

# developing a sustainable rating system for justice

november 4, 2011

# acknowledgements

academy of architecture for justice aaj sustainable justice committee writers/ editor/ reviewers graphics wizards justice partners





# AIA Academy of Architecture for Justice SUSTAINABLEJUSTICE2030: Green Guide to Justice

# sustainable justice

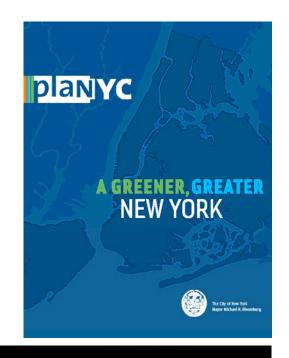
- Environment, Economy, Equity
- Sustainable system/ building/ operations
- Green Guide to Justice/ LEED-J
- Community impact





# our goals

- define a vision for a Sustainable 2030 justice system
- refine with our Justice Partners
- present to the US Council of Mayors, USGBC, National Association of Counties
- endorsement by Justice Partners
- policy by Local, State, National Government







# progress

#### Sustainable Justice Workshops -AAJ Conference

San Francisco 2008

Chicago 2009

Los Angeles 2011

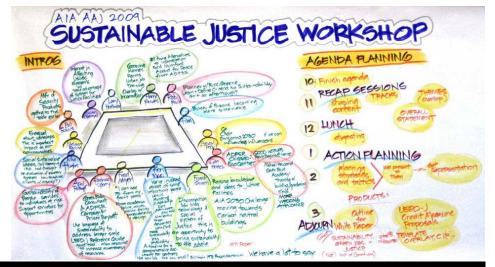
#### Sustainable Justice presentation -AIA Convention

Miami 2010

New Orleans 2011

Green Guide to Justice

Fall 2010

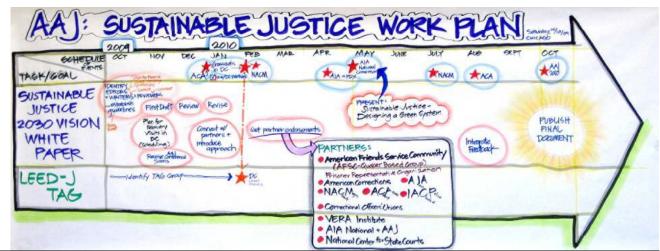






# next steps

- promulgate Green Guide to Justice
- seek endorsement from Justice Partners
- dialogue with USGBC and define LEED-J
- your Local government!







# agenda

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law enforcement Beverly Prior, FAIA

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A new role for buildings and administrative operations as the population paradigm shifts

Justice facilities are uniquely functionally co-dependent upon changing demographics and outside influencers.

Changes occurring in one component of the system have a reciprocal impact on other components within the justice system.

The desired outcome is a plan, a design, and an operation that satisfies evolving needs of many stakeholders.







Early analysis establishes need

Evolving populations affect bed counts

What happens when counts are off?

What is the planning, design, and operations response?





#### AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

	Broad Category	Specific Issue	Metric	References	Examples	
1	Define population Plan for evolving populations management approach		Reimagining/repurposing from within — "monitoring in-place" with a programmatic action plan that tracks shifts in population  Strategic approach must consider state-wide alignment of goals, information, and process of all major stakeholders — "outside influencers"  Establish range of short and long-term objectives specific to geographic locations: urban vs rural			
2	Community Connection	Siting and access  Lifecycle benefits of successful transition	Community-based Services Center  Operational systems for educational, life skills, so purposeful transition and long-term success for t			
3	Project Definition & Implementation Plan	LEED Certification	Register project with USGBC for LEED Certification Initial LEED workshop and checklist review	n		
4	Design	Integral flexibility	Flexible secure perimeter with functions accessib Smaller or less secure housing units w/ multi-pur supervision without overdesigning spaces, building	pose amenities that support classification and	d operational flexibility / direct	
5	Operations	Re-evaluate population assumptions	Define metrics for population management succe - research to test original assumptions - research follows youth beyond incarceration - recidivism - community success stories - Turn findings into action items	ess:	_	
6	Post-occupancy	Re-evaluate population assumptions	Define metrics for population management succersearch to test original assumptions - research follows youth beyond incarceration - recidivism - community success stories - Turn findings into action items – task teams, probringing info back to planning/design		ors, legislation, training,	



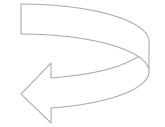


AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

Broad Category Specific Issue Metric

Define population management approach

Plan for evolving populations





#### **Planning Response:**

Reimagining / repurposing from within:

"monitoring in place" with a programmatic action plan that keeps abreast of changes and has actions in place

- Strategic approach for state-wide alignment of goals, information, process of major stakeholders – "outside influencers"
- Establish range of short and long-term objectives specific to geographic locations
- UCJDC examples, PA example, others?





AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

Planning Response

Specific Issue

Metric

Siting and access

Lifecycle benefits of successful transition



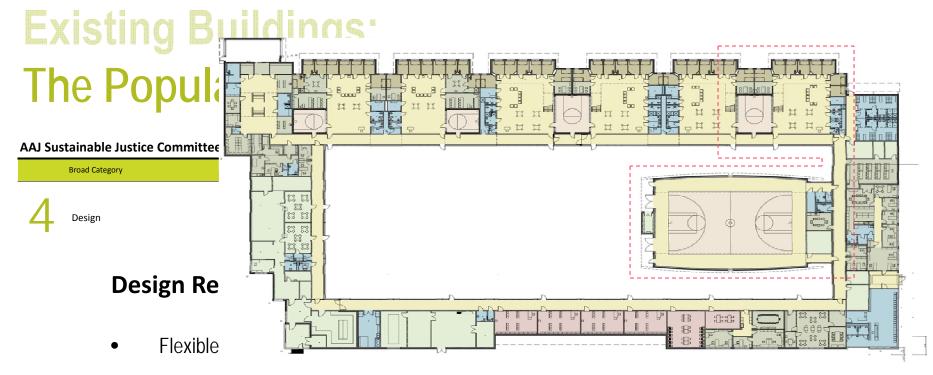
Reimagining/repurposing from within:

"monitoring in place" with a programmatic action plan that keeps abreast of changes and has actions in place

- Community-based Services Center
- Mental health program and other community-based engagement
- Provide communal satellite work environments and multi-purpose space that is usable by justice partners and the community.
- Operational systems: educational, life skills, social skills, and marketable job skills







- Functions accessible from both sides of the secure perimeter to service providers, youth, family, and community
- Enable a shift for specific zones within zones, and schedule flexibility
- Reliant upon automatic control systems as well as human interaction and control





AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

Broad Category

Specific Issue

Administrative Operational Response

Re-evaluate population management success

Metric



- Flexibility in staff culture to manage various populations
  - Staff can be cross trained and introduced to a more service-based culture of preparing for release, stewardship bridging service providers, youth, family, and community
  - Programs "in place" to respond to changing need







AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

Broad Category

Specific Issue

Administrative Operational
Response

Re-evaluate population
management success



#### **Administrative Operational Response**

- How will spaces be used? When? By whom?
- Evening reporting
- Shelter program vs detention center, family access to building (flexible secure perimeter allows increased accessibility)
- Continuity of care for youth & family same advocate for journey through the system & beyond – crossing the age barrier as youth becomes a legal adult

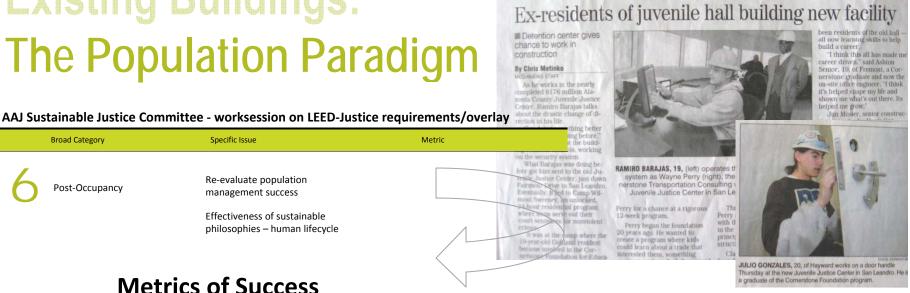




Re-evaluate population

Effectiveness of sustainable philosophies - human lifecycle

management success



#### **Metrics of Success**

Measure effectiveness of sustainable philosophies differently (more than just with lifecycle costs of building systems ---- what are the metrics of system influencers -

