THE PROTECTOR

PROTECTIVE DESIGN CENTER
SERVING THE NATION AND THE WORLD

AVAILABLE SUPPORT SERVICES

Planning	• Criteria Development • AT Plan Development • Contingency Plan Development • Construction Security Plan Development
Design and Review	• IED Mitigation and Casualty Prediction • Blast Analysis and Protective Design • Design of Hardened Structures • Blast Resistant Window Design • Access Control Point (ACP) Design • Active Shooter Design & Assessments • Chemical/Biological Protection & Design • SCIF and E3 Facility Design • HEMP/EMP Shield Systems Design
Assessments	• Energy System Protection & Continuity • Risk and Vulnerability Assessments • Infrastructure Assessments • UFC Compliance Reviews/Assessments • Analysis of Hardened Structures • Mailroom Compliance Assessments • Blower Door Testing/Contaminated Air Leakage into Buildings
Training	• Security Engineering • ECF/ACP • Blast Design • SCIF/SAPF

A MESSAGE FROM THE PROTECTIVE DESIGN MCX DIRECTOR:

This newsletter is part of the Protective Design Center's continuing efforts to provide the Federal Government security community with information related to protective design, antiterrorism, physical security, hardened structures, and access control. This a special issue to provide information about the wide range of training provided by the PDC.

John Galloway, Director Protective Design Center

PROTECTIVE DESIGN CENTER TRAINING

The Protective Design Mandatory Center of Expertise (PDMCX) was established as a Center of Expertise for the Army relative to antiterrorism and force protection in 1986. As a Center of Expertise, one of our primary mission objectives is to provide technology transfer. While this newsletter serves as one vehicle to help fulfill this mission, perhaps nothing does more to achieve this objective, than the training the PDMCX provides throughout the world.

The PDC offers both mobile training teams (MTT) and open-enrollment classes and has provided over 300 classes that have been attended by more than 10,000 students. Classes range from three to five business days depending on the type of class.

Among the training classes provided by the PDC are:

The Security Engineering (SE) Class is a five-day course offered in Omaha, NE or Alexandria, VA. The SE class is the original, and perhaps most popular, class. There are a minimum of two open enrollment classes, and often in excess of ten MTT classes, each fiscal year. The SE Class is described in greater detail on page two of this newsletter.

The Entry Control Facilities/Access Control Points (ECF/ACP) Class is a three-day course offered in Omaha, NE. The ACP/ECF Class is described in greater detail on page three of this newsletter.

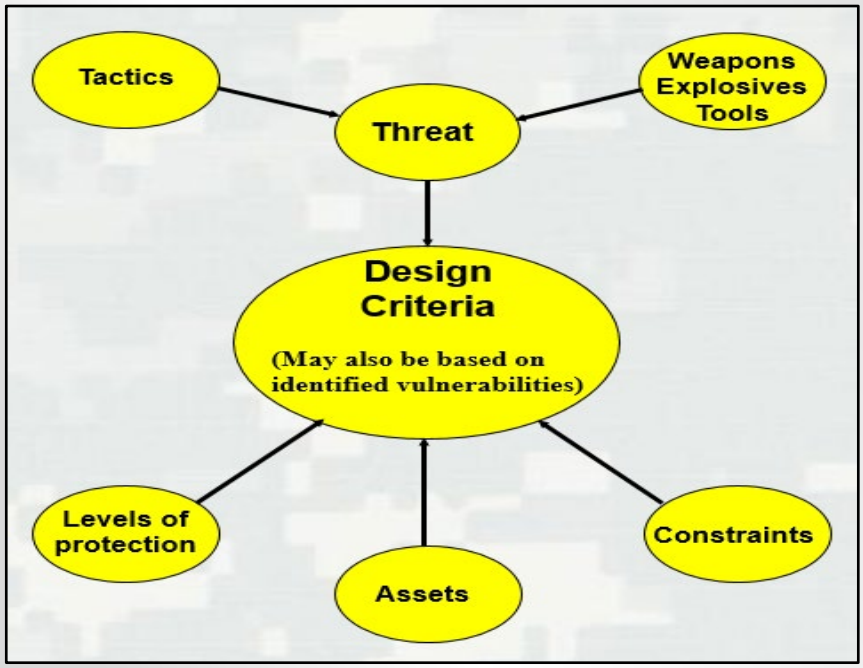
The Blast-Resistant Structural Design Class is a five-day course offered in Omaha, NE. The Blast Design Class is described in greater detail on page four of this newsletter.

