DoD Master Planning
A Holistic Process that Creates Resilient Installations

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Driving a New Model

Highlights of UFC 2-100-01 Installation Master Planning from a Resiliency Standpoint

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Resilient Master Planning

A Critical Installation Responsibility

• Installations are like any towns or cities where citizens live, work, and play and desire great neighborhoods and QOL.

• Each installation must have a master plan for resilient, sustainable, energy efficient development that also preserves long-term military capabilities.

• Military planning follows the same master planning practices as cities and towns.

Ft. Belvoir Mixed Use Development
What is Resilient Planning?

It’s more than the buildings...

It means:

• Creating **resilient communities** while improving **quality of life**, housing, and the **overall health and well-being** of Soldiers, families, and civilians

• **Meeting the mission** and Federal mandates
Resilient Master Planning Policies

• Focuses on resilient infrastructure solutions developed around connected utility and multi-modal transportation networks, reduced compact footprints...and repurposing

• Promotes a resilient land utilization strategy ensuring both mission reductions and mission growth

• Encourages comprehensive energy solutions that reduce energy consumption
Executive Order 13514

FEDERAL LEADERSHIP IN ENVIRONMENTAL, ENERGY, AND ECONOMIC PERFORMANCE (5 Oct 2009)

It is therefore the policy of the United States that Federal agencies shall...design, construct, maintain, and operate high performance sustainable buildings in sustainable locations....

Ensure that planning for new Federal facilities or new leases includes consideration of sites that are pedestrian friendly, near existing employment centers, and accessible to public transit, and emphasizes existing central cities and, in rural communities, existing or planned town centers.
Installation Master Planning UFC 2-100-01

- Created with active input from all services
- 10 key DoD-wide planning strategies
- Adopts best practices for sustainability and energy
- Approved 15 May 2012
  http://wbdg.org
Master Planning UFC 10 Key Strategies

Sustainable Planning
Natural, Historic and Cultural Resource Management
Healthy Community Planning
Defensible Planning
Capacity Planning
Area Development Planning
Network Planning
Form-Based Planning
Facility Standardization
Plan-Based Programming
2801(a) Preparation of Military Master Plans

Plans required– At a time interval prescribed by the Secretary concerned (but not less frequently than once every 10 years), the commander of each military installation under the jurisdiction of the Secretary shall ensure an installation master plan is designed to address environmental planning, sustainable design and development, sustainable range planning, real property master planning and transportation planning.
Each installation master plan shall include consideration of planning for:

a) compact and infill development;

b) horizontal and vertical mixed-use development;

c) the full lifecycle costs of planning decisions; and

d) capacity planning through the establishment of growth boundaries around cantonment areas to focus development towards the core and preserve range and training space.
How Do We Achieve Resilient Installations?

Start with the process of master planning

• Move beyond “vacant lot” planning

• Create compact, mixed-use developments instead of segregated, sprawling uses

• Develop “walkable” instead of auto dependent communities

• Focus on the entire community, not individual buildings

• A process…not a product…begins with a vision

the planning process facilitates resiliency
Meeting Resiliency Master Planning Goals

- Complies with all environmental laws and regulations
- Promotes a resilient land utilization strategy ensuring being able to handle mission reductions and mission growth
- Identifies all missions and provides adequate facilities
- Strategic approach for using, acquiring and managing real property
- Considers alternatives (renovation vs. new construction)
- Systematic approach to defining land area required
- Encourages mutual cooperation between the installation and local community
- Creates a positive, enduring legacy for future generations
- Supports all Services’ long-range planning goals
- Provides quality working and living conditions
Benefits of Resilient Master Planning

- Establishes installation management goals
- Framework for funding priorities
- Decision making info for Commanders
- Identifies environmental constraints
- Coordinated investment strategies
- Optimizes use of real property
USACE Master Planning Support

Regional Master Planning Support Centers

• Skilled in planning for comprehensive resilient solutions
• Chartered by the USACE Campaign Plan and the Army
• Skilled in installation support
• Experienced in sustainability strategies
USACE Master Planning Support Centers

NORTH ATLANTIC DIVISION
BALTIMORE
EUROPE

SOUTH ATLANTIC DIVISION
SAVANNAH
MOBILE

LAKES AND RIVERS DIVISION
LOUISVILLE

HUNTSVILLE ENGINEERING & SUPPORT CENTER

SOUTHWESTERN DIVISION
FORT WORTH

NORTHWESTERN DIVISION
SEATTLE

SOUTH PACIFIC DIVISION
SACRAMENTO

PACIFIC OCEAN DIVISION
FORT WORTH DISTRICT (REACH BACK SUPPORT)
Fort Hunter Liggett

Implementing a Master Plan to Create a Resilient Military Installation

Jerry Zekert, Chief
HQ U.S. Army Corps of Engineers
Fort Hunter Liggett, CA

FORT HUNTER LIGGETT
Framework Plan

Vision
To create a flexible training environment surrounding an attractive small town with walkable main streets and a usable town square, where Soldiers, civilians, and their families enjoy living and working.

