexibility of having clarifications (limited exchanges between the government and offerors) and negotiations. The government conducts negotiations – also called discussions – in competitive acquisitions after the establishment of the competitive range. The primary objective of discussion is to maximize the government's ability to obtain the best value, based on the requirements and evaluation factors set forth in the solicitation.

We issue the majority of our contract awards on a firm-fixed-priced basis; however, occasionally we issue some contracts on a cost-reimbursement basis.

- With a fixed-price contract, the contractor assumes maximum risk and has full responsibility for the performance costs and resulting profit (or loss). Fixed-price-contracts are used when cost risk is minimal or can be predicted with an acceptable degree of certainty. A firm-fixed-price contract is not subject to any adjustment to the initial price as stated in the contract unless there is a subsequent in-scope contract modification. This contract type provides maximum incentive for the contractor to control costs and perform efficiently.
- With a cost-reimbursement contract, the contractor assumes less risk for the performance costs and is reimbursed for costs that are allowable, allocable, and reasonable to the extent prescribed in the contract, plus a negotiated fixed fee (profit). Cost-type contracts are used when uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of fixed-price contract. These contracts establish an estimate of total cost for the purpose of obligating

What is it?

Who can use this service?

How does it work?

funds and establishing a ceiling that the contractor may not exceed without the approval of the contracting officer.

MED uses two types of source selection evaluation techniques:

- **Best Value:** The Best Value Tradeoff process is used when it is in the best interest of the government to consider award to other than the lowest priced offeror or to other than the highest technically rated offeror.
- **Lowest Price Technically Acceptable (LPTA):** LPTA is used when the best value is expected to result from the selection of the technically acceptable proposal with the lowest evaluated price.

How can your organization get the maximum benefits from this service?

The better we understand your project requirements – such as project schedule, available funding, and tolerance for risk – the better we can determine the right contracting tool to meet your needs. You are encouraged to be an engaged team member throughout the entire acquisition process. We also welcome your participation as a member of the technical evaluation team responsible for reviewing offerors' proposals.

Project Budget Development

What is it?

The project budget is an estimate of the costs for all engineering, design, construction, operations and maintenance, or other agreed-upon services. The project budget includes not only the cost of construction, for example, but the cost for the Middle East District to manage, supervise, and administer the work. Generally, we use the initial project budget for early project programming and follow up with adjusted budgetary project estimates as the scope and details are further developed.

Who can use this service?

All customers.

How does it work?

After you and the District agree on the scope of the services, we will develop a Rough Order of Magnitude estimate for the work. We will develop the estimate based upon a combination of historical data collected for similar work, regional cost factors, cost surveys and unit cost books, and our specific expertise and experience. We will review and adjust the project budget throughout the project life cycle as requirements and criteria are more thoroughly defined, developed, or changed. The construction budget reflects the scope, project schedule, desired customer contingencies, and the Supervision and Administration fee (at cost or flat rate).

How can your organization get the maximum benefits from this service?

Project budgets are rough estimates at the beginning of the project and are continuously refined as the project delivery team clarifies requirements. Clear definition of project requirements improves the accuracy of budget estimates. We can assist you in matching your budget to the project's requirements. We are available to develop the cost for any service or to review and provide an alternate assessment of existing estimates.

Project Orders

What is it?

Project orders offer you a simple tool for directly acquiring the services of the Middle East District in-house staff. We accept project orders at any time, but they are especially beneficial near the end of the fiscal year when you have expiring one-year appropriated funds. Your funds will be quickly obligated to meet bona fide needs, and the MED staff, potentially with the support of other U.S. Army Corps of Engineers (USACE) entities, will work on the agreed-upon deliverables into the next fiscal year.

U.S. military customers.

You identify requirements on a DD Form 448, Military Interdepartmental Purchase Request, and sign a statement certifying the work is a genuine necessity (bona fide need) for the current fiscal year. We will work with you to define the exact deliverables (i.e., study, planning report, charrette, etc.), and we will agree upon a specific completion date for the deliverable (usually 30 September of the subsequent fiscal year). We must produce the deliverable using mostly in-house labor resources and must start the effort within 90 calendar days upon acceptance of the Military Interdepartmental Purchase Request and project order. We offer MED in-house services, including all engineering and architectural disciplines, such as:

- Technical studies;
- Planning report;
- Charrettes;
- Cost estimating;
- Technical specification writing; and,
- Program and project management.

The majority of your funding must go toward MED or USACE in-house services. Project orders cannot be accepted for Supervision and Administration costs for construction projects.

Your organization can benefit when you have an important requirement that is a bona fide need for the current year that you are unable to begin because of resourcing or scheduling issues. With the implementation of a project order, you can be certain that work on the requirement will begin early in the following fiscal year. This course of action is especially important when the congressional appropriation is not passed by 1 October and your agency is operating under a continuing resolution that prohibits new project starts.

Utility Studies

Utility studies analyze the plant and distribution capacities of an existing or planned system – such as water distribution, power distribution, and wastewater collection – to determine if the system is or will be adequate to serve existing and future demands. Utility studies also analyze the physical and operational condition of these systems to determine the level of deterioration. In addition, these studies identify potential or existing health and environmental hazards and provide advice on how to prevent or eliminate the hazard.

All customers.

The Middle East District will set up an on-site meeting to help assess your needs and determine the scope of work, a schedule, and an estimated cost for the study. Depending on the scope and condition of the system, the study can take from a few weeks to a few months. MED has technical personnel on staff to perform a utility study or, if necessary, engage the expertise of special consultants.

A utility study provides necessary data so that you can prioritize and program repairs and upgrades. Information provided in the utility study ensures that the utility infrastructure is available to support new or planned facilities.

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

What is it?

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

Service Contracts

What is it?

A service contract is a contract that directly engages the time and efforts of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply. Typical service contracts include:

- Maintenance, overhaul, repair, servicing, rehabilitation, salvage, modernization, or modification of supplies, systems, or equipment;
- Routine recurring maintenance of facilities and infrastructure;
- Housekeeping and base services;
- Advisory and assistance services;
- And operation of government-owned equipment, facilities and infrastructure, and systems.