The Sensitive Compartmented Information Facilities/Special Access Program Facilities (SCIF/SAPF) Class is a four-day course offered in Omaha, NE. The SCIF/SAPF Class is described in greater detail on page five of this newsletter.

PDMCX training classes are designed to provide the knowledge, skills, and ability to help you protect your personnel, assets, and mission!

SECURITY ENGINEERING (SE) TRAINING CLASS

This class provides students with a thorough understanding of the information contained in the Unified Facilities Criteria (UFC) 4-010-01 *DoD Minimum Antiterrorism Standards for Buildings* and UFC 4-020-01 *DoD Security Engineering Facilities Planning Manual*.



The UFCs present a process by which a planning team, consisting of a physical security person, the Antiterrorism Officer (ATO), an engineer, the facility user and other appropriate personnel can formulate security-related design criteria for a facility. The design criteria consider the assets to be protected, the threat against those assets (based on specific aggressor tactics), the level to which the asset will be protected against the threat, and other user-imposed design constraints. The UFCs provide a process by which protective counter measures can be developed and integrated into a total protective system. The UFCs also provide a means to estimate a preliminary cost for the system. The course consists of formal instruction periods (lecture) along with interactive, sample problem exercises. The course concludes with a summary exercise that is solved and presented by students working in smaller interdisciplinary groups.

The Security Engineering class provides students with the knowledge, skills, and abilities to develop protection strategies to mitigate a wide range of aggressor tactics, including moving and stationary vehicle bomb, standoff weapons, hand-delivered explosive devices, forced entry, and covert entry, among others.

Class instruction is based on determining the relative value of specific assets, establishing the threats to those assets, and then using an outward-in protection strategy to select a suite of protective measures that work in concert to mitigate the identified threats and vulnerabilities to enhance the protection of each asset

The **Security Engineering Training Class** is intended for civilian and military personnel involved in security, or engineering support of security. Security personnel may include people from provost marshal, physical security, or law enforcement offices. Engineering personnel may include architects, engineers, planners, and designers from engineering offices, and Directorates of Public Works. Personnel from installation level, major command level, and U.S. Army Corps of Engineers district and division level, are encouraged to attend. Representatives from other U.S. government agencies may attend. Under certain circumstances, representatives from A/E firms and foreign governments may also attend.

COURSE OUTLINE

- Introduction to Security Engineering
- Protective Systems Overview
- Design Criteria Development
- DoD Minimum AT Construction Standards
- Weapon Effects and Blast Loads
- Building Elements and Systems
- Building Element Design
- Vehicle Bomb Tactic
- Hand-Delivered Devices Tactic
- Indirect and Direct Fire Weapons Tactics
- Forced and Covert Entry Tactics
- Surveillance and Eavesdropping Tactics
- Airborne and Waterborne Contamination Tactics
- Waterfront Attack Tactic
- Programming Level Cost Development

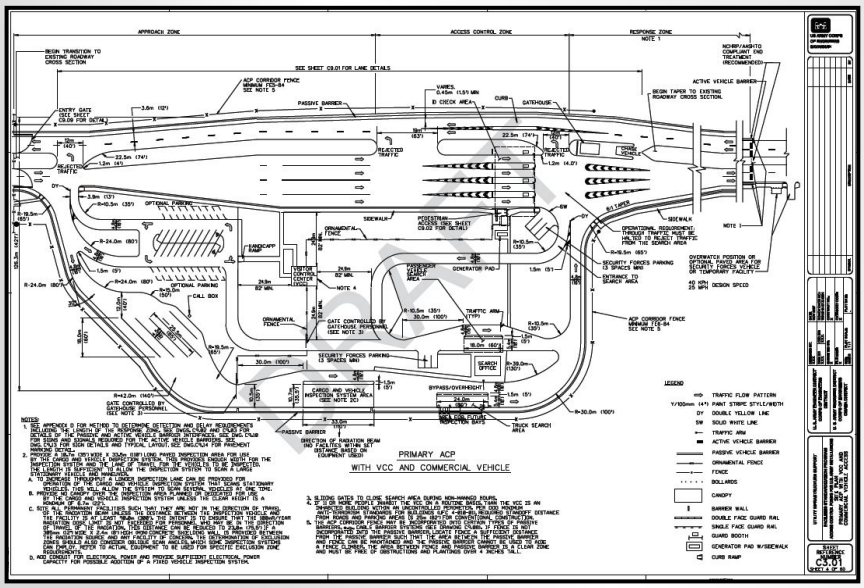
Please see page 6 for FY25 SE schedule

To register, contact the Registrar via email @ PDC.Training@usace.army.mil

ENTRY CONTROL FACILITIES/ACCESS CONTROL POINTS (ECF/ACP) TRAINING CLASS

ECF/ACP projects are notoriously complex and expensive, but they serve as the first and most critical component to overall installation security.

