# Layout and Design Considerations in Food Production Areas

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# Five Facility Design and Equipment Selection Principles that Address Safety, Sanitation, and Efficiency

1. Efficient Flow
2. Maximum Utilization
3. Flexible and Functional
4. Environmental
5. Security

# Efficient Flow – Safety, Sanitation and Efficiency

**Flow of Food** - Purchasing to Receiving to Storage to Preparation to Cooking to Holding to Transport to Service to Re-store/Reheat

*Focus is on separation of raw and cooked*

**Flow of Non-Food items** - Dishroom to storage to use (preparation and service) to dishroom

*Focus is on separation of clean and soiled*

*Danger is in re-contamination*

# Efficient Flow – Safety, Sanitation and Efficiency

Staff Flow

- time and motion economy
- bottlenecks – space in aisles; door ways
- sequence of tasks
- worker safety
- heights of tables; storage
- Ergonomic features

Think about your operations

# Maximum Utilization

## Use of Space

- space at premium due to cost factors – more in commercial but still consideration non-commercial production space versus revenue generating or instructional areas
- allocation and design driven by menu and amount in-house preparation (equipment needed etc)
- design types (straight line, L-shaped, U-shaped) partitions; architect's books have guidelines
- amount for storage versus production (potential savings larger volume purchases)

## Use of Equipment

- multi-use item
- adaptable

# Flexible and Functional

**Design**

- allows for change
- multi-use of area
- partitions
- built-in features

Example: cafeteria and gym

**Equipment**

- movable carts rather than bolted tables
- multi-use
- need versus space (based on menu, style service, etc)

# Environmental Factors

**Energy Sources**

– gas (LP or natural)

- electric (common volts/phases 110-220; 220-240/1; 220-240/3)

- direct wire most permanent

– be sure equipment matches with supply

- steam (PSI; potable source)

**Water supply**

– plumbing connections

- potable source; testing

**Waste management** – recycle, sewage

# Security Factors in Design

- It is a New World
- Food and Facility Defense Important
- Internal Threats
  - theft
  - sabotage
- External threats
  - location of office
  - storage areas
  - access

# Security Issues and Solutions

**Design**

- office located between receiving area and storage
- locker rooms between production and office)

**Policies**

- limited access to non-foodservice staff

**Barriers**

- receiving dock door automatically locks on outside

# In Summary, food production area design should address:

1. Efficient Flow
2. Maximum Utilization
3. Flexible and Functional
4. Environmental
5. Security