Who can use this service?

All customers.

How does it work?

Once identified, the Middle East District will work with you to document your requirement in a written scope of work and prepare a government estimate. We will advertise the solicitation on the Federal Business Opportunities website, evaluate proposals, and negotiate and award the contract. We then debrief unsuccessful offerors. After contract award, we will fully administer contracts, including making invoice payments and preparing contractor performance appraisals.

Our Project Management Division manages service contracts - including base operations and maintenance - and coordinates with you throughout the life of the contract to ensure that we are meeting your established, changing, or new requirements.

**How can your organization
get the maximum benefits
from this service?**

When you identify your need for a service contract early, we are better able to meet your schedule. From the issuance of the Request for Proposal, contract award may take three to six months. You get the greatest benefit from this service when you ensure that the right stakeholders, particularly the end users, participate from inception through the duration of your service requirement.



Engineering Capabilities

The Middle East District in-house design staff provides engineering and design assistance on a wide range of projects. For certain projects, we provide complete design services using our in-house staff. For other projects, we manage architect-engineer contracts or obtain services from other U.S. Army Corps of Engineers offices; we review contracted designs to ensure that they fully meet your requirements and are ready for the construction contract phase.

The Middle East District has registered professionals in the following disciplines: civil engineering, environmental engineering, architecture, cost engineering, structural engineering, mechanical engineering, electrical engineering, communications engineering, geotechnical engineering, and fire protection. Our design staff is available to assist you in developing new projects from beginning to completion or to assist you with repair or alteration projects.

Civil Our civil engineers design your roads, airfields, tunnels, dams, water supply, sewage systems, and other infrastructure. They develop projects by designing site layout plans, grading and drainage plans, pavements, water supply, and sewer service. They consider many factors in their designs, from project costs to ensuring that the project serves your needs.

Architectural Our architects work with you to develop functional needs and to produce floor plans, elevations, and project specifications that incorporate your requirements and the applicable building codes.

Structural Our structural engineers design structural features, such as building columns, beam slabs and foundations, bridges, and crane-supporting columns and beams.



Mechanical Our mechanical engineers develop your heating, ventilating, air-conditioning, refrigeration, plumbing, compressed air, medical gases, and fuel oil systems, assuring that the designs comply with applicable building codes, criteria, your needs, and site-specific requirements. They visit overseas construction sites to investigate and resolve mechanical problems that arise during construction and participate in programming and design charrettes to develop scopes of work for your upcoming projects.

Electrical Our electrical and electronics engineers develop safe and economical designs for your interior and exterior power distribution systems, street lighting, airfield lighting systems, power plants, telephones, computer networks, television, electronic security systems, and lightning protection systems. We ensure that designs comply with the National Electrical Code and telecommunications standards, as well as British, European, and local electrical codes. Our electrical and electronics engineers visit overseas construction sites to investigate and resolve problems; perform site surveys to gather field data, including availability of power to support ongoing and future project designs; and participate in programming and design charrettes (page 25) to develop scopes of work for your upcoming projects.

Geotechnical Our geotechnical engineers apply their knowledge of geology and materials testing to safely and economically design foundations, retaining walls, and similar structures.

Fire Protection Our fire protection engineers assure that your projects have the necessary fire alarm and detection system features to minimize danger from fire, smoke, or panic. They assure compliance with several building codes all containing criteria devoted to saving lives and preserving property. By integrating these building features, we tailor a cost effective balance to your needs in order to achieve life and property safety. Every facility design must consider the minimum criteria for building size, distances, means of egress, number of exits, occupancy classification, hazards, fire barriers, types of doors, fire alarms, sprinklers, emergency lighting, and ventilation.

Environmental Engineering Our environmental engineers maintain expertise in environmental compliance, mitigation, and restoration as part of the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), among other regulatory requirements.

Interior Design Our interior designers provide building-related, furniture-related and comprehensive interior design services including planning, scopes of work, design, design review, procurement, and placement.



Accessible Design

What is it?

The U.S. Department of Defense (DoD) established a policy in 1993 to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) in addition to the Uniform Federal Accessibility Standards (UFAS). The policy applies to the design and construction of DoD facilities worldwide whenever the ADAAG provide equal or greater accessibility. The Architectural Barriers Act and the newer Americans with Disabilities Act are the federal laws under which the UFAS and the ADAAG were developed, respectively.

Who can use this service?

All customers.

How does it work?

The Middle East District considers accessibility on all designs. We recommend consultation and perhaps a site visit prior to start of design, or at least a review of the concept design package, so that we can discuss your needs and best advise a course of action. Our architects and engineers are knowledgeable about the accessibility requirements, regulations, standards, and limitations for both new construction and the alteration of existing facilities. Additionally, our diverse staff helps to combine the U.S. requirements with host nation standards, where applicable. Depending on the scope and complexity of the project, the review and/or design may take from a few hours to several weeks.

How can your organization get the maximum benefits from this service?

Applying the ADAAG and the UFAS early in a project – such as at the DD Form 1391 programming (page 7) and/or the design charrette phase (page 25) – will eliminate the confusion, difficulties, and lost design efforts that can occur if the team identifies the necessary requirements too late.

Aircraft Hangar Fire Protection Technical Center of Expertise

What is it?

The Middle East District serves as the Technical Center of Expertise (TCX) for hangar fire protection for the U.S. Army Corps of Engineers (USACE). We provide engineering assistance for design and construction of fire protection systems in aircraft hangars.

Who can use this service?

U.S. Army and U.S. Air Force customers primarily, but it is available for all customers.

How does it work?

