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Office of Justice Programs
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NATIONAL INSTITUTE OF JUSTICE
Construction Bulletin

Michael J. Russell, Acting Director

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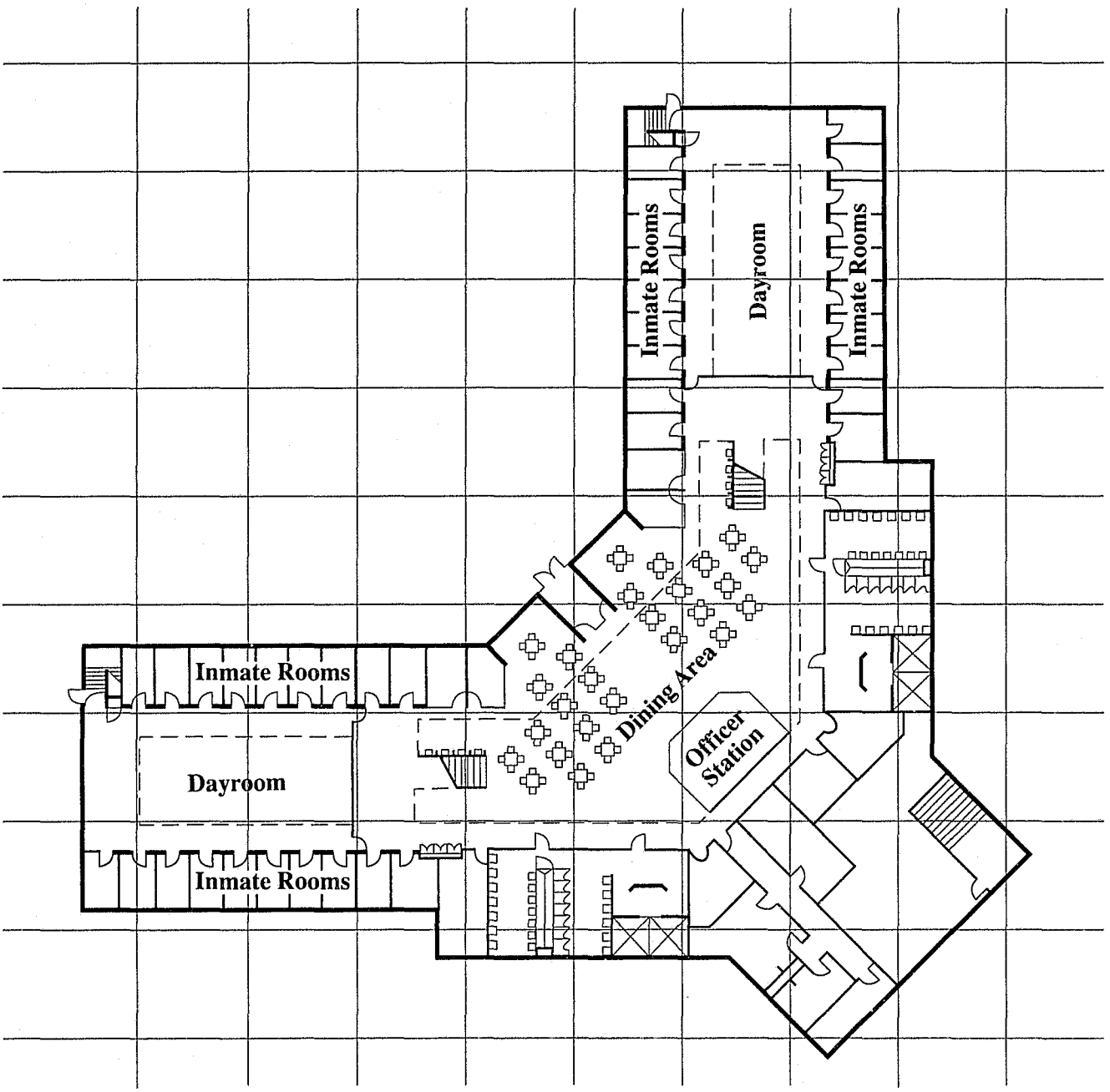
Construction Cost Indexes



Construction Cost Indexes

Any facility shown in the NIJ *National Directory of Corrections Construction* will show the date and cost of construction at a particular location, and you can use the following table of Cost Indexes to estimate what it would cost to construct that facility in your geographic region. Likewise, you may have an NIJ Construction Information Exchange Facility Data Base Search printout that shows the date and cost of construction for a jail or prison which you would like to consider for your own jurisdiction. You can use these indexes to make reasonably estimated comparisons. These comparisons should not be substituted, however, for detailed budget estimates, which include appropriate contingencies and consider your specific site and program.