No doubt you have heard that “a failure to plan is a plan for failure.” This statement, while cautionary, holds true when it comes to planning and designing an Entry Control Facility/Access Control Point. Planning is critical to the overall success of an ECF/ACP project. Mistakes made in the early stages of the planning and design process will become magnified as the project progresses. This can easily impact the security, life safety, and functionality of the completed ECF/ACP. Furthermore, costs can increase dramatically due to expenses associated with modifications to the original design, life cycle costs, problems caused by loss of use, and potential costs from litigation. As illustrated by the image, below, ECF/ACP design is extremely complex.



The Entry Control Facilities/Access Control Points Training Class describes design requirements in Unified Facilities Criteria (UFC) 4-022-01 “*Security Engineering: Entry Control Facilities/Access Control Points*" as well as Army criteria, "*Army Standard for Access Control Points*" and the “*Standard Design for Army Access Control Points*.” The course thoroughly describes and dissects every critical component of an ECF/ACP, while presenting all of the mandatory requirements, guidance and options contained in the UFC and Army criteria.

The Protective Design Center’s ECF/ACP Training Class provides DoD personnel with a thorough understanding of the most current ECF/ACP criteria and standards, the planning process, the design/function of all the major ECF/ACP components, speed management strategies, and how to avoid common pitfalls in ECF/ACP design, management, operation, and maintenance.

The **Entry Control Facilities/Access Control Points Training Class** is intended for an interdisciplinary group including engineering planners and designers, as well as provost marshal/security and law enforcement personnel, and is intended for civilian and military personnel involved in security or engineering support of security.

COURSE OUTLINE

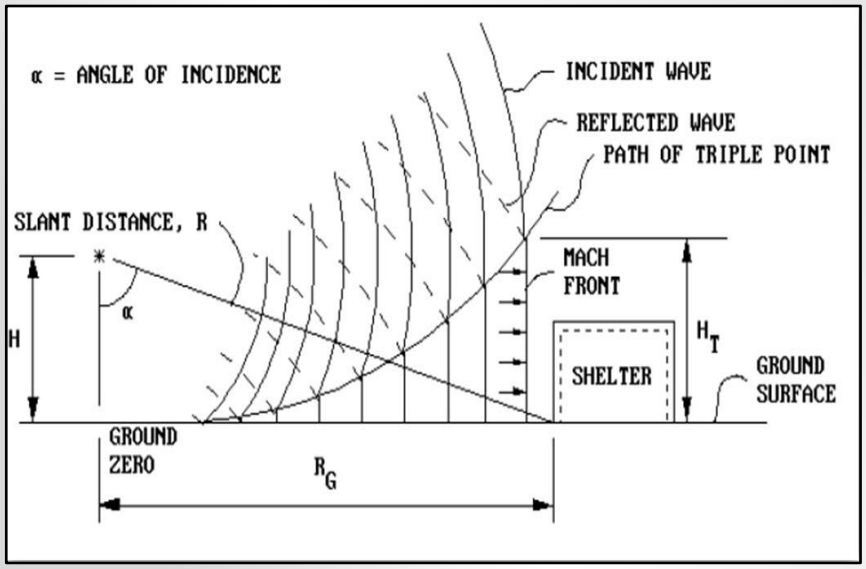
- Introduction/Overview
- ECF/ACP Criteria/Standards
- ECF/ACP Planning
- Threat Scenarios/Performance Standards
- Active Barrier Control Systems/Commissioning
- Electronic Security Systems Overview
- Lighting and Power
- Geometric Design
- Traffic Engineering Study
- Sizing Features/Threat Delay Time
- ECF/ACP Signage and Pavement Markings
- Speed Management Strategies
- Limited Use and Pedestrian ECF’s/ACP’s
- Estimation of Costs