The TCX has standardized design procedures and approaches to deliver better systems to you. We perform technical reviews of hangar fire protection system designs to assure adherence to applicable design criteria. We offer assistance in the shop drawing review process and for final acceptance testing. The services we provide include:

- Providing technical assistance to engineers responsible for the complete design and/or installation of hangar fire protection systems; for example, we assist designers in the interpretation and application of U.S. Department of Defense (DoD) design criteria.
- Acting as a liaison with Headquarters, USACE, and the U.S. Air Force to resolve unique or unusual design issues.
- Staying abreast of changes in hangar fire protection practices as active members of the National Fire Protection Association Technical Committee on Airport Facilities. We also stay involved in on-going fire testing programs with other DoD agencies and branches.
- Applying lessons learned to develop and update design criteria.
- Participating in acceptance testing of fire protection systems and inspection of facilities.
- Assisting field offices in answering questions and resolving installation and testing issues.
- Maintaining working relationships with our partners in private industry (e.g., foam manufacturers).

We assure that hangar fire protection systems meet applicable codes. We design and construct these systems to be cost effective, reliable, and maintainable. You should seek these services as early as possible in the design process, request-for-proposal process, and construction phase. For additional information, see the following link: <http://www.tam.usace.army.mil/business-with-us/hangar-fire-protection/>

How can your organization get the maximum benefits from this service?

Architect-Engineer Contract Management

The Middle East District awards architect-engineer (A-E) contracts to obtain professional services of an architectural or engineering nature, such as planning, design, construction, alteration, or repair of facilities. These services may include studies, investigations, surveying, mapping, tests, evaluations, consultations, program management, conceptual designs, plans and specifications, value engineering, construction phase services, soils engineering, drawing reviews, and maintenance manual preparation.

What is it?

All customers.

Who can use this service?

The Brooks Act (Public Law 92-582) establishes the procurement process by which federal agencies select A-E firms for design contracts. We select A-E contractors based on professional qualifications, specialized experience, and their capacity to accomplish the work in the required time at a fair and reasonable price. The selection process involves a selection board and possibly a pre-selection board, either of which may include your agency's designated participant. Our support includes drafting the scope of work, advertising on the Federal Business Opportunities website, preparing government estimates, evaluating proposals, and negotiating and awarding contracts. After the contract is awarded, we administer it by making progress payments and preparing A-E performance appraisals after the work is completed.

How does it work?

We award A-E contracts as follows:

- Single project design contract: You identify a project requiring a separate A-E design contract, and we will advertise, select, negotiate, and award it. We may handle contract management, or you may handle it if you meet the requirements for delegating Contracting Officer Representative authority.
- Indefinite delivery contract (IDC): You identify your need for multiple requirements of a recurring nature to our project manager and participate in the selection process. We will advertise, select, negotiate, and award the basic contract with your involvement.
- Task order award, existing IDC: You notify the MED project manager of your requirements and provide funding. We will prepare scopes of work, evaluate A-E proposals, and negotiate and award the task order.

A-E selections follow a rigid selection process that may take up to six months to complete. After the selection process is complete, contracting for services may take an additional three to six months. MED can award IDC contracts for up to five years, subject to Federal Acquisition Regulations. Task orders under existing IDCs typically take up to 30 days for award.

How can your organization get the maximum benefits from this service?

Contingency Standard Designs

The Middle East District developed standard building designs for use in contingency operations in the U.S. Central Command area of operations. The designs are generic in nature; they allow you to configure buildings for multiple uses, with the contractor required to make modifications to adapt each facility to a specific site.

What is it?

Available Standard Designs:

- Barracks (40 man, 80 man, 60 man)
- Theater-level maintenance wash rack
- Wash racks (50 point and 100 point)
- Hardened containerized housing units
- Air-conditioned warehouse/non-air-conditioned warehouse
- Medical facilities (troop medical clinic, dental facility, hospital)
- Joint operations center
- Tactical operations center
- Dining facility
- Morale welfare recreational building
- Detention facility
- Expeditionary protective structure
- Hardened joint operations center
- Hardened warehouse
- Hardened vehicle maintenance
- Helicopter pad
- Fixed wing hangar
- Fixed/rotary wing hangar
- Base camp master plan
- Power generation system
- Water treatment system
- Wastewater treatment system
- Communications facility
- Fuel system
- Tanker truck off-load facility (3-million, 7.5-million, and 10-million gallons)
- Administration buildings (small, medium, and large)
- Entry control point structures

Who can use this service?

U.S. government customers.

How does it work?

These designs use floor systems, exterior walls, and roof systems that contractors can erect expediently. Included are a standardized set of building design drawings that include material specifications, bills of quantities, construction estimates, construction execution schedules, and 3-D building models with 3-D walk-through files. These files are linked to the DD Form 1391 Programming, Administration, and Execution (PAX) Processor with all design information fully loaded in the Theater Construction Management System (TCMS). This system allows you to open a TCMS file and look at the floor plans, watch the walk-through file, review a fully prepared DD Form 1391 document (page 7), and determine if the particular facility meets the requirement. This system also allows you to develop clearly defined DD Form 1391 programming documents.

How can your organization get the maximum benefits from this service?

When you use standard designs, you minimize the cost and time required to produce bidding documents. Since the facilities are constructed using local materials and local building methods, you also save construction dollars and reduce the completion time.

Cost Engineering Assistance and Products

What is it?

Cost engineering provides independent, objective, accurate, and reliable capital and operating cost assessments. These assessments can be used for investment funding and project control decisions. Some types of cost estimating include rough order of magnitude estimates for budgetary purposes, planning and programming reports, current working estimates, and independent government estimates (IGE).

Who can use this service?

All customers.

The Middle East District offers the following estimating assistance:

- For military customers, DD Form 1391 development support (page 7) including concept level cost estimates and entry of data into the Programming, Administration and Execution (PAX) Processor;
- On-site planning and design charrettes;
- Rough Order of Magnitude (ROM) Level 5 planning estimates through Parametric and Current Working Estimates through detailed Level 1 Cost Estimates for construction
- Cost and Schedule Risk Analysis (CSRA)
- Support of customers' cost estimating software including Parametric Cost Engineering System (PACES), PC-Cost, Micro-Computer-Aided Cost Estimating System (MCACES or MII), and Historical Analysis Generator (HAG/HII);
- Unit Price Book development (page 31);
- Contingency standard design cost estimates;
- Life Cycle Cost Analyses (LCCA)
- Emergency/disaster estimates;
- Independent technical cost reviews;
- Cost price evaluations and technical cost evaluations; and,
- Modification cost estimating.