- System-wide impacts
- Focusing the transition
- Understanding the success
- Turn findings into action items



**Broad Category** 

Post-Occupancy



# Existing Buildings: Green Concerns & Key Metrics

- Alternative commuting rate
- Energy STAR score
- Plumbing fixture flush & flow rates
- Recycling rate
- Outdoor air ventilation rate











# Key Personnel: Operations v. New Construction

#### **New Construction**

- Owner
- Architect
- M/E/P Engineers
- Task: Design

#### **Operations**

- Owner
- Property Manager
- Chief Engineer
- Task: Preventive Maintenance





# **Existing Building Rating Systems**

LEED	EnergySTAR ENERGYSTAR
Non-profit (USGBC)	Government (EPA)
Whole building (energy, water, materials, healthy building, etc.)	Energy only
Management & performance	Performance only
Fees: \$1,200 + \$0.03/sq.ft. (\$15,000 max.)	free
Available to all Justice building types	Only available to Courts





# Key Criteria: LEED Building Design v. Existing Buildings

#### LEED - BD&C

- Energy Model
- Commissioning
- Verification plan
- Transit Facilities
- Construction Materials & Jobsite Waste

#### LEED - EBOM

- Energy Star (actual consumption)
- Energy Audit / Retro-Commissioning
- Sub-metering (actual use)
- Transportation surveys
- Daily use material consumption & ongoing recycling rate





### Planning for Green O&M

#### Measure it to manage it:

- Electric sub-metering, especially lighting
- Water sub-metering
- Maintenance access to lights, equipment
- Loading dock & waste flow planning
- Landscape design, e.g. plant selection
- Operations manuals
- Involve O&M staff during design







### **O&M Concerns for Justice Buildings**

- Shared facilities access control
- Extended hours of operation 24/7
- Durability







# LEED & Community Metrics status & development



- Where LEED is now:
  - Some community recognition in LEED-ND (e.g. affordable housing)
  - Working group on social equity
- Where LEED is going:
  - No new market sector adaptations until 2013 at earliest
  - Pilot credit process to introduce new ideas







#### LAW ENFORCEMENT

1000	Req or pints	Justice Building Type	Broad Category	Specific Issue	Metric	References	Examples
Pre-R	leq	All	Perform an independent needs assessment	Build only what you need	Needs Assessment Minimum Criteria:  1. Articulate the mission 2. Identify the outcome measures 3. Provide evidence to support the approach 4. Have needs assessment reviewed and commented on and endorsed by a criminal justice stakeholders committee	Need to find example that recommends community policing and community benefits	TBD
Pre-f	eq (	Law Enforce nept	Perform an independent needs assessment	Build only what you need	Assess time period usage of spaces to assess multiples uses for each space.	Show example of conference room use analysis, example of to built into community com	Candidates for reducing space through multiple uses include: - conference rooms - training/EOC /community rooms - shared workstations for 24/7 positions
Point	s	All	Workplace Technology	Build only what you need	Reduce storage requirements through electronic filing, compact storage systems for files and evidence		
Point	S	All	Workplace Technology	Build only what you need	Reduce workstation size through efficient furniture systems		Laptops in report writing, laptops in patrol cars
Point	s	All	Workplace Technology	Build only what you need	Share workstations for those that do shift work		Having dedicated files and chairs
Point	s	All	Regional Resources	Build only what you need	Provide resources to neighboring communities or contract resources to neighboring communities		Regional 911 / Communication Centers; Regional Training Facilities; Crime Labs





#### AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

#### LAW ENFORCEMENT

			Req or Justice Buildir ints Type	Broad Category	Specific Issue	Metric	References	Examples
		oints	All	Community connection	Siting	community access, near other justice system and social service institutions		
		oints	All	Community connection	Community amenities	Provide community serving spaces such as gymnasiums, meeting rooms, co-locating with other community-serving functions		
2		<b>∂oints</b>	Law En orden ent	Community	Community accountability	Provide checks and balances through having a civilian complaint review boards	If we're interested in this one, Raphael will les arch to see if there are guidelines	San Francisco is an example of this
		oints	Law Enforcement	Community connection	Community accountability	Regular review of racial profiling statistics (and corrected actions) for key metrics like traffic stops/ street frisks/ issuing infractions, etc.	CALEA or NACOLE standards adopted	
		oints	Law Enforcement	Community connection	Community outreach	Provide programs and support to communities that support crime prevention, awareness		Neighborhood Safe, Family counseling, Youth Services, School Resource programs, etc.
3		oints	oree	ne: our e use	Green on erations	Reduce use of paper through electronic ililig		
4	4	Points	staf	Human Resource	Stress reduction for staff	Provide a work environment that is conducive to a physical and mental health of the staff	Find a study on law enforcement staff stress and impact on service	Employee break rooms, outdoor break areas, fitness room, lockers, access natural light and air, views to nature





> perform an independent needs assessment

#### pre- justify need to grow, need to change

- requisite! population trends and demographic bubbles
  - ratios of sworn to non-sworn staff per thousand population relative to standard ratios
  - assess existing facilities

#### assess optimal operational approach

- service area study, organizational study
- sharing with other agencies





> perform an independent needs assessment:

credit! assess time periods of space usage to maximize use of each space

(meet 100% of criteria below)

- conference rooms use analysis minimum % planned usage
- shared workstations min. ratio of workstations to staff
- open workstations min. ratio of workstations to offices

#### example:

Community room = training room = EOC = press room





> workplace technology

#### credit! reduce storage area requirements

- electronic records
- compact storage systems for files and evidence

#### credit! reduce workstation size

efficient furniture systems







> regional resources

credit! share resources with other communities (provide to others or contract from others)

- dispatch/911
- emergency operations center
- forensic labs
- medical examiner
- patrol?
- investigations?
- joint operating agreements?







#### > siting

credit! locate near population centers
within 1 mile of central business
district

credit! locate near other civic and/or justice functions
within ¼ mile of other civic and justice

**functions** 







#### > community amenities

# credit! provide community-serving spaces

- community-access meeting rooms
- fitness room accessible to all agency staff
- co-locate with other community-serving functions







> community outreach

credit! support communities in crime prevention and awareness programs (evidence by # of programs)

- neighborhood safe
- family counseling
- youth services
- school resource programs
- gang prevention
- community service centers







#### > accountability:

pre- perform regular review of racial profiling and statistics requisite?

#### credit! achieve credentialing through CALEA or NACOLE

The Commission on Accreditation for Law Enforcement Agencies

- JV of law enforcement executive associations IACP, NSA, PERF, and NOBLE
- Requires comprehensive, uniform set of written directives
- Provides a continuum of standards that define authority, performance, and responsibilities

The National Association for Civilian Oversight of Law Enforcement

- Network of agencies that oversee Law Enforcement activities from outside the agency
- An outside review body a direct form of community accountability





### 3 green operations

> resource use

prerequisite!

pre- reduce paper usage

• electronic records

credit! reduce trips

 remote records access for public



credit! reduce non-renewable resource use

Use alternative fuel vehicles





# 4 staff support

> staff stress reduction

credit! provide a healthy work environment (minimum # of below)

- employee break rooms
- outdoor break areas
- fitness room
- access to natural light and air
- views to nature











#### AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

	Pre-Req or Points	Justice Building Type	Broad Category	Specific Issue	Metric	References	Examples
1	Pre-Req	All	Perform an independent needs assessment	Build only what you need	Needs Assessment Minimum Criteria:  1. Articulate the <u>mission</u> 2. Identify the <u>outcome measures</u> 3. Provide <u>evidence</u> to support the approach 4. Have needs assessment reviewed and commented on and <u>endorsed</u> by a criminal justice stakeholders committee including law enforcement, prosecutors, defenders, judiciary, probation, detention, corrections, and community representatives	on workload/caseload provided by them. also includes working closely w/reasonably	(1) san mateo county superior court - medium sized in bay area - main facilities in center of san mateo and near center of 2 other towns; (2) kern county superior court - very large county w/variety of facilities in main city (Bakersfield); (3) lake county superior court - new main courthouse in main town; (4) inyo county superior court - recommended to be in county seat (very small); (5) king county washington's unified juvenile and family courts. credit: jay farbstein & associates (JFA)
	Pre-Req	Courthouse	Perform an independent needs assessment	Build only what you need	Provide justification for number and types of judges and courtrooms based on case load analysis.  Assess and develop options that reduce trips, travel time such as alternative jury call systems, video arraignment, electronic filing.  Assess and develop options that reduce square footage such as collegial chambers, community dispositions, alternative document storage systems	see above	see above
2	Points	All	Community connection	Siting	Locate near populations centers with good community access, near other justice system and social service institutions	aoc will consider a variety of locations. if community strongly wants in the center, they will try. also go to more edge locations under some circumstances - and not always with good transport. some of the projects do include social or justice agencies (as opposed to just being close to them). (JFA)	programming and design for: (1) fresno b.f. sisk courthouse; (2) san joaquin - in downtown stockton; (3) porterville - adjacent to town center; (4) san jose - in center, well served by public transport, close to agencies; (5) shasta - in center; (6) yolo - in town center (woodland) (JFA)
3	Points	All	Community connection	Community amenities	Provide community serving spaces such as gymnasiums, meeting rooms, co-locating with other community-serving functions	1	
1	Points	All	Resource use	On-site energy generation	Establish targets for on-site energy generation	how is this different than standard LEED points?	san joaquin superior court uses heat transfer from ground water (JFA)
5	Points	All	Provide a normative environment	Access to natural daylight and views of nature	Provide significant amounts of natural light and views of nature if possible in jury assembly, courtrooms, office spaces, lobby, waiting areas, etc.	study; kaplan, parsons, et al; hartig & evans;	(1) maricopa county superior courthouse; (2) federal building u.s. district courthouse, wheeling, west virginia; (3) east contra costa county courthouse, pittsburg, ca; (4) u.s. courthouse, alpine, tx; (5) haifa courthouse, haifa, israel





- 1 build only what you need: needs assessment
  - 1a. provide justification for number/types of courtrooms
  - 1b. involve all criminal justice stakeholders
  - 1c. assess and develop options that reduce travel
  - 1d. assess and develop options that reduce sf
- 2 community connection : siting colocate other justice system and social service institutions
- 3 community connection: community amenities provide community serving spaces
- 4 resource use: on-site energy generation establish targets
- 5 staff & user support : provide normative environment that reduces stress; enhances environment & health; increases productivity





1 a. provide justification for number/types of

courtrooms

#### example:

- needs assessments are required to determine future needs
- strategies to maximize use of space:
  - judges decoupled from courtrooms
  - flexible operational methodology

(long beach courthouse, long beach ca / aecom)







# 1 b. involve all criminal justice stakeholders

#### example:

• california administrative office of the courts (AOC) - work with a broad committee including courts, AOC, local justice and government and/or public members. the committee stays on thru programming and design all stakeholders have to sign-off on report. (san mateo county superior court, kern county superior court, lake county superior court, inyo county superior court)

(san joaquin superior court - jay farbstein & associates and nbbj)







1 C. assess and develop options that reduce travel

#### examples:

- video arraignment
- alternative jury call systems
- electronic filing
- colocation of related services and agencies
- online payments







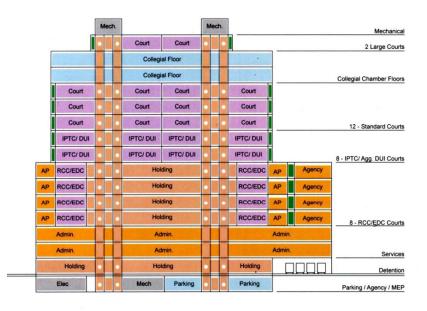


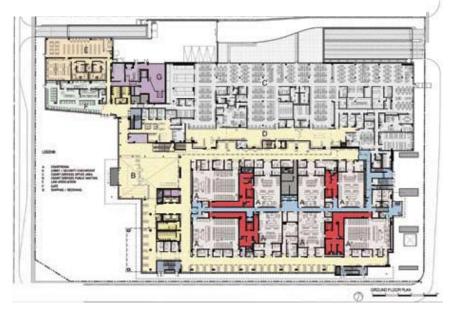
# 1 d. assess and develop options that reduce sf

#### example:

• schedule courtrooms for **multiple judges** and design **collegial chambers** to increase utilization of court spaces and reduce the built area.