Goals
1. Flexible Training Environment
2. Attractive Small Town
3. Walkable Main Streets
4. Usable Town Square

Legend
- ADP Locations
- Primary Public Roads
- Primary Cantonment Roads
- Secondary Public Roads
- Cantonment Focal Points
Installation Development Plan

Fort Hunter Liggett
IDP Illustrative Plan

Vision
To create a flexible training environment surrounding an attractive small town with walkable main streets and a usable town square, where Soldiers, civilians, and their families enjoy living and working.

Legend
- Service Area Boundary
- Existing Facilities
- New Facilities
- Barracks
- Townhouses
- Single-Family Homes / Duplexes
- Natural Open Space
- Parks / Quads
- Existing Trees
- Street Trees
- Surface Water Centerline
- 5- and 10-Minute Walk From Transit Stop
- Demolished Building
- Transit Stop Location
- Tactical Vehicle Parking
- POV Parking

- New Family Housing Neighborhoods
- Dog Park
- Hacienda Heights Town Green
- Town Square
- UEPH Barracks
- District Parking
- Recreation Park (Ballfields: PN 74001)
- Multipurpose Fitness Complex
- Milpitas Housing and Park
- Bradley Park
- Administrative Campus
- BCTC Campus
- Industrial Infill
- Barracks Campus
- Recreational Area
- DES Facility
- TASS Facility
- ORTC Campus
- Industrial/Training Administrative Campus
- Solar-Covered Tactical Vehicle Storage
- Training Campus
- ECS Facilities and Vehicle Storage Areas
- Staging
- POF
- Washrack
- Convoy Queuing Area
- Wastewater Expansion
- Access Control Point

Fort Hunter Liggett Capacity:

Parking:
- Car Parks: 3,574 spaces
- On-Street Parking: 1,476 spaces
- Total Parking: 5,050 spaces

New Facilities (min/max building heights):
- Demolished: 350,303sf
- Mission/Industrial: 456,630sf / 550,130sf
- Campus/Admin: 2,255,500sf / 2,844,000sf
- Net Capacity: 2,361,827sf / 3,023,827sf

New Housing:
- Single-Family/Duplexes: 134 units
- Townhouses: 35 units
- Total Housing: 169 units

Map developed by The Urban Collaborative, LLC.
Flexibility Equals Resiliency

Fort Hunter Liggett
IDP Regulating Plan

Vision
To create a flexible training environment surrounding an attractive small town with walkable main streets and a usable town square, where Soldiers, civilians, and their families enjoy living and working.

Legend
- Installation Cantonment Boundary
- Barracks Building Standard
- Campus Building Standard
- Civic Building Standard
- Commercial Building Standard
- Industrial Building Standard
- Large Format Building Standard
- Mixed-Use Building Standard
- Single-Family Standard
- Townhome Standard
- Parks/Open Space
- Buildable Area Boundary
- Required Build-To Line
- Parking Zone
- Required Entry Line
- Required Entry Location
1/2 Minimum/Maximum Building Heights

General Notes:
1. Refer to the Street Standards for detailed street information.
2. Refer to the Building Standards for detailed building information.
3. Unregulated areas shall be permanently designated as open space.
4. Numerical designation in each buildable area refers to minimum and maximum allowable number of floors.
Green Infrastructure Network

Fort Hunter Liggett
IDP Parks & Quads Plan

Vision
To create a flexible training environment surrounding an attractive small town with walkable main streets and a usable town square, where Soldiers, civilians, and their families enjoy living and working.

Legend
- Cantonment Boundary
- Parks & Quads

The Urban Collaborative, LLC
Transportation Network

Fort Hunter Liggett
IDP Transportation Network Plan

Vision
To create a flexible training environment surrounding an attractive small town with walkable main streets and a usable town square, where Soldiers, civilians, and their families enjoy living and working.

Legend
- Cantonment Boundary
- Parkway (with Integrated Bicycle Lanes)
- Campus Street (with Integrated Bicycle Lanes)
- Alley (Supports Bicycle Traffic)
A Picture is Worth a Thousand Words

Administrative Campus
A Picture is Worth a Thousand Words

Industrial Grid
A Picture is Worth a Thousand Words

Townhouse Barracks
BASE CAMP MISSION

Fort Hunter Liggett Base Camps will provide **customizable, multi-component, net zero training areas** that meet current and unforeseen objectives.

**CUSTOMIZABLE** – Provide flexible training environments that allow units of all sizes to configure the base camp to best facilitate their mission and training requirements.

**MULTI-COMPONENT** – Create areas that support the training requirements of all branches of U.S. and foreign military.

**NET ZERO TRAINING AREAS** – Implement net zero energy, water, and waste strategies that include on-site energy generation, re-using water, and composting waste.