Cost estimating is an integral part of project planning and implementation. Early development of estimates, along with their continual refinement, greatly assists you in meeting budgetary and scheduling goals. The length of time required for estimate preparation varies from a few days for a simple parametric estimate to a few weeks for a complex detailed IGE.

Design Charrettes

Design charrettes are a logical progression from planning charrettes (page 12). When the design phase is ready to begin, the Middle East District conducts a design charrette to clearly define the project's functional intent and to serve as the basis for design. A charrette is a collaborative effort that brings stakeholders together with project managers, engineers, and architects to define the project requirements and to estimate costs. The process involves the definition of project requirements in written and visual form, as well as the development of charrette documents that our project manager briefs for approval to the appropriate stakeholders. This process maximizes your access to the designer and the designer's access to both the site and the stakeholders during initial planning and design development.

All customers.

An integrated team of customer representatives and designers will meet to focus on the project. The design team will use experienced people whose backgrounds include program and project management, design, construction, training, group facilitation, and charrette experience. Usual services include:

- Facilitating meetings of the combined customer and Middle East District team (language as required);
- Providing technical professionals in the appropriate disciplines (civil, structural, architectural, electrical, mechanical, etc.);
- Cost estimating, economic analysis, and/or value engineering capability; and,
- Providing 3D computer-aided drafting and design services, sustainable design reviews, and base master planning assistance.

How does it work?

How can your organization get the maximum benefits from this service?

What is it?

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

We recommend a design charrette during the early design phase of all projects. The benefits include:

- Reducing miscommunication that can be common in this project phase by bringing all stakeholders together with an experienced facilitator.
- Saving both money and time since this collaboration vastly diminishes or eliminates the need for later changes.
- Reducing the potential for redesign efforts since the team identifies all project requirements and criteria up front and validates them within a group setting.
- Establishing partnering patterns early since communication begins from the start.
- Solving problems more quickly since the team was formed early and established lines of communication from the start.

To be successful, a design charrette must include all project stakeholders. The omission of anyone from the initial meeting creates a greater risk for miscommunication and the potential need for rework during the project's design.

What is it?

Design Review and Checking System (DrChecks)

DrChecks is the worldwide U.S. Army Corps of Engineers web-based data system designed to facilitate the review of design documents, to collect comments, and to share lessons learned. We can make this system available for your use to allow fully integrated review of projects designed by the Middle East District or other design agents.

Who can use this service?

All customers.

How does it work?

DrChecks empowers project teams to improve design quality through an integrated web-based business process. Our DrChecks coordinator will provide guidance for the setup and support of the DrChecks program. Delivery via the web allows all project stakeholders to participate in the review. Remote administration of DrChecks ensures that local personnel are able to change pick lists, offices, and other program features to reflect the evolving nature of work at each individual office.

How can your organization get the maximum benefits from this service?

DrChecks provides the venue for reviewers and designers to agree on the resolution of each review comment. Reports allow users to see others' work, review the progress, identify reluctant participants, and identify issues that impact scope, time, or cost. Use of this system allows you to monitor the design review process at your desired level of detail to ensure that any problems are resolved in a timely manner and with the involvement of all necessary participants.

What is it?

Environmental Services

The Middle East District provides a wide variety of services to assist you in meeting environmental goals. Services include the development of studies, designs, scopes of work, and contracts for remediation and abatement. Typical examples of environmental work include:

- Asbestos abatement;
- Lead-based paint surveys;

- Radon surveys;
- Environmental site investigations and assessments;
- Contaminated soil and debris disposal; and,
- Soil and groundwater remediation.
- Water and Waste Water Treatment consulting.

All customers.

We will employ one of our indefinite delivery contract architect-engineer firms or another U.S. Army Corps of Engineers office to help address and meet your environmental needs. Our project manager and technical team will work with you to clearly define the scope of effort required and to develop the necessary contract documents for studies, remediation, or other work. We will prepare the scopes of work and cost estimates and then will negotiate and manage the project to completely address your environmental needs.

To meet environmental regulations, you often need expertise not readily available at the base, complex, project, or installation level. We can supplement your capabilities to address environmental concerns.

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

Force Protection Surveys and Design

Force protection surveys identify the physical steps needed to meet security requirements established by the U.S. Department of Defense, U.S. Department of State, or host nation governments to eliminate or reduce vulnerability to terrorism or hostile acts.

All customers.

The Middle East District will work with you to determine the scope of work, a schedule, and estimated costs for a force protection survey. We may engage the U.S. Army Corps of Engineers Protective Design Center in Omaha, Nebraska, to assist with field investigations that identify vulnerabilities. We will also complete studies with recommendations for designs that identify needed upgrades to your facility. This effort culminates in the elimination of the vulnerabilities through specific design and construction projects. Depending on the conditions at your base, complex, or installation, design may take from a few days to a few months.

When you meet force protection requirements, you have the appropriate level of protection for your personnel. Your active participation in describing the population and intended use of your facilities helps us to develop an accurate and achievable force protection plan.

What is it?

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

Geographic Information System Support

A geographic information system (GIS) is a powerful tool that links a set of mapping tools with a relational database, allowing the user to display land features (such as roads, buildings, or utilities) and to store important aspects of these features (such as sizes and materials) for later query and analysis. GIS allows you to

What is it?

perform queries and analyses of a variety of information, including infrastructure, facilities, environmental, and socioeconomic conditions.

The Middle East District will coordinate closely with you to develop scopes of work and estimates for the products you need. A wide range of possible products that are available include:

- Developing web-based and graphic user interfaces for GIS;
- Converting older computer-aided drafting and design maps into GIS format;
- Reviewing and assisting in the development of planning products, such as facility utilization surveys and land use plans;
- Reviewing databases for proper format, setup, and development; and,
- Updating existing maps or preparing new maps from survey information.

Who can use this service?

How does it work?

All customers.

