



**Breakthrough to Excellence**  
LEAD INNOVATE INSPIRE



**Jails: Build, Expand, Design, Refurbish**

**Pre-Architectural Programming**

Dennis R. Liebert



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**Project Team Names**



- The agency's user group, supported by the county planning team, needs to take the lead in defining operations within the jail, determining how those functions will be carried out, and where to locate them within the facility.



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**Time for a New House?**

- Assess need
- Remodel or Build?  
Weigh cost of each
- Determine activities:  
'functional programming'



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## Remember

Form (design) follows



Function (operations)



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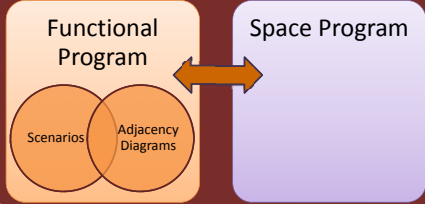
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## Pre-Architectural Program



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## Functional Components and Activities

▪ Housing	▪ Administration
▪ Booking and Release	▪ Staff Support
▪ Visitation	▪ Recreation/Exercise → Indoor → Outdoor
▪ Medical Services	▪ Programs → Educational → Vocational → Religious
▪ Support Services → Food Service → Laundry	

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### FUNCTIONAL PROGRAM

- Develop mission statement/operational philosophy
  - **Functional/Operational Program**
  - Operational scenarios
    - Booking
    - Housing
    - Medical
    - Food service
    - Programs
- Develop a Staffing Analysis/Operational Costs



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### SOME KEY ISSUES TO BE EXAMINED DURING PROGRAMMING

- Type of cells (single, dorms or multiple)
- Interface with existing CJS agencies
- Classification and proper separation
- Surveillance versus supervision
- Circulation/inmate movement
- Types of programs and services
- Centralized or de-centralized prog./services
- Need for electronics
- Natural light in cells
- Accessibility of services
- Expandability
- Perimeter security



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### Scenarios

- Provide great detail about different functions
- Reflect decisions made about functional components
- Add more definition of facility operations
- Form the foundation for policies, procedures, and post orders



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## Scenario Development Steps

- There are 8 basic steps
- Remember these functions?

• Housing	• Administration
• Booking and Release	• Staff Support
• Visitation	• Recreation/Exercise →Indoor →Outdoor
• Medical Services	• Programs →Educational →Vocational →Religious
• Support Services →Food Service →Laundry	

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## Scenarios

- Step 1 – Identify the functions and related activities
- Step 2 - Determine, chart, sequence
- Step 3 – Identify the users
- Step 4 – Identify range of behaviors, emotions, and variances

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## Scenarios

- Step 5 – Identify furnishings, materials, and equipment
- Step 6 – List policies, rules and standards
- Step 7 – Continue to identify and fine tune adjacency / space needs
- Step 8 – Test and Revise

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## Scenarios

- Provide great detail about different functions
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## Basic Design and Inmate Management Philosophy

- When developing housing scenarios, first determine:
  - your basic design premise
  - inmate management philosophy
  - classification strategies
- Each have a major impact on housing



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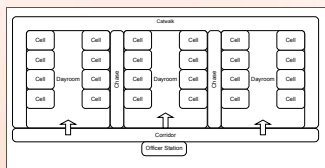
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## Basic Design and Inmate Management Philosophy Linear Design – Intermittent Surveillance



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### Inmate Management Philosophy and Housing Unit Response

Podular Remote Surveillance

The diagram illustrates a podular remote surveillance housing unit. It features two Dayrooms, each with four Cells on either side. A central Staff Control area is positioned between the two Dayrooms, with arrows indicating surveillance coverage. Two inset photographs show a staff member in a control room and inmates in a dayroom.

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### Inmate Management Philosophy and Housing Unit Response

Podular Direct Supervision

The diagram illustrates a podular direct supervision housing unit. It features a large central Dayroom surrounded by a perimeter of Cells. A Staff Control area is located at the bottom center of the Dayroom. An inset photograph shows a large, open-plan housing unit with a central staircase.