Please see page 6 for FY25 ECF/ACP schedule

To register, contact the Registrar via email @ PDC.Training@usace.army.mil

BLAST-RESISTANT STRUCTURAL DESIGN (BLAST) TRAINING CLASS

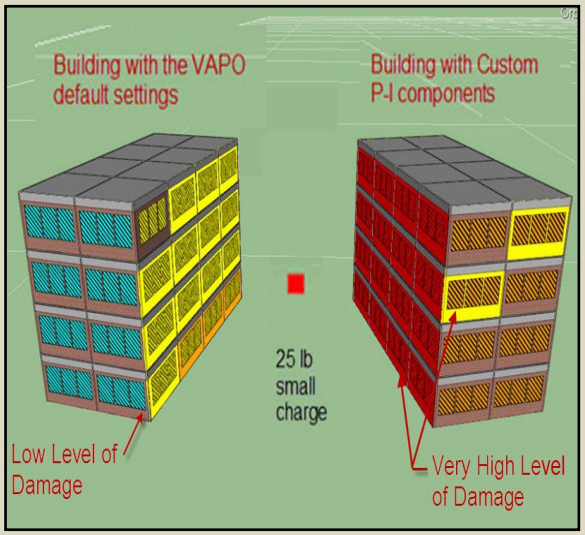
The Blast Class acquaints practicing structural engineers with the procedures that are used to design structures to resist the effects of explosive events. This course serves as an excellent introduction to blast resistant structural design, if the desired standoff distances cannot be achieved. The course is well suited for practicing senior structural engineers who would like to develop their skills in the analysis and design of structures subjected to highly transient dynamic loading from blast pressures associated with an explosion. Students also become familiar with terminology, methodologies, the Single-Degree-of-Freedom Blast Effects Design Spreadsheets (SBEDS) and SBEDSW for windows. These computer analyses programs are a very important aid in the review of consulting engineer's blast resistant designs.



The course content is based on the tri-service documents – UFC 3-340-02, "*Structures to Resist the Effects of Accidental Explosions,*" and UFC 3-340-01, "*Design and Analysis of Hardened Structures to Conventional Weapons Effects*." Additional sources are used when they represent the best "state of the art" practices.

Major topics include Blast Loads on Structures; Principals of Structural Dynamics; Dynamic Material Properties, Allowable Response Criteria, Design of Steel Structures, Reinforced Concrete Structures, Masonry Structures, Glazing, Doors, Building Systems, Frames, SBEDS, and Special Considerations. The majority of this material is focused on Single-Degree-of-Freedom methodology.

Time during the five-day course is split between lectures that provide the theoretical basis of the design process and hands-on use of government and commercially developed software specifically made for blast analysis and design. High-speed test video and posttest photography is provided to compliment the course material. The course also includes typical example design problems and their solutions. Specific design considerations that attendees may be facing in the near future can also be discussed. An electronic reference library, as well as practical design software related to blast resistant design, is provided to attendees.



The **Blast-Resistant Structural Design Training Class** contains information that is marked CUI. Individuals allowed to attend are limited to representatives of U.S. Government agencies. The Blast Class is best suited for structural engineers that have a good grasp of traditional structural engineering design principles. The Blast Class also uses computer software to create detailed models that include all of the basic building construction components that comprise the structure being analyzed. Having a basic working knowledge of various building construction materials is beneficial.

COURSE OUTLINE

- Introduction to Blast Design
- Blast Design Criteria
- Air Blast
- SDOF Analysis
- SBEDS Analysis
- Energy Solutions
- Steel
- Concrete
- Masonry
- Windows Analysis and Design

Please see page 6 for FY25 Blast schedule

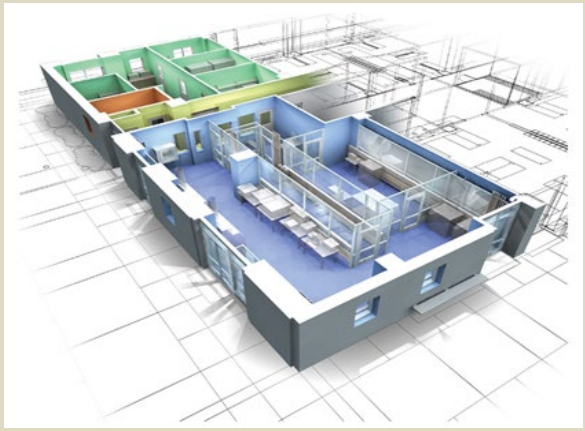
To register, contact the Registrar via email @ PDC.Training@usace.army.mil

SENSITIVE COMPARTMENTED INFORMATION FACILITY/SPECIAL ACCESS PROGRAM FACILITY (SCIF/SAPF) PLANNING, DESIGN, & CONSTRUCTION TRAINING CLASS

The Sensitive Compartmented Information Facility/Special Access Program Facility (SCIF/SAPF) Planning, Design & Construction Training Class provides students with a thorough understanding of SCIF/SAPF criteria and standards. The course presents the elements of a successful SCIF/SAPF project, in detail, from the planning stage through the design and construction phases. All current SCIF criteria and standards are addressed, along with any supporting criteria. The goal of this course is to ensure the SCIF/SAPF project is properly planned, documented, designed, and constructed to meet performance and mission requirements.