Using mapping tools that link the graphic elements to a relational database, you may query and retrieve data – such as road material type and condition, building function, area, size, occupancy and utility type – and display this along with a geographic map. Older maps may be used, or new maps may be prepared from aerial or ground surveys. Discuss your needs with our GIS specialist who will work to develop a cost-effective solution. We will obtain the services of an architect-engineer firm to develop and/or update your GIS database.

How can your organization get the maximum benefits from this service?

GIS greatly increases your capability and efficiency in managing base, complex, project, or installation resources. Information must be kept up to date for GIS systems to be used effectively. It is a wiser investment of time to maintain the system than to spend time searching redundant or obsolete files.

What is it?

Geotechnical Investigation Services

Geotechnical investigations are performed by geotechnical engineers or engineering geologists to obtain information on the physical properties of the soil and rock around a site. Geotechnical engineers or geologists use this data to design foundations for proposed structures and for the repair of facilities damaged as a result of subsurface conditions.

A geotechnical investigation includes both surface and subsurface explorations of a site.

- Surface exploration includes geologic mapping and geophysical testing, or it can be as simple as a geotechnical engineer observing the physical conditions at the site.
- Subsurface exploration usually involves soil sampling and laboratory tests of soil samples retrieved. We use test pits, trenching, boring, and in situ tests to observe the soils and rocks below the surface, obtain samples, and determine their physical properties.

Who can use this service?

How does it work?

All customers.

Based on your needs, the Middle East District will prepare the scopes of work and cost estimates for your project. We will then engage with one of our architect-engineer (A-E) firms to conduct your geotechnical investigations. The A-E firm will mobilize equipment at the project site, conduct surface and subsurface explorations, and send soil samples to a soils testing laboratory to establish engineering properties. The A-E firm will compile the findings of field investigations and laboratory testing into a geotechnical report that also includes the soil engineering parameters needed in the design. You will have the opportunity to

review the product at various stages of development, and we will work with the A-E firm to incorporate your comments into the final geotechnical report. By conducting geotechnical investigations, MED can more precisely design building foundations, thereby avoiding delays and reducing the risk of additional costs during construction. We significantly reduce the time required to design a project when the geotechnical information is gathered before the start of design. Our engineers will advise you about the best use of resources to obtain preliminary geotechnical reports.

How can your organization get the maximum benefits from this service?

Independent Technical Review and Assistance

What is it?

Before construction, all designs require an independent technical review (ITR) to verify overall design quality, to confirm compliance with your needs and expectations, and to ensure that both applicable U.S. and host nation criteria are adequately incorporated. We accomplish this review using architects and engineers to ensure that we meet acceptable quality standards and that you receive maximum value for the costs incurred.

Who can use this service?

All customers.

How does it work?

ITR is a normal part of design work performed by the Middle East District and our contracted architect-engineer (A-E) firms. You may also request an ITR of a design accomplished by another agency or firm. Technical experts will ensure that the design properly addresses life safety, fire protection, provisions for the disabled, force protection, functional performance, structural soundness, pleasing aesthetics, compliance with codes and criteria, and compliance with statutory scope limitations. MED will perform the ITR with experienced in-house architects and engineers, other U.S. Army Corps of Engineers resources, or an A-E firm, as necessary.

In addition to formal ITR, we can provide technical advice and recommendations to assist you in problem resolution, study of alternatives, and assessment of design options. Our in-house engineering staff combines experience with large-scale program reviews and resolution of construction problems to provide real-time lessons learned in the form of specific technical guidance and expertise for special problems.

ITR for most projects normally takes from a few days to two weeks, depending on the nature of the work. Dialogue for technical advice ranges from hours to days, depending on the question and solution requested.

How can your organization get the maximum benefits from this service?

An ITR often results in cost savings by eliminating conflicts and errors in design documents.

Structural Evaluation and Design

What is it?

Many buildings may have undergone undocumented and unanalyzed physical, functional, and structural changes over the years. Some structures have unknown structural systems and difficult-to-assess physical properties. Intrusive structural investigation of an existing facility is an essential pre-design requirement when you upgrade a facility or use it for a different purpose. Middle East District structural engineers have the experience to investigate, analyze, and recommend the necessary retrofit and/or new design to meet your requirements. In addition to in-house experience, our structural engineers can tap the expertise of other U.S. Army Corps of Engineers structural engineers, architect-engineer consultants, and laboratories when

Who can use this service?

necessary.

How does it work?

All customers.

How can your organization get the maximum benefits from this service?

MED engineers will work with you to evaluate the situation and make recommendations. If a follow-on investigation is appropriate, we will prepare the scope of work and complete the investigation along with any required testing and analysis. Depending on the scope and condition of the facility, it is possible for the investigation, testing, and analysis to take from a few weeks to a few months.

Your investment in structural evaluations will lead to better designs, safer structures, and more accurate cost estimates.

What is it?

Sustainable Design and Development (Leadership in Energy and Environmental Design)

Sustainable Design and Development (SDD) is the holistic process of planning, designing, building, renovating, deconstructing, operating, and maintaining facilities while considering the impact on the environment, energy use, natural resources, the economy, and the overall quality of life. SDD saves energy and reduces emissions, uses renewable resources, maximizes facility performance and economic return, and improves indoor air quality, thereby increasing employee health, safety, and productivity.

Who can use this service?

All customers.

How does it work?

The Army uses the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) – New Construction rating tool to quantify and measure the sustainability of its projects. Projects are rated in six categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. The LEED-certified member of the project delivery team certifies projects at one of three levels: Silver, Gold, or Platinum.

In January 2008, the U.S. Army Corps of Engineers (USACE) issued an Engineering and Construction Bulletin announcing the publication of the USACE Army LEED Implementation Guide. Starting with the Fiscal Year 2008 program, all vertical construction projects with climate-controlled facilities must achieve a LEED Silver rating. This requirement applies worldwide to construction on permanent Army installations, Army Reserves, Army Readiness Centers, and Armed Forces Reserve Centers regardless of funding source and includes the Base Realignment and Closure process. The most recent Army directive requires a LEED Accredited Professional team member on each project delivery team. LEED evaluations are included in the charrette process at both the planning and design phases. Overseas contingency construction facilities are exempt from this requirement.