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### Inmate Classification

Planning to Meet Needs

- Right type of bed
- Right type of cell
- Right-sized housing unit
- Right materials used for constructing/ furnishing the units

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### Classification Plan + Inmate Management Philosophy = Space Implications

- Housing unit design is directly affected by classification/inmate management philosophy
- For podular remote and podular direct determine:
  - Number of housing units
  - Number of beds in each unit
  - Type of cells



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### Functional Program

More Operational and Philosophical Considerations

- Lighting
- Space flexibility
- Meeting the needs of inmates with disabilities
- Types of materials used
- Plumbing chase design and the relation to operations
- Sustainable justice system



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### Space Planning Issues

- Description of Spaces
  - Quantity
  - Size
  - Environment
  - Special characteristics
- Relationship of Spaces
  - Adjacency diagram



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## Space Program Components

- All departments in the facility
- Space standards
- Net square feet
- Department efficiency factor
- Department, building and total gross square feet




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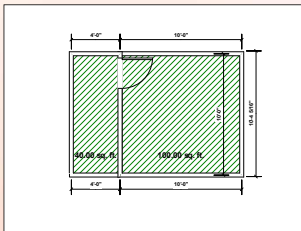
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## Net and Gross Square Feet



**Net SF = Room Area =**  
 $10' \times 10' = 100 \text{ SF}$

**Gross SF = Room + All else =**  
 $10.33' \times 14' = 145 \text{ SF}$

**Grossing Factor =**  
 $\text{Gross SF} / \text{Net SF} = 145 / 100 = 1.45$




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## Sample Space Program Overview

Department	Net S.F.	Efficiency Factor	Square Feet
1.0 Administration	2,390	1.4	3,346
2.0 Operations/Central Control	840	1.4	1,176
3.0 Video Hearings	1,030	1.5	1,545
4.0 Visiting	2,600	1.4	3,640
5.0 Inmate Processing	8,065	1.7	13,711
6.0 Health Care	4,000	1.5	6,000
7.0 Inmate Programs/Services	5,670	1.4	7,938
8.0 Food Services	7,080	1.15	8,142
9.0 Housing Summary	84,140		128,293
10.0 Staff Support	4,520	1.4	5,876
11.0 Laundry	1,465	1.3	1,905
12.0 Maintenance	4,130	1.15	4,750
13.0 Mechanical	7,700	1.15	8,855
Subtotal	133,630		195,176
		Building Gross @15%	29,276
		<b>Total Gross Square Feet</b>	<b>224,452</b>




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### Sample Space Plan Detail

Space	Description	People/Area	# Areas	Space Standard	Net Square Feet
5.1	Vehicle Sallyport	-	1	2,500/area	2,500
5.2	Pedestrian Sallyport	-	1	100/area	100
5.3	Male Holding	8	1	20/inmate	160
5.4	Female Holding	5	1	20/inmate	100
5.5	Isolation Cells	-	2	60/cell	120
5.6	Detox Holding	4	1	20/inmate	80
5.7	Booking Stations	-	4	80/area	320
5.8	Pre-booking Waiting	30	1	15/person	450
5.9	Male Shower	-	2	30/area	60
5.10	Female Shower	-	1	30/area	30

