



WILL COUNTY JUSTICE CENTER | **JOLIET, IL**

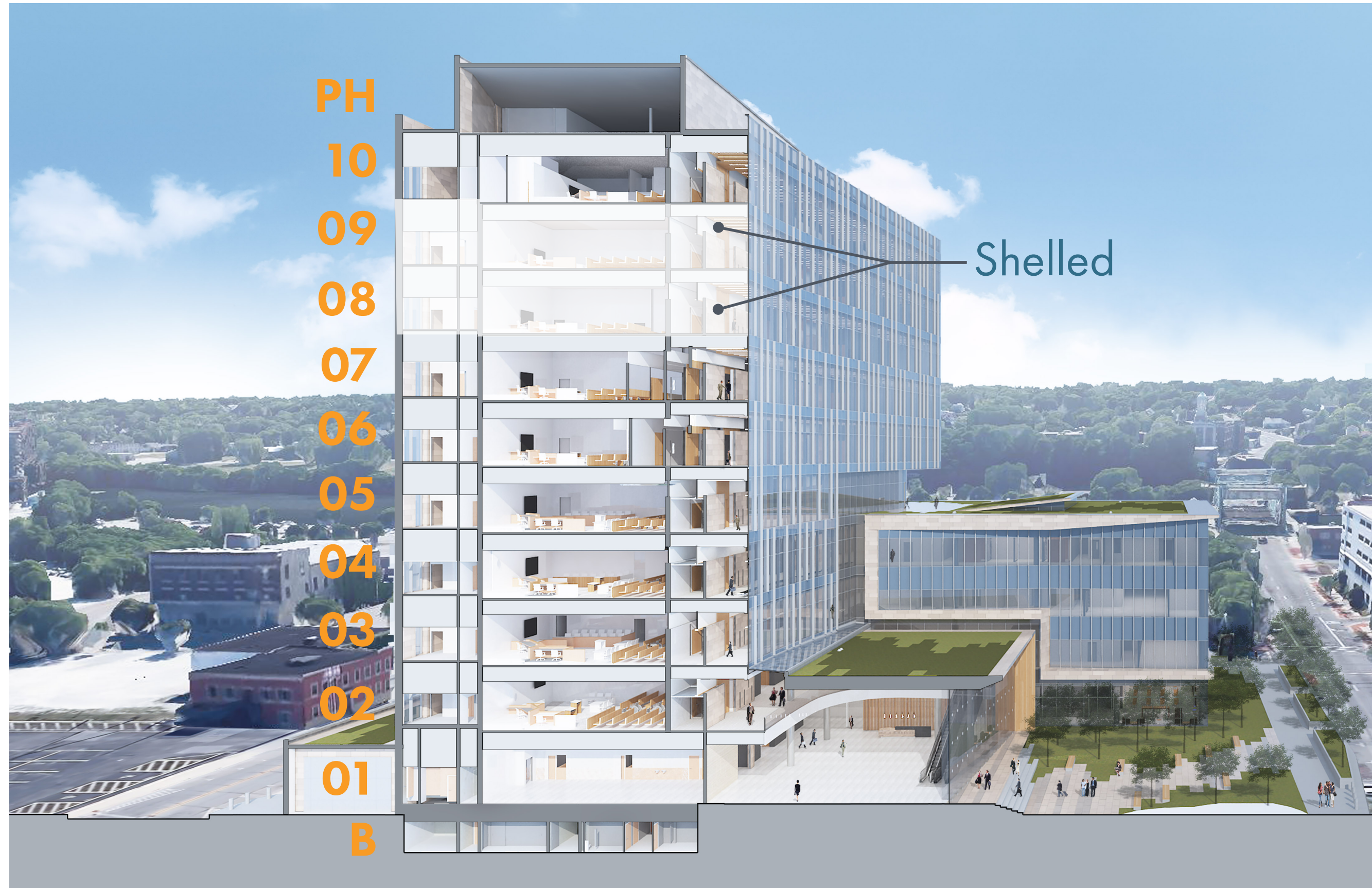
SCHEMATIC DESIGN PRESENTATION

09.20.2016

Component	10-Story Option	
	Total DGSF	Staff
1. Courtrooms	119,274	0
1A. Criminal and Traffic Courtrooms	63,309	0
1B. Basic Traffic Courtroom	4,729	0
1C. Civil Courtrooms	29,492	0
1D. Family Courtrooms	21,745	0
2. Judicial Chambers	22,127	44
2A. Judicial Chambers - Criminal and Traffic	11,219	22
2B. Judicial Chambers - Civil	5,454	11
2C. Judicial Chambers - Family	5,454	11
3. Circuit Court Clerk	28,496	176
3A. Circuit Court Clerk Executive Office	1,318	5
3B. Criminal and Traffic Divisions	6,156	56
3C. Civil and Family Divisions	3,297	33
3D. Customer Service and Finance Divisions	8,100	50
3E. Circuit Court Clerk Support	9,626	32
4. Chief Judge and Court Administration	2,919	9
5. Alternate Dispute Resolution	3,024	4
6. Jury Commission	9,308	8
7. Grand Jury	2,829	0
8. Law Library / Self-Help Center	3,409	8
9. Court Support	10,948	81
9A. Shared Staff Conference Rooms	1,938	0
9B. Court Reporters, Bailiffs and Interpreters	5,704	81
9C. Other Court Support	2,225	0
9D. Orders of Protection	1,081	5

Component	10-Story Option	
	Total DGSF	Staff
10. Sheriff's Office	21,617	53
10A. Vehicular Sallyport	4,208	0
10B. Central Holding Security Control	581	0
10C. Secure Holding	14,176	20
10D. Civil Process - NOT IN BUILDING	0	0
10E. Sheriff's Administration - NOT IN BUILDING (Sheriff's)	0	0
10F. Courthouse Staff Support	1,917	33
10G. Courthouse Security Control Room	736	0
11. State Attorney's Office	1,814	9
11A. State Attorney's Office		
11B. Drug / Mental Health / Veteran's / Adult Redeploy C	0	9
11 State Attorney's Courthouse Office Space	1,814	0
12. Public Defender	1,607	1
12A. Public Defender's Office		
12 Public Defender's Courthouse Office Space	1,607	1
13. Adult Probation	3,787	7
13A. Adult Probation		
13B. Probation Courthouse Office Space	3,787	7
14. Building Support	21,915	13
14A. Facility Services	5,413	13
14B. Shared Building Support	16,503	0
14C. Building Parking	0	0
Total Departmental Gross Area (DGSF)	253,072	413
Building Gross Factor	116,583	47%
TOTAL BUILDING GROSS SQUARE FEET	369,655	





Site Plan - Ground Level

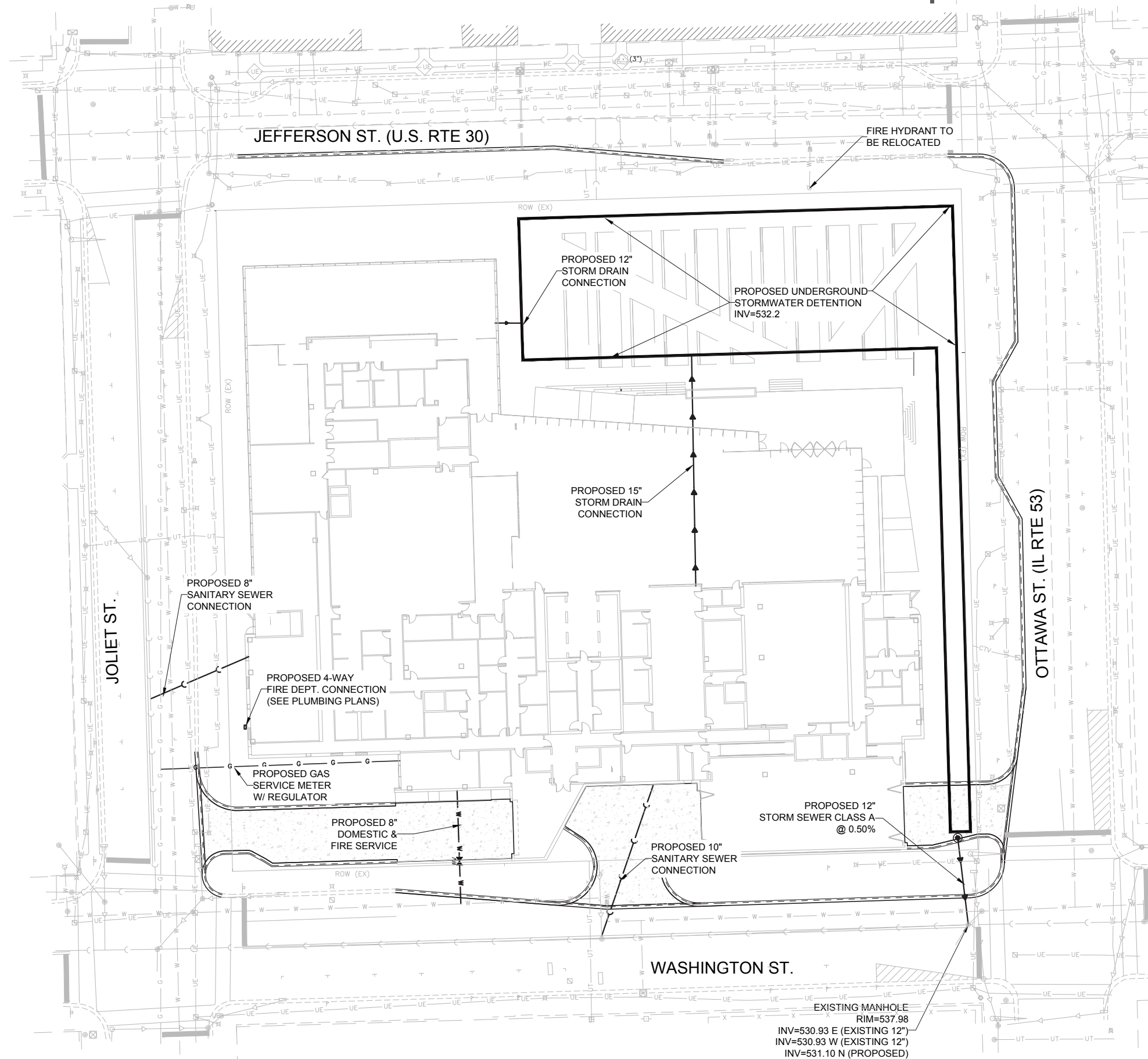