Buildings that are not climate-controlled should include sustainable design features to the maximum extent possible, but they are exempt from the minimum score that applies to new construction.

How can your organization get the maximum benefits from this service?

The Middle East District possesses the expertise to assist you in understanding and using the LEED rating tool and in meeting the requirements for LEED certification. Our team members are available to provide an SDD overview, as well as to train your in-house staff on the use of the LEED rating tool. Our LEED-certified team members are available to conduct awareness workshops as needed.

Topographic Mapping Services

Maps are the best tool to view the arrangement of features on the earth’s surface. The feature that distinguishes topographic maps from maps of other types is the use of contour lines to portray the land’s shape and elevation. Topographic maps render the three-dimensional ups and downs of the terrain on a two-dimensional surface. Topographic maps portray both natural and manmade features.

The wide range of information provided by topographic maps makes them extremely useful to engineers and planners. Engineers primarily use topographic maps for site development design. In addition, they are used for a wide variety of other purposes including energy exploration, natural resource conservation, environmental management, and commercial and residential planning.

All customers.

Based on your needs, the Middle East District will prepare the scopes of work and cost estimates and then engage with an architect-engineer (A-E) firm to prepare the topographic mapping products. The A-E firm will conduct field surveys and may compile data from aerial photography. This will allow them to then produce and digitize the maps. You review the product at various stages and provide comments that we will incorporate into the final product, as appropriate.

Your investment in topographic mapping facilitates base planning and design of future infrastructure and facilities. By conducting topographic surveys, MED can more precisely establish building locations and final elevations of structures and pavements, thereby avoiding project delays and reducing the risk of additional costs during construction. We can significantly reduce the time required to design a project if the topographic information is gathered before the start of design.

Unit Price Book

The Unit Price Book (UPB) is a country- or site-specific cost book that reflects local labor, material, and equipment costs for the development of accurate and dependable cost estimates.

We design the UPB to be:

- Quickly and easily understood; it is filled with information that helps you understand the necessary factors that go into developing a cost estimate.
- A desk reference that provides key costs, using Micro-computer aided cost estimating system software.
- A comprehensive, reliable source of construction costs and production rates, so that you’ll be prepared to estimate any project costs.
- A source book for preliminary project cost, product selections, and alternate materials and methods.

All customers.

The Middle East District will develop a UPB for a country or specific area through local market surveys of products, materials, equipment, and labor; recent contract award data; and information provided by field offices. We will then develop the UPB and provide it to designers to use when estimating the cost of future

What is it?

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

What is it?

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

projects.

We make available to you the latest UPB information for your location and assist you in obtaining updates, which are usually required in two-year intervals. We also determine a factor to be applied to existing data to avoid the cost of additional market surveys. A UPB aids in the development of accurate program and project costs.

What is it?

Value Engineering

Value engineering is a process devoted to reducing costs and increasing efficiency in the design of facilities. Value engineering analyzes the design and function of construction equipment and materials to reduce life cycle cost without sacrificing quality, aesthetics, or operations and maintenance capability.

Office of Management and Budget Circular A-131 requires that value engineering be performed on all construction projects with a construction working estimate of \$2 million or more. Projects between \$1 million and \$2 million may be included if cost effective.

Who can use this service?

All customers.

How does it work?

The Middle East District project delivery team usually programs a value engineering study as an element within the Project Management Plan. Typically, we schedule this study to occur near the concept design submittal. When a value engineering study is required, the project delivery team accomplishes it as part of the initial design charrette when project size, resources, and schedule allow. This saves both time and effort and captures the teaming spirit created in conducting a charrette.

If you want a full value engineering study, the MED technical team will review the drawings and specifications, analyze the high cost items and their functions, develop alternatives, and recommend changes that result in savings to project cost and time. The MED Value Engineering Officer directs this multi-disciplinary engineer team in completing this study and discussing the options with you. We encourage your participation in this team. The study generally takes one to two weeks.

During construction, a contractor may submit a Value Engineering Change Proposal (VECP). The VECP identifies potential changes to processes or systems that may result in significant cost savings to the project. MED will evaluate the VECP to determine its merit and cost savings. If accepted, you share those savings with the contractor.

Value engineering assists you in the efficient and effective use of your construction dollars.

How can your organization get the maximum benefits from this service?

What is it?

Water Resource Development

Water resources are sources of water that are useful or potentially useful. These sources are developed to meet household, industrial, agricultural, recreational, and environmental requirements, many of which require fresh water. Fresh water is a renewable resource, yet the world's supply of clean fresh water is steadily

decreasing. Common sources of fresh water are surface, sub-surface, and desalination.

Water resource development activities may include:

- Multi-objective plan formulation;
- Socioeconomic analysis;
- Environmental evaluation and risk analysis;
- Watershed and hydrologic assessment;
- River hydraulics and forecasting; and/or,
- Reservoir systems and water management.

All customers.

The Middle East District will employ one of our indefinite delivery contract architect-engineer firms or obtain assistance from another U.S. Army Corps of Engineers office to help address and meet your water resource needs. We will conduct studies to include onsite visits, hydrologic investigations, ground water investigations, surveys, and topographic analyses. We will prepare the scopes of work and cost estimates and will manage the project.

Development of a water resource plan provides you with a way to identify potential problems, assure water quality, and avoid unnecessary utility shortages.

Who can use this service?

How does it work?

How can your organization get the maximum benefits from this service?