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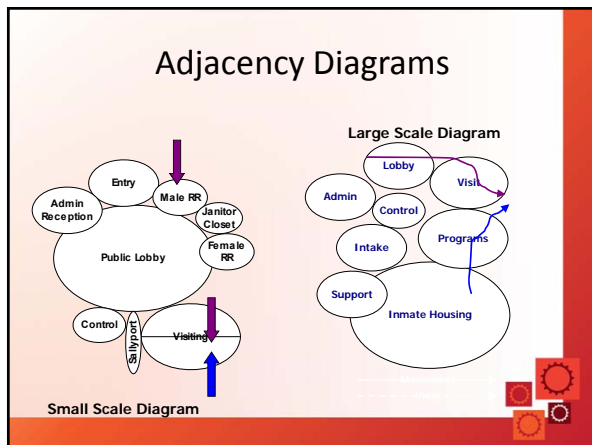
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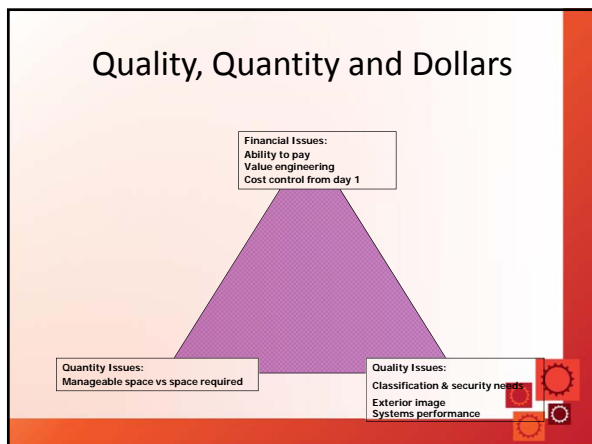
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### Worksheet

B Component	C Base NSF	D Nets	E Total NSF	F Circ. Factor	G GSF	H Unit Cost	I Cost
Public Spaces	750		750	1.4	1,050	\$130	\$136,500
Booking							
sallyport	2,000		2,000	1.2	2,400	\$200	\$480,000
all other	3,200		3,200	1.4	4,480	\$200	\$896,000
Health Care	600		600	1.4	840	\$160	\$134,400
Education & Counseling	1,200		1,200	1.4	1,680	\$100	\$168,000
Laundry	750		750	1.2	900	\$200	\$180,000
Maintenance	1,800		1,800	1.2	2,160	\$130	\$280,800
Jail Administration	1,800		1,800	1.4	2,520	\$130	\$327,600
Exercise (exterior)	4,500		4,500	1.0	4,500	\$100	\$450,000
Food Service	4,150		4,150	1.4	5,810	\$200	\$1,162,000
Subtotal "others"	20,750		20,750		26,340		\$4,215,300
Housing	# cells						
high security single cells	(1)	0	0	1.7	0	\$300	\$0
general population single cells		0	0	1.7	0	\$200	\$0
minimum secure dormitory beds		0	0	1.7	0	\$150	\$0
non-secure dormitory beds		0	0	1.6	0	\$130	\$0
Visiting	1,000	(2)	1,000	1.4	1,400	\$100	\$140,000
Subtotal "team decisions"	(3)	1,000			1,400		\$140,000
Total	(4)	21,750			27,340		\$4,355,300
Mechanical (5%)	(5)				1,390	\$130	\$180,700
Building Grossing Factor (20%)	(6)				5,550	\$200	\$1,110,000
Total Building Square Footage/Cost	(7)				34,680		\$5,646,000

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### Project Cost Worksheet

Cost Item	%	Amount
Construction Cost		\$5,646,000
Project Cost		
Furniture, Fixtures & Equipment	5%	\$282,300
Special Systems	5%	\$282,300
Site Development	8%	\$451,680
Permits/Administration	2%	\$112,920
Contingency	10%	\$564,600
Subtotal Project Cost		\$1,693,800
Total Construction and Project Cost		\$7,339,800

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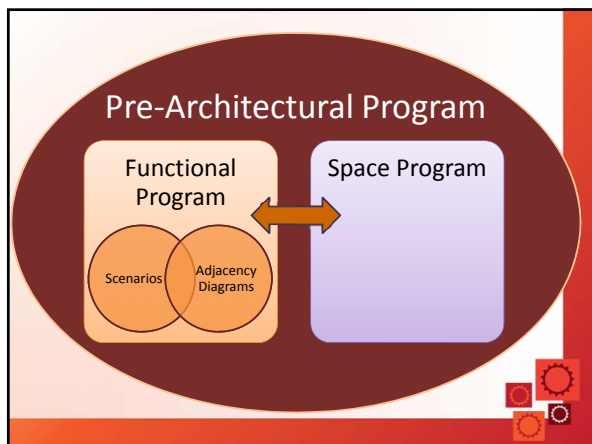
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