(top: early programming diagram maricopa county superior court, phoenix, az, gould evans / aecom; bottom: durham consolidated courthouse, oshawa, ontario, wzmh architects)





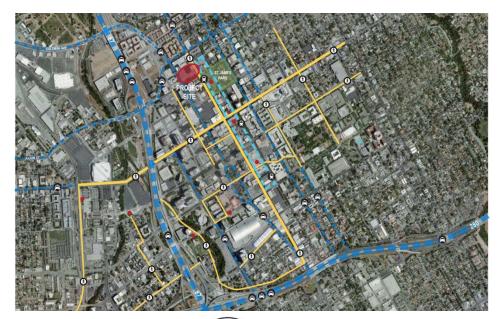


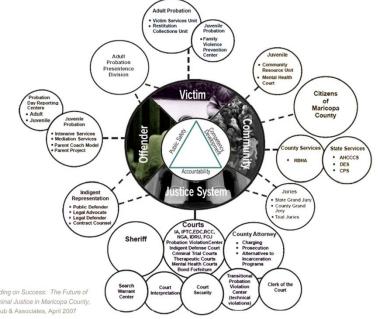


2. locate near centers with good community access, near other justice systems and social services

#### example:

- locate in **convenient locations** with **easy access** to public transportation, downtown districts, services and civic centers; **consolidate** facilities (santa clara county family justice center, san jose, ca/ jay farbstein & associates and smithgroup)
- locate close to other justice facilities – law enforcement, detention facilities, social services (early maricopa county court diagram, straub & associates)







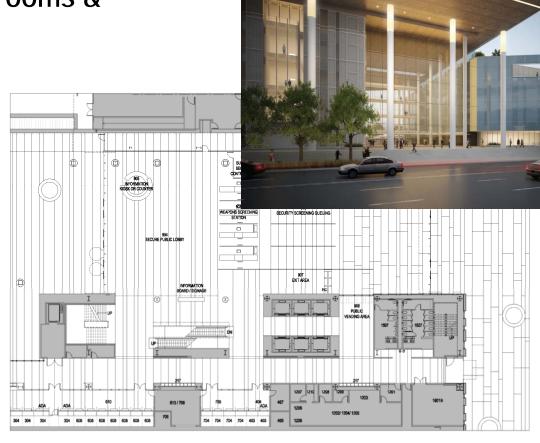


3. provide community spaces such as meeting rooms & gymnasiums

#### example:

- plan exterior spaces to serve as civic outdoor spaces
- •allow jury assembly rooms or other assembly spaces to be used in off-hours for community uses

(long beach courthouse, long beach ca / aecom)







4 .establish targets for on-site energy generation

#### example:

- analyze available site energy possibilities: integrate photovoltaic panels into parking lot covers; investigate wind and thermal options
- plan passive strategies such as optimizing the building envelope and passive solar strategies

(court of justice of the european union, luxembourg, dominique perrault – kyocera solar modules – 400 kw)







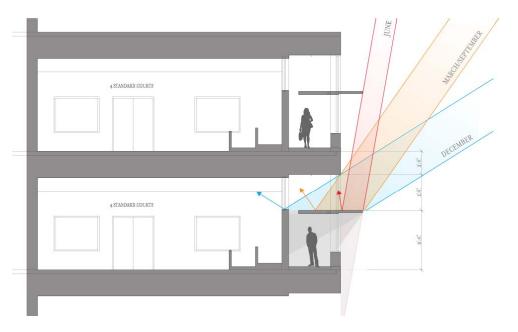


5. provide access to natural daylight & views of nature in waiting, jury assembly, courtrooms, lobby, etc.

#### example:

- courtrooms organized to allow for daylighting opportunities above the jury
- light shelves bring borrowed light into courtrooms while shading the window openings below

(maricopa county superior court, phoenix, az gould evans / aecom)











#### AAJ Sustainable Justice Committee - worksession on LEED-Justice requirements/overlay

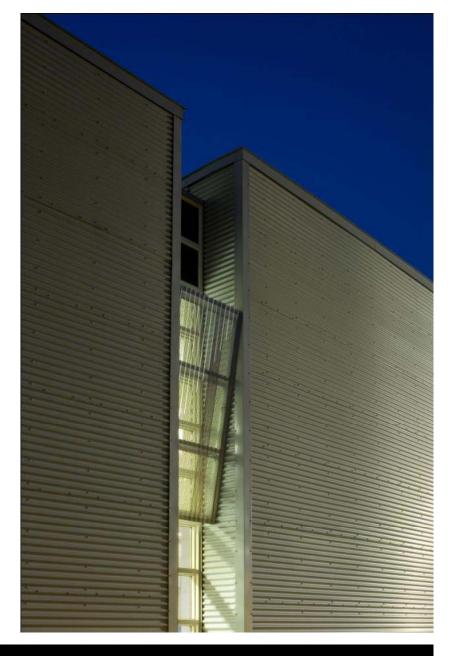
	Broad Category	Specific Issue	Metric	References	Examples
1	Needs Assessment	A systems approach to sustainable design	<ol> <li>"How small rather than how large should we build our new jail?"</li> <li>Commit to sustainable initiatives.</li> <li>Site Selection</li> </ol>		
2	Program Development	Develop Sustainability Goals	Identify programs to support sustainable initiatives, Identify operational and space needs for sustainable programs, Goals for physical plant, Site Evaluation		
3	Project Definition & Implementation Plan	LEED Certification	Register project with USGBC for LEED Certification Initial LEED workshop and checklist review		
4	<b>Design</b> Sustainable Design		Implement sustainable initiatives during design process		
5	Post Occupancy	Successful Community Transition	Successful Re-Entry Continuity of principles		





# 1. A systems approach to sustainable design

A systems approach to sustainable design goes beyond LEED.
Sustainability is fostered by changes to the justice system as well as building design







1 a. Fewer admissions
Shorter lengths of stay
Fewer beds

BASELINE BEDSPACE REQUIREMENT 90 BEDS



JUVENILE JUSTICE SYSTEM IMPROVEMENTS
SAVES 15 BEDS



NEW JUVENILE DETENTION CENTER 75 BEDS (17% reduction)





### 1 . Good neighbor

- Site integration into community
- Provide Community space
- Detention centers that communities want

- Not NIMBY but YIMBY
- Building perimeter as secure perimeter-no fence









# 2a. Identify programs to support sustainable initiatives

- Implement standardized intake process
- Control inappropriate admissions
- Expand alternatives to secure detention
- Timely transfers







# 2b. Establish goals for physical plant

- Daylight reduces energy consumption
- Daylight reduces stress
- Daylight lifts spirits
- Positive staff attitude
- Environment conducive to behavioral change



Sunlight on the floor





#### 2C. Site Evaluation

- Jail next to courthouse allows easy movement of prisoners
- Reduces number of vehicle trips
- Closer to public transportation
- Allows for re-use of old jail









## 3. Project Definition & Implementation Plan

- Register project with USGBC for LEED Certification
- Initial LEED workshop and checklist review
- Budget allocation for sustainable measures





# 4. Implement sustainable initiatives during design process

- Select building systems and materials
- Daylight and views into the dayroom
- Vibrant colors
- Excellent sightlines
- Climate control
- Acoustic dampening
- LEED Checklist and follow-up workshop
- Lifecycle cost analysis and Energy Models





#### 4. Normative environment

- Normative interior finishes: carpet, wood, color
- Sunlight
- Acoustics





# 4. Direct supervision

- Fewer jail incident reports (assaults, thefts, etc)
- Clear sight-lines
- Reduce staff absenteeism
- Improve staff retention
- Increase service agency and family visitation











#### 4. Reduce resource consumption

- Construction aligns with security level
- Fewer toilets/doors/locks
- Sightlines vs cameras
- Building enclosure is secure perimeter





## 5. Successful re-entry

- Education
- Green jobs

- Treatment
- Reduce recidivism





### 5. Continuity of principles

- All criminal justice stakeholders committed to change
- "Right-sizing" the jail a universal priority
- System changes continued in new jail operations





### 5. Continuity of principles

- A new attitude across US towards high cost of prison operations
  - Washington DOC and Evergreen State College -- "Sustainable Prisons Project"
    - Green collar education and training
    - Sustainable prison operations
    - Scientific research and conservation
  - Ohio Green Prison Project











# what can architects do?

- share Green Guide to Justice with clients
- encourage evidence-based Best Practices
- communicate a Vision
- get active in AAJ
  - starting this Saturday!
- share your Knowledge