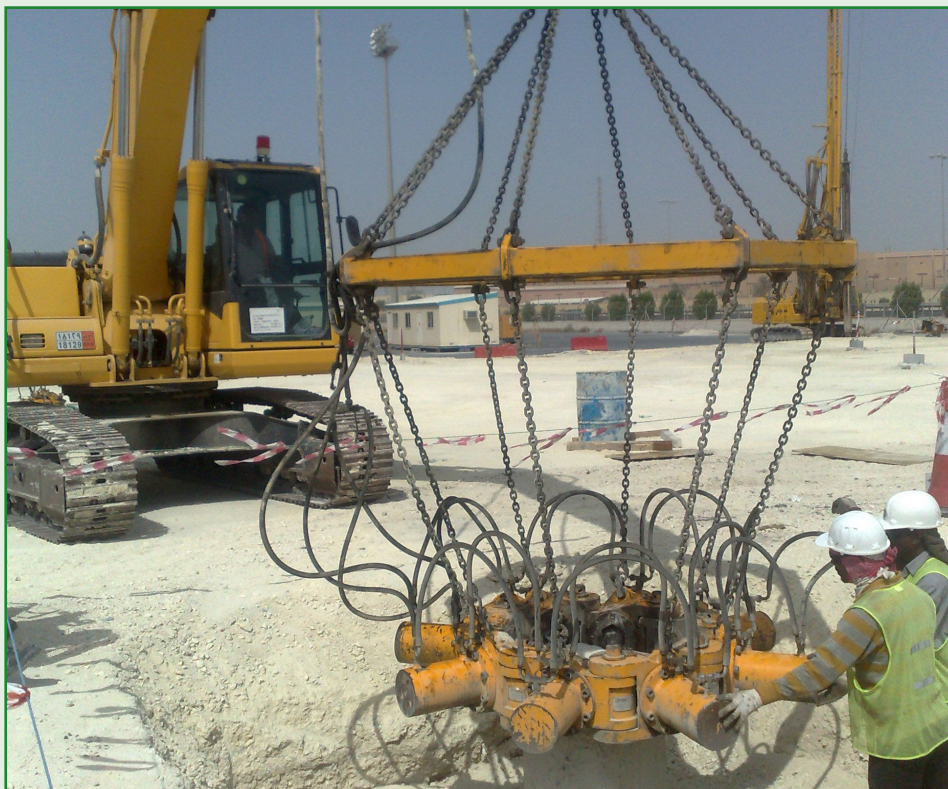


Construction and Services

The Middle East District ensures that contractors meet all technical, quality, and safety specifications on contracts awarded to support your requirements. Our staff manages construction contracts, job order contracts, facility support services, life support, and operations and maintenance contracts. In addition, we provide construction surveillance on contracts awarded by host nations using agreed-upon standards.

We offer the following services:

- We review and approve contractor plans, including quality control, safety, and performance schedules.
- We review and approve shop drawings, and review submittals for design-build contracts.
- We investigate technical problems to determine resolution.
- We function as the project's administrative contracting officer and provide onsite contract administration.
- We review, analyze, and recommend action on contractor requests for equitable adjustment.
- We perform quality assurance inspections.
- We enforce EM 385-1-1, the U.S. Army Corps of Engineers (USACE) Safety and Health Requirements Manual.
- We develop scopes of work and cost estimates for task orders on indefinite delivery contracts.
- We manage and maintain funds control.
- We initiate, estimate, negotiate, and draft contract modifications.
- We prepare and review contractor pay estimates for completed work.
- We schedule inspections, prepare construction progress reports, prepare completion reports, and transfer the completed project to the end user.
- We review and evaluate test procedures for specialized systems and observe contractor testing.
- We implement warranty requirements.



Construction management services are available for the duration of the project, plus one additional year for warranty enforcement. You are welcome to be part of our construction team if the circumstances allow for such support.

We provide the following functions to assure quality construction and services:

Biddability, Constructability, Operability and Environmental and Sustainability Review (BCOES)

BCOES review is a process that considers bidding, construction, operability, and environmental issues in the design and design-build process. We perform the BCOES review at concept and final design (typically 30 percent and 95 percent) before awarding a construction contract. By using this process, we ensure that construction occurs efficiently to keep your project delivery on schedule.

Schedule Review and Acceptance To manage the time specified to accomplish a project, we require contractors to submit a schedule for construction contracts. A review of the contractor's construction schedule – for compliance with the contract requirements – is crucial to the good start of any project. This review requires an in-depth analysis of the contractor's schedule activities and an analysis of the logical ordering of those activities (to ensure proper work sequencing). We review resources to ensure that the contractor understands the scope of the contract and can complete the work on time. We monitor schedules monthly and perform a time impact analysis for change orders or modifications. We will keep you informed when these changes affect the delivery date of your project.

Design Review and Approval of Design-Build Contracts For design-build contracts, we compare the contractor's design drawing submittals to the contract documents to ensure that the contractor meets or exceeds the specifications in the scope of work.



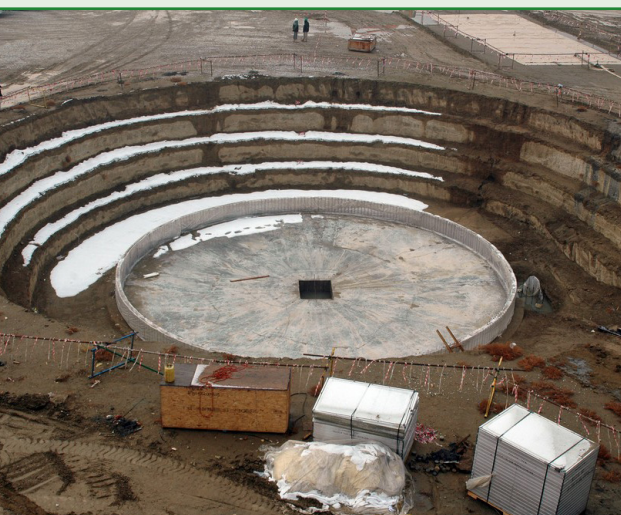
Shop Drawing Review and Approval We compare the contractor's shop drawing and construction materials submittals to the contract documents to verify that the submittals comply with the contract and meet or exceed the quality specified.

Payment Estimate Review and Processing Under the terms of construction contracts, a contractor can request payment based on progress and can expect payment within 14 days under the Prompt Payment Act. The U.S. government has an obligation to pay the contractor for work performed and to protect itself from inadvertently paying for work not accomplished. We review the supporting documentation, including schedules, to pay contractors on time for work completed and to avoid interest charges. The contractor and the U.S. government benefit by closely following the contract requirements and assuring a properly fiscally managed project.

