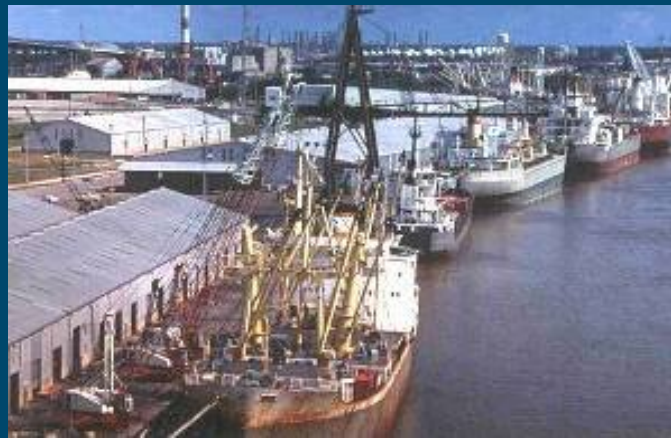


PROTECTING OUR INFRASTRUCTURE: DESIGNING AND IMPLEMENTING SECURITY IN THE PORT OF HOUSTON



Port of Houston Authority Project At A Glance

Scope of Services Includes:

- Security Master Plan design and engineering consulting services for 4th largest port in the US
- Threat and Vulnerability Assessment
- Port Infrastructure Physical and Electronic Security System Design (CCTV, Access Control, Credentialing)
- Security Emergency Response Plan
- Gap Analysis
- Design Basis Threat Matrix
- Installed Radiation Detection Portal



Key Project Elements

- Threat Vulnerability Assessment
- Design Basis Threat Matrix
- Security Master Plan
- Security Systems Engineering

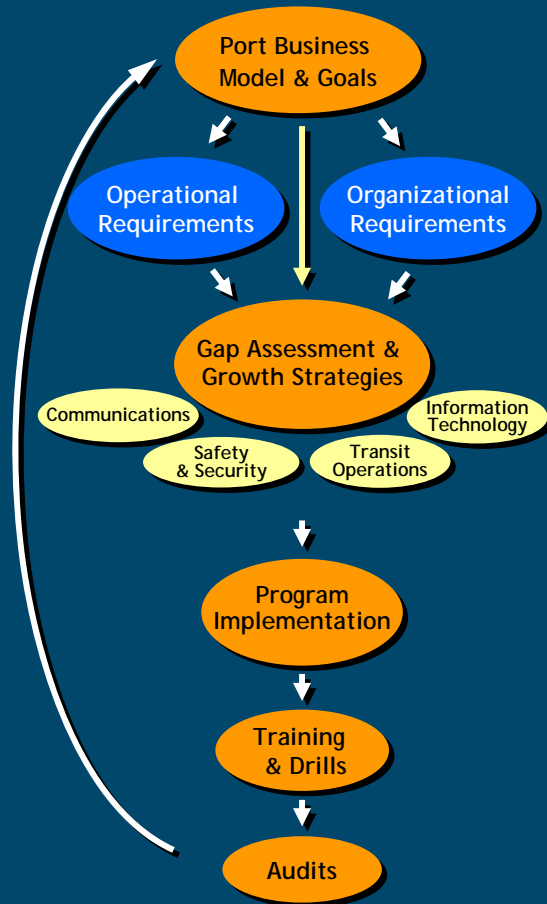
Threat Vulnerability Assessments

- Port Operations
- Physical Security
- Electronic Security

Design Basis Threat Matrix

Target (Critical Asset)	Attack Profile (Type of attack)	Military Value (1-5)	Training (1-5)	Profile Risk (calculated)	Indication (1-5)	Target Hardness (1-5)	Recovery (1-5)	Redundancy (1-5)	Death/Injury (1-5)	Security Enhancement Provides	Enhancement Applicable	Motivation	Capability	Intent	THREAT	VULNERABILITY	ADJ. VULNERABILITY	CONSEQUENCE	RISK	
Ships	Boat Bomb	2	5	3	2	3	3	1	2			4	5	3	3	4	3	2	3.0	
Admin Building	Car/Truck Bomb	1	5	3	2	4	2	2	3	Y	Y	3	5	2	3	3	3	3	5.0	
Bridge	Diver Attack	2	3	2	2	3	3	1	2			4	4	2	3	4	3	2	2.9	
Storage tanks	Ground Force Attack	1	5	2	2	5	1	1	3		Y	2	5	2	3	4	3	3	1.8	

Security Master Plan



- Result of TVA
- Result of Design Basis Threat Matrix
- Security Roadmap (Mitigation)

Threat Mitigation

Physical Security

- Fencing
- Lighting
- Gates
- Crime Prevention Through Environmental Design (CPTED)

Electronic Security

- Access Control
- Closed Circuit Video System (CCVS)
- Credentialing (TWIC) and Visitor Management System
- Command and Control (C2) Electronic Security

Operations

- Policies and Procedures
- Security Staffing
- Security Awareness
- Training
- Emergency Response Plan

Deployed Technology

Communications Infrastructure

- Wide Area Security Information Network (WASIN)
- Fiber Optic, Wireless, Wired
- Data Network, Servers, RAID Storage
- IP Based Technology

Access Control

- Credentialing, Access Control
- Visitor Management

CCVS

- Thermal cameras, low light camera, PTZ
- Digital Video Recording, digital video encoder/decoders, video analytics

Systems Integration

- C2
- Integration between Access Control and CCVS
- Multi Agency Integration (Port Authority, Transtar, USCG, HPD/HEC)