FEATURES OF THE SCIF/SAPF COURSE:

- Addresses all facets of a SCIF/SAPF project from inception through construction and accreditation.
- Presents in-depth technology and engineering principles of design to defeat threats in all facets of SCIF/SAPF design.
- Provides attendees with a better understanding of construction and accreditation topics and issues through a detailed description of the various design components, their functions, and their purpose.



The Sensitive Compartmented Information Facility/ Special Access Program Facility Planning, Design, & Construction Training Class is intended for an interdisciplinary group, including project managers, engineers, designers, and architects. This course is intended for all applicable parties who are involved in new or retrofit SCIF/SAPF projects. Personnel from installation level, major command level, and Corps of Engineers district and division levels are encouraged to attend. Representatives from other federal government agencies may also attend.

COURSE CONTENT

- Definitions
- Criteria
- Assets
- Physical/Technical Threats
- Project Planning Process
- Project Costing
- Documentation and Accreditation
- Layout Design (Arch, Elect, Mech, & Struct.)
- Design for Physical Security
- Design for Acoustic Mitigation
- Design for Photonic Mitigation
- Design for TEMPEST Mitigation
- Red/Black Design for Data Communications
- Electrical Technical Power Design
- OCONUS vs. CONUS
- Construction Security Plans

Please see page 6 for FY25 SCIF/SAPF schedule

To register, contact the Registrar via email @ PDC.Training@usace.army.mil

TO SCHEDULE A MTT, contact the Training Coordinator by phone 402-995-2930, or via email PDC.Training@usace.army.mil

Please allow 90-day advance notice for scheduling CONUS classes and 120-day notice for OCONUS

TO REGISTER FOR AN OPEN-ENROLLMENT CLASS, contact the Class Registrar via email PDC.Training@usace.army.mil

FY25 OPEN ENROLLMENT CLASSES

SECURITY ENGINEERING CLASS

24-28 Feb 2025 (Omaha, NE)

12-16 May 2025 (Omaha, NE)

ECF/ACP CLASS

15-17 Apr 2025 (Omaha, NE)

BLAST DESIGN CLASS

14-18 Apr 2025 (Omaha, NE)

SCIF/SAPF CLASS

4-7 Mar 2025 (Omaha, NE)

22-25 Jul 2025 (Omaha, NE)

12-15 Aug 2025 (Omaha, NE)

PROTECTIVE DESIGN CENTER

US Army Corps of Engineers

THE PROTECTOR

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U.S. Army Corps of Engineers, Omaha District
ATTN: CENWO-EDS (Mr. John Galloway)
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Progressive Collapse:
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Blast Resistant Window/Door Design and Analysis:
Bill Veys 402-995-2379

Vulnerability Assessments and AT Plan Development:
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Critical Infrastructure Assessments:
Justin Ketelsen 402-995-2390

Access Control Point Design & Review:
Rob Hallett / Kris Katzmann 402-995-2397/2931

DoD Anti-Ram Vehicle Barrier List:
Ann Mittelsdorf 402-995-2930

Active Vehicle Barrier (AVB) Commissioning:
Rob Hallett / Kris Katzmann 402-995-2397/2931

Fencing and Gates:
Rob Hallett 402-995-2397

Chemical/Biological Protection Design:
Justin Ketelsen 402-995-2390

Criteria Development:
Justin Ketelsen / John Benefiel 402-995-2390/2396

Blower Door (Building Leakage) Testing:
Mr. Don Dittus 402-995-2364

SCIF and E3 Facility Design & Energy System Protection:
Mr. John Benefiel 402-995-2396

HEMP/EMP Shield Systems & Protection:
Mr. John Benefiel 402-995-2396

Electromagnetic Effects, RF Systems, & EMI Protection:
Mr. John Benefiel 402-995-2396