Change Order Initiation and Monitoring Changes are an inevitable part of any construction contract. Since the government will not permit the contractor to perform any work outside the scope of the contract, the contracting officer or administrative contracting officer must initiate the change order process immediately. Our contract administration staff determines the proper scope, changes to the plans and specifications, and an estimated cost. From there, we issue a request for proposal to the contractor to perform the work, and we keep you informed as you desire when this occurs.

Modification Preparation and Processing Modification preparation and processing begins upon completion of negotiations with the contractor. Our construction staff packages all information necessary to support the final agreement on cost and time for review, approval, and documentation by the contracting officer. We inform you about contract modifications in accordance with your desires.

Requests for Equitable Adjustment A request for equitable adjustment (REA) occurs when the contractor submits for additional costs for government-directed work he feels is outside the scope of his contract. The contractor provides his REA and supporting information to our contract administration personnel for review, analysis, and recommended action. We keep you informed throughout this process.



Transfer and Acceptance of Military Real Property USACE documents the transfer of construction to U.S. military customers by providing a DD Form 1354, Transfer and Acceptance of Military Real Property. You sign the DD Form 1354 certifying completion of the work, except for known deficiencies as listed on the form, at the joint inspection. Your Real Property Officer may use the costs shown on the DD Form 1354 to update your Real Property Inventory.

Before construction completion, we can provide the following services for preparation of physical completion DD Form 1354s:

- Preparation of the draft DD Form 1354 including determining facilities, category codes, area or other unit of measure quantities, and estimated costs.
- Coordination of the draft DD Form 1354 with the Director of Public Works or Base Civil Engineer before the pre-final inspection to ensure that the draft correctly represents your needs for updating your Real Property Inventory.

After completion of construction, we prepare the final DD Form 1354 upon fiscal closeout of the project. This work can include reconciliation of cost accounts with funding documents, determining the proper allocation of costs on multi-project/multi-funded contracts, and allocation of costs to the various category codes.

Safety Management We provide a safe work environment for contractor, customer, and government personnel both in the course of building our projects and in non-work settings. Our construction contracts reference the USACE Safety Manual, EM 385-1-1, which provides a prescriptive standard for performing nearly all construction functions safely. Contractors must provide a project-wide safety plan that incorporates how they will function in accordance with the manual. Most contracts require the contractor to have a certified safety professional to ensure that the contractor meets our safety standards. Our safety officer and field personnel monitor the contractor's compliance.



Construction Contracts

What is it?

The Middle East District awards construction contracts to meet your project requirements. These contracts may be in the form of design-build contracts or construction contracts following the design-bid-build process. We also award job order contracts (JOCs) that include a wide variety of predetermined unit prices to perform base maintenance, repair, and minor construction projects.

Who can use this service?

All customers.

How does it work?

You identify a construction project. We will work with you to determine the most advantageous acquisition strategy for your project; this includes choosing a design-build or design-bid-build approach. We will prepare a government estimate and solicitation documents, including the scope of work, drawings, and specifications. We will advertise on the Federal Business Opportunities website, evaluate proposals, negotiate, and award the contract. We then debrief unsuccessful offerors. After contract award, we will fully administer contracts including making progress payments during the construction period and preparing contractor performance appraisals after work is completed.

For JOCs, we will prepare a unit price book (page 31) consisting of established tasks and associated unit prices. We will award the contract and issue individual task orders for each requirement. Generally, we award a JOC for a specific base, installation, or region.

How can your organization get the maximum benefits from this service?

When you identify your need for construction services early, we are better able to meet your schedule and project requirements. From the issuance of the Request for Proposal, contract award may take three to six months.

Construction Management Oversight for Host Nation-Awarded Contracts

What is it?

The Middle East District offers construction management oversight for facility and infrastructure contracts awarded by host nations. We provide this oversight as an extension of the host nation's professional engineering staff to help ensure that contractors meet their requirements. We may provide construction oversight services to contracts that support your acquisition of military hardware or to contracts that support various military operational requirements under government-to-government agreements. We accomplish the work using Foreign Military Sales (page 10) or Technical Assistance Act procedures to establish the parameters of the required services.

Who can use this service?

Host nation military customers.

How does it work?

Contact the Chief of Construction Division, your designated Area Engineer if you are already a customer, the Deputy for Programs and Project Management, or the U.S. Embassy in your country. You will formally initiate your request for services through a Letter of Request. MED will assign a project manager to work with you to process your request and to provide a range of options tailored to address your requirements. Each option will include a scope of work, a preliminary schedule, and a budgetary cost estimate, along with advantages and disadvantages. Once your project requirements are defined, approved, and funded through a Letter of Acceptance, your project manager will lead the team in accomplishing the project and delivering the services requested.

By engaging us early in your planning process and clearly defining your requirements, we can provide construction management oversight to ensure that you receive a quality product or service on time and within budget.

How can your organization get the maximum benefits from this service?



Acronyms and Abbreviations

A-E	Architect-Engineer
ADAAG	Americans with Disabilities Act Accessibility Guidelines
APPO	Administrative Personnel Processing Office
BCOES	Biddability, Constructability, Operability, Environmental, and Sustainability Review
DoD	U.S. Department of Defense
DrChecks	Design Review and Checking System
FMS	Foreign Military Sales
GIS	Geographic Information System
IDC	Indefinite delivery contract
IGE	Independent Government Estimates
ITR	Independent Technical Review
JOC	Job order contract
LEED	Leadership in Energy and Environmental Design
LPTA	Lowest price technically acceptable
MED	Middle East District
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
P&P	Planning and programming
PACES	Parametric cost estimating system
PAX	Programming, Administration, and Execution
PDT	Project delivery team
P.E.	Registered Professional Engineer
PM	Project manager
PMBP	Project Management Business Process
PMP	Project Management Plan
PMP	Project Management Professional
RA	Registered Architect
REA	Request for equitable adjustment
SA	Support Agreement
SDD	Sustainable Design and Development
TCMS	Theater Construction Management System
TCX	Technical Center of Expertise
UFAS	Uniform Federal Accessibility Standards
UPB	Unit Price Book
USACE	U.S. Army Corps of Engineers