The Cost Indexes are based on a 69-city national average, with a 1978 base of 100. To estimate or compare costs, use the index factors for the cities closest to the geographic areas you wish to compare, or closest to the area in which you wish to construct a new facility. The Cost Indexes are in alphabetical order by State for your convenience. The table does not list any cities in North Dakota.

The two main uses of the Cost Indexes involve the estimation and comparison of costs for:
1. Construction in different regions for different years (Examples 1 and 2).
2. Construction in a particular region for different years (Example 3).

The formula: $\frac{\text{Index factor for date and place desired}}{\text{Index factor for date and place known}} \times \text{known cost} = \text{estimated cost}$

Example 1

You are interested in adapting the Denver Reception and Diagnostic Center (DRDC), constructed in 1991 in Denver, Colorado, for construction in your own region. The total construction cost for the DRDC in 1991 was $36,000,000. Your new facility is to be built in Charlotte, North Carolina.

Procedure

(a) Divide the 1992 Charlotte index factor by the 1991 Denver index factor.

(b) Multiply the DRDC known cost ($36,000,000) by the result of (a).
(c) The result of (b) is the total estimated cost for your new jail in Charlotte.

Calculation

1992 Charlotte index factor = 140.3
1991 Denver index factor = 159.2

$\frac{140.3}{159.2} \times \$36,000,000 = \$31,726,130$

Example 1 formula: $\frac{\text{(1992 Charlotte index factor)}}{\text{(1991 Denver index factor)}} \times \text{DRDC known cost} = \text{estimated cost for Charlotte}$

Example 2

You are interested in adapting the Knox County Jail, constructed in 1984 in Barbourville, Kentucky, for construction in your own region. The total construction cost for the Knox County Jail in 1984 was $666,000. Your new facility is to be built in Billings, Montana.

Procedure

(a) Divide the 1992 Billings index factor by the 1984 Louisville (closest city to Barbourville, Kentucky) index factor.

(b) Multiply the Knox County Jail known cost ($666,000) by the result of (a).
(c) The result of (b) is the total projected cost for your new jail in Billings.

Calculation

1992 Billings index factor = 162.4
1984 Louisville index factor = 130.4

$\frac{162.4}{130.4} \times \$666{,}000 = \$829{,}436$

Example 2 formula: $\frac{\text{(1992 Billings index factor)}}{\text{(1984 Louisville index factor)}} \times \text{Knox County Jail known cost} = \text{estimated cost for Billings}$

Example 3

A replacement cost is needed for a State prison located near Birmingham, Alabama. You would like to model the new prison after the Federal Correctional Institution constructed in 1979 in Talladega, Alabama. The total construction cost for that facility was $10,069,300.

Procedure

(a) Divide the 1992 Birmingham index factor by the 1979 Birmingham (closest city to Talladega) index factor.

(b) Multiply the Federal Correctional Institution known construction cost ($10,069,300) by the result of (a).
(c) The result of (b) is the total projected cost for the replacement prison near Birmingham.

Calculation

1992 Birmingham index factor = 144.9
1979 Birmingham index factor = 94.3

$\frac{144.9}{94.3} \times \$10{,}069{,}300 = \$15{,}472{,}338$

Example 3 formula: $\frac{\text{(1992 Birmingham index factor)}}{\text{(1979 Birmingham index factor)}} \times \text{Federal Correctional Institution known cost} = \text{estimated cost for Birmingham}$