8J BASE CAMP PLANNING VISION

From this planning vision, three goals guided the planning process:

In support of Joint Force Training, 8J will be a **developed base camp, with a full range of appropriate facilities and infrastructure**.

**DEVELOPED BASE CAMP** – Create a developed base camp with appropriate infrastructure that facilitates a variety of training needs.

**FULL RANGE OF APPROPRIATE FACILITIES** – Provide permanent, semi-permanent, and temporary structures that are appropriately sited to allow for maximum flexibility and adaptability of the site.

**APPROPRIATE INFRASTRUCTURE** – Provide appropriate and adequate infrastructure to accommodate permanent and semi-permanent structures.
The plan takes advantage of existing topography by reversing the placement of the tent laydown space with tactical vehicle parking. The Quonset huts are demolished and the hillside terraced to combat erosion. The gently sloped land to the west is used for tent laydown. A location for photovoltaic panels has been identified to the north of the billeting tents.
The primary goal is a **focus toward net zero** and when we talk about net zero, it's not only net zero energy, but it's **net zero energy, water, and waste**. When you look at the term "net zero" or a hierarchy of net zero you must **start with reduction**, then progress through repurposing, recycling, energy recovery, disposal being the last.

Honorable Katherine Hammack
What is a Sustainability Component Plan?

In this era of constrained budgets, Public Works staff members are regularly identifying and implementing practical ways to reduce our costs associated with energy, water, and waste.

At installations with updated Area Development Plans, a Sustainability Component Plan (SCP) can help facilitate this effort and move an installation closer towards net zero.

Just as a Transportation Component Plan identifies ways to facilitate more efficient movement around an installation, the SCP identifies ways at both the planning and building level to facilitate more efficient use of our limited fiscal and natural resources.
When is an SCP Prepared?

**SCPs are prepared at the district level** and then, when all SCPs are completed, the metrics can be integrated into an overall SCP for the installation.

Before completing the SCP for a district, an **Area Development Plan (ADP) needs to be in place**. This is essential since the ADP gives planners the metrics needed to effectively forecast supply and demand of energy, water, and waste.

In this way, the outcome is not a stand-alone plan for energy, water, or waste but a **fully integrated component** of a holistic master plan.
How Resilient?

100% reduction achieved by master plan

58.2% reduction achieved by master plan

100% reduction achieved by master plan
Creating a Resilient Military Installation

Fort Hunter Liggett

Embedded Resilient Strategies into...
...planning process
...cantonment plans
...base camp plans
...sustainability component plan
The Private Sector Role

Creating Sustainable and Resilient Military Bases

Barry Gordon, AICP, LEED Green Associate
Chief Operating Officer + Planner
The Urban Collaborative, LLC
Why Private Sector Involvement?

- Low-Impact Development
- Sustainability
- Leadership
- Standards
- Master Planning
- Competency
- Culture
- Energy Efficiency
- Resiliency

Design and Construction Agents

Major Commands

Installations
Why Private Sector Involvement?

• Ability to Bring People Together
• Engage the People Who Know
• Facilitate Diverse Communities
Why Private Sector Involvement?

• Private sector can bring contemporary strategies
• Create great places
• Design great buildings
• Bring the best practices of cities and towns planning
Why Private Sector Involvement?

- Private sector is able to bring good visualization and tools
- Translate dreams into actions
Know the Policies and Regulations

• Today's planner works in a complex intergovernmental web of plans, policies, and regulations

• Know the Policies and Regulations
  ...EO 13514
  ...NDAA FY13/FY14
  ...UFC 2-100-01
  ...MCO 11000.12

• Best practices of city and town

• If you don’t know ask
Championing the Process

- Private sectors must have the patience and the understanding to bring diverse users together
- Engage the stakeholders
- Backed by stakeholders
- Create flexible plans
- Create realistic implementable plans

Private sector planners facilitate resiliency
• Classroom training, workshops and practicums

• Accredited by AIA, AICP, PE, and PMP

• Open to all: DoD, consultants, federal agencies and general public

• Targeted to all levels: interns to executive leaders

• http://www.dodmpi.org
DOD Master Planning Institute

**Master Planning Sustainable Historic Structures (392)**
Portland, OR  14 – 16 July

**Master Planning Practices (241)**
Mobile, AL  20—23 July

**Master Planning Guideline Implementation (319)**
Baltimore, MD  27 – 28 July

**Master Planning Program Execution (326)**
Baltimore, MD  29 – 31 July

**Master Planning Visualization Techniques (948)**
Huntsville, AL  28 – 31 July

**Master Planning Energy & Sustainability (258)**
Seattle, WA  11 – 14 August

**Master Planning Advanced Techniques (952)**
Savannah, GA  17 – 20 August

Complete course descriptions and registration at: [www.dodmpi.org](http://www.dodmpi.org) or [www.ulc.usace.army.mil](http://www.ulc.usace.army.mil)
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