	CONSTRUCTION						
	1978	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**
Alabama							
Birmingham	86.5	94.3	103.5	110.3	115.5	120.2	125.6
Alaska							
Anchorage	121.2	131.5	144.8	159.4	172.9	182.7	187.9
Arizona							
Phoenix	95.7	105.0	116.7	126.7	134.2	139.1	140.7
Arkansas							
Little Rock	86.2	92.1	101.6	110.6	117.1	120.6	126.5
California							
Fresno	106.8	117.3	128.9	140.6	150.3	160.5	163.5
Los Angeles	111.3	122.1	133.7	146.7	156.1	163.8	169.2
San Diego	108.3	119.5	130.1	142.0	152.5	158.0	161.5
San Francisco	117.7	128.2	142.5	155.8	168.3	178.8	184.4
Colorado							
Denver	96.0	105.3	115.8	122.5	132.7	140.4	148.4
Connecticut							
Hartford	94.6	101.4	111.2	118.7	127.8	136.3	144.3
Delaware							
Wilmington	98.2	105.4	115.8	125.3	135.1	142.9	148.4
District of Columbia	95.9	102.6	113.8	122.5	130.1	138.2	141.6
Florida							
Jacksonville	85.7	93.5	102.4	108.6	115.8	121.0	127.6
Miami	88.3	95.7	103.5	112.9	121.9	126.6	129.0
Tampa	86.9	94.6	103.4	112.7	118.6	125.9	129.8
Georgia							
Atlanta	87.7	95.0	103.6	111.1	118.8	125.6	127.9
Hawaii							
Honolulu	114.8	124.6	137.1	151.0	163.8	173.1	178.0
Idaho							
Boise	91.7	100.4	110.4	121.5	131.9	137.1	140.4
Illinois							
Chicago	102.3	110.9	122.0	131.9	139.7	146.6	152.1
Peoria	92.3	100.0	109.5	120.0	128.7	135.2	139.3
Indiana							
Indianapolis	98.5	107.1	116.7	125.6	133.7	138.1	144.6
Iowa							
Des Moines	90.7	97.9	108.9	114.7	122.1	126.0	130.5
Kansas							
Wichita	89.4	95.8	104.2	112.9	119.4	123.1	130.8

COST INDEXES							
1985	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**
128.1	128.5	130.8	136.6	139.4	140.1	142.9	144.9
190.3	195.2	202.2	205.7	210.2	214.7	221.0	223.8
145.2	143.9	147.1	157.2	160.7	163.7	169.2	172.1
127.1	127.3	128.4	137.9	140.9	144.1	147.5	149.0
164.3	167.1	171.7	179.6	183.5	187.5	193.0	195.5
174.6	176.1	180.8	184.3	187.8	190.3	198.1	202.1
167.3	168.6	174.4	179.7	183.7	187.1	193.2	196.7
186.6	192.1	198.8	201.3	205.0	208.9	215.8	218.2
144.2	144.0	149.0	154.6	152.9	155.0	159.2	161.8
150.0	155.5	160.3	161.3	165.6	169.6	173.3	175.9
151.2	155.4	162.2	165.3	169.8	174.2	178.7	182.5
143.7	148.5	153.0	155.6	159.0	162.9	168.5	169.2
128.9	131.8	134.7	138.9	142.1	144.2	147.5	149.6
132.5	133.9	137.9	143.2	146.4	149.7	153.3	155.7
133.2	136.2	140.8	143.1	146.2	149.5	153.1	155.5
130.3	133.3	137.8	140.6	143.2	146.4	149.4	152.0
180.2	184.9	191.6	194.8	199.1	203.3	209.3	212.0
141.3	143.6	147.5	152.6	156.6	160.1	163.2	167.5
155.3	156.4	162.5	169.4	173.4	177.3	181.5	187.1
141.5	143.3	149.1	154.1	157.9	161.5	165.5	169.3
145.5	149.0	152.0	158.1	161.8	165.2	169.3	171.7
132.7	135.4	137.8	147.9	150.4	153.8	156.8	159.6
127.4	129.1	133.2	141.4	144.4	147.7	151.3	152.8

	CONSTRUCTION						
	1978	1979	1980	1981	1982	1983	1984
Kentucky							
Louisville	91.0	99.0	106.9	114.4	120.4	123.3	130.4
Louisiana							
New Orleans	89.2	96.6	106.4	113.8	121.6	127.8	134.2
Maine							
Portland	86.1	92.5	101.0	110.6	120.9	127.6	131.8
Maryland							
Baltimore	95.5	102.5	112.5	122.9	129.2	136.6	141.3
Massachusetts							
Boston	107.7	114.1	125.0	132.4	145.9	154.5	163.7
Michigan							
Detroit	105.5	114.8	125.5	136.2	145.8	150.6	155.7
Grand Rapids	86.0	93.2	101.7	111.8	120.6	125.6	129.2
Minnesota							
Minneapolis	98.3	107.6	117.6	124.7	134.7	140.3	149.3
Mississippi							
Jackson	80.1	88.7	98.8	105.5	111.0	115.9	120.2
Missouri							
Kansas City	98.0	105.9	115.4	124.2	133.6	138.6	145.2
St. Louis	97.2	106.2	117.0	124.0	131.2	137.4	144.9
Montana							
Billings	93.8	101.4	110.7	118.8	128.1	135.5	142.2
Nebraska							
Omaha	90.2	99.8	107.4	114.6	123.0	128.3	132.9
Nevada							
Las Vegas	102.0	112.1	124.2	137.0	143.6	151.6	155.0
New Hampshire							
Nashua	87.0	93.4	102.0	111.7	122.2	128.9	133.2
New Jersey							
Newark	104.7	112.2	122.9	131.6	141.7	149.6	159.5
New Mexico							
Albuquerque	93.9	101.5	113.8	123.3	132.7	137.0	142.9
New York							
Buffalo	103.6	111.5	121.9	132.6	141.8	151.3	156.4
New York	117.7	124.5	136.3	147.8	160.2	170.4	180.5
Rochester	100.7	108.3	118.1	129.6	141.6	147.7	153.1
North Carolina							
Charlotte	79.4	86.8	93.5	101.9	106.9	113.7	116.9

COST INDEXES

1985	1986	1987	1988	1989	1990	1991	1992
131.4	132.9	136.9	146.8	149.2	152.7	155.6	158.4
136.1	136.3	139.2	143.3	142.8	145.2	147.6	150.1
133.6	136.5	141.5	145.8	149.7	153.2	156.8	159.2
143.1	147.7	153.2	153.0	155.8	159.7	166.5	165.6
169.3	176.2	183.2	186.1	191.4	196.1	199.3	202.6
157.0	160.1	165.8	172.1	177.1	180.9	185.3	189.1
130.3	132.9	137.9	142.3	146.2	149.5	153.2	155.9
149.0	153.5	157.9	160.7	164.2	167.8	171.7	174.6
122.3	122.3	123.8	131.6	134.6	136.6	139.7	141.7
145.0	147.4	152.6	156.5	159.4	162.9	166.4	167.4
149.1	153.3	158.5	164.0	165.3	169.0	171.0	174.6
137.8	142.3	145.7	151.7	152.8	155.8	159.9	162.4
130.2	133.4	137.8	145.8	149.2	152.6	156.4	158.8
156.5	157.5	162.3	171.3	175.0	178.8	184.0	186.4
134.9	137.9	143.0	147.3	151.2	154.8	158.4	160.8
167.5	173.8	180.7	180.1	185.5	191.2	196.8	200.8
142.6	143.6	145.5	151.5	153.5	157.3	159.4	163.7
159.8	167.6	172.8	173.4	176.9	178.9	184.5	186.5
188.8	196.1	206.1	207.7	215.0	223.4	230.4	236.7
155.4	162.4	167.3	169.1	172.5	174.5	179.9	181.8
119.1	121.0	126.6	129.1	131.9	135.0	138.1	140.3

	CONSTRUCTION						
	1978	1979	1980	1981	1982	1983	1984
Ohio							
Cincinnati	98.5	107.8	117.6	125.5	133.7	138.0	145.1
Cleveland	103.8	113.5	124.7	134.3	144.8	149.9	157.2
Columbus	97.0	106.7	116.4	127.2	136.2	141.9	145.9
Oklahoma							
Oklahoma City	88.5	96.5	105.7	116.9	125.7	129.4	132.3
Oregon							
Portland	99.8	110.5	120.2	132.1	140.6	145.3	148.0
Pennsylvania							
Erie	95.3	103.0	112.8	123.5	131.6	138.5	143.6
Philadelphia	104.1	111.2	123.4	130.2	139.5	148.1	155.8
Pittsburgh	101.1	109.4	120.4	129.8	135.8	142.9	150.1
Rhode Island							
Providence	96.4	103.6	113.0	123.9	135.4	142.9	147.6
South Carolina							
Charleston	78.0	84.3	91.6	101.3	110.0	116.2	118.1
South Dakota							
Sioux Falls	79.7	86.6	94.5	102.7	111.2	116.4	121.5
Tennessee							
Memphis	87.1	93.9	105.5	111.2	118.4	123.8	128.8
Nashville	84.8	93.6	102.3	110.2	116.5	120.0	125.0
Texas							
Dallas	87.8	95.9	106.7	115.3	123.8	130.3	136.2
El Paso	81.7	90.1	98.7	107.1	115.2	120.3	123.4
Houston	91.7	101.5	110.4	122.4	129.5	136.4	141.1
San Antonio	84.9	93.6	102.4	112.2	120.2	124.6	127.8
Utah							
Salt Lake City	94.1	101.4	111.1	117.8	125.5	132.4	140.9
Vermont							
Burlington	84.7	90.9	99.2	108.8	118.9	125.5	129.6
Virginia							
Richmond	87.1	93.6	102.1	112.4	117.6	125.1	127.5
Washington							
Seattle	101.4	112.9	124.5	135.8	146.8	151.4	155.0
Spokane	99.6	109.8	119.9	131.9	139.7	146.2	150.4
West Virginia							
Charleston	98.3	106.2	116.3	127.4	135.8	142.9	148.2
Wisconsin							
Milwaukee	99.9	108.2	117.3	128.3	135.5	140.7	146.0
Wyoming							
Cheyenne	87.6	95.5	104.7	113.7	123.3	130.0	134.9

COST INDEXES

1985	1986	1987	1988	1989	1990	1991	1992
145.0	146.2	150.6	155.5	158.9	161.9	165.6	167.9
158.4	163.8	168.6	174.1	176.7	176.6	182.9	184.1
145.1	149.1	152.7	158.8	162.5	166.0	170.1	172.5
134.6	132.3	132.9	142.0	143.9	147.5	149.4	153.5
149.1	150.9	153.5	163.2	167.5	171.2	174.6	179.1
146.2	149.0	153.6	156.3	159.3	163.8	167.4	169.8
160.1	165.6	173.1	175.9	181.1	186.1	190.8	196.1
154.1	157.1	160.4	162.0	164.3	169.5	172.6	175.0
149.6	152.8	158.5	163.3	167.6	171.6	175.6	178.2
119.1	121.3	126.3	129.4	132.4	135.5	138.8	140.9
122.0	125.0	129.3	132.0	135.1	138.2	141.7	143.9
130.9	132.9	135.4	144.1	146.6	149.9	152.8	155.5
127.3	127.7	130.1	137.6	140.8	142.8	146.1	148.2
135.6	133.0	134.8	134.8	138.4	142.1	142.1	147.8
122.8	121.9	126.3	131.6	133.4	136.7	138.5	142.3
138.3	136.5	136.4	147.9	149.9	153.6	155.6	159.9
128.1	128.2	130.3	137.0	138.8	142.2	144.1	148.0
136.3	140.9	143.6	150.3	151.5	154.4	158.5	161.0
131.3	134.2	139.1	143.4	147.1	150.6	154.2	156.5
129.6	133.6	136.5	140.7	143.7	147.3	152.3	153.0
155.5	157.7	160.2	166.7	171.2	174.8	176.8	183.8
152.3	154.6	158.2	164.4	168.7	172.5	175.9	180.4
150.8	153.7	158.4	161.2	164.3	168.9	172.7	175.2
147.7	150.4	156.0	163.1	167.1	170.9	175.2	179.1
134.1	135.0	139.9	144.6	145.8	148.6	152.6	154.9

Construction Documents Available From NCJRS

Construction Bulletins

Acquiring New Prison Sites: The Federal Experience. 1987. NCJ 106784. Free.

California Tests New Construction Concepts. 1986. NCJ 101593. Free.

Construction Options: A California Case Study. 1992. NCJ 136079. Free.

Cost Savings in New Generation Jails: The Direct Supervision Approach. 1988. NCJ 105288. Free.

Florida Sets Example With Concrete Modules. 1986. NCJ 100125. Free.

From Arizona to South Carolina: Transfer of a Prison Design Model. 1990. NCJ 114915. Free.

Inmates Build Prisons in South Carolina. 1987. NCJ 106783. Free.

Jail Construction in California. 1990. NCJ 125097. Free.

Maine Jails: Progress Through Partnerships. 1987. NCJ 104918. Free.

New Construction Methods for Correctional Facilities. 1986. NCJ 100121. Free.

Ohio's New Approach to Prison and Jail Financing. 1986. NCJ 102093. Free.

Oklahoma Prison Expansion Saves Time and Money. 1987. NCJ 105290. Free.

Stopping Escapes: Perimeter Security. 1987. NCJ 104600. Free.

Other Available Publications

Construction Information Exchange Reference Catalog. LT000088. Free.

Building on Experience: A Case Study of Advanced Construction and Financing Methods for Corrections. 1987. NCJ 103869. $8.40.

Correctional Facility Design and Construction Management - Issues and Practices. 1985. NCJ 096969. $9.90.

Corrections Construction Resource Package. NCJ 139309. $32.00.

Corrections Construction Topical Search. TS011105. $5.00.

Development of a Test Method to Evaluate the Penetration Resistance High-Security Glazing Subjected to Mechanical Impact and Heat. 1986. NCJ 104868. $5.20.

Siting of New Correctional Facilities. TS011663. $5.00.

These publications may be ordered from NCJRS. Please call 800–851–3420.

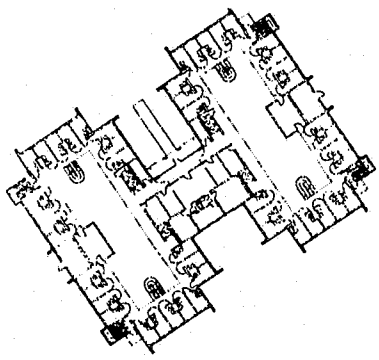
Points of view or opinions expressed in these publications do not necessarily reflect the official position or policies of the U.S. Department of Justice.

The National Institute of Justice is grateful to CRSS Constructors, Inc., located at Suite 600, 1530 Wilson Boulevard, Arlington, VA 22209, 703–528–1300; Suite 1700, 216 16th Street Mall, Denver, CO 80202, 303–820–5200; and 243 Vallejo Street, San Francisco, CA 94111, 415–693–9140, who provided these Cost Indexes. They are intended only for general guidance and preliminary planning purposes. They should not be used in lieu of a professionally prepared cost estimate.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, Bureau of Justice Statistics, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

NCJ 140964

About NIJ's Construction Information Exchange



The Construction Information Exchange, developed in 1985 by the National Institute of Justice, provides practical, cost-oriented information on efficient methods to increase the capacity of corrections facilities.

Information the Exchange Provides

State and local officials can tap into this network and obtain the information they need through the Construction Data Base, the Construction Information Exchange Reference and Referral Service, the *National Directory of Corrections Construction*, and *Construction Bulletins*.

The Construction Data Base

This up-to-date and expanding information resource offers detailed information on jails and prisons. The data base includes several hundred types of information ranging from construction costs and financing methods to staffing levels, cell capacity, and operational costs. It also lists administrators, sheriffs, architects, and other professionals who have recently completed a prison or jail project.

The Construction Reference and Referral Service

The Service provides easy access to specialists who will locate answers to questions or refer inquirers to knowledgeable sources.

The National Directory of Corrections Construction

This volume provides the same wealth of information as the data base, but in book format. It includes selected information for each facility in a two-page profile that includes floorplans. A third edition is in production.

Construction Bulletins

These publications highlight corrections issues and provide case studies of selected construction projects that demonstrate new building techniques and financing methods that save time and money.

How To Participate in the Construction Information Exchange

Call or write for a survey form. A specialist will help make your project part of the construction data base (projects must have been completed since 1985 and be operational).

Getting More Information

For more information, or to submit information for inclusion in the Exchange, contact:

Construction Information Exchange
National Institute of Justice/NCJRS
Box 6000, Rockville, MD 20850
Telephone: 800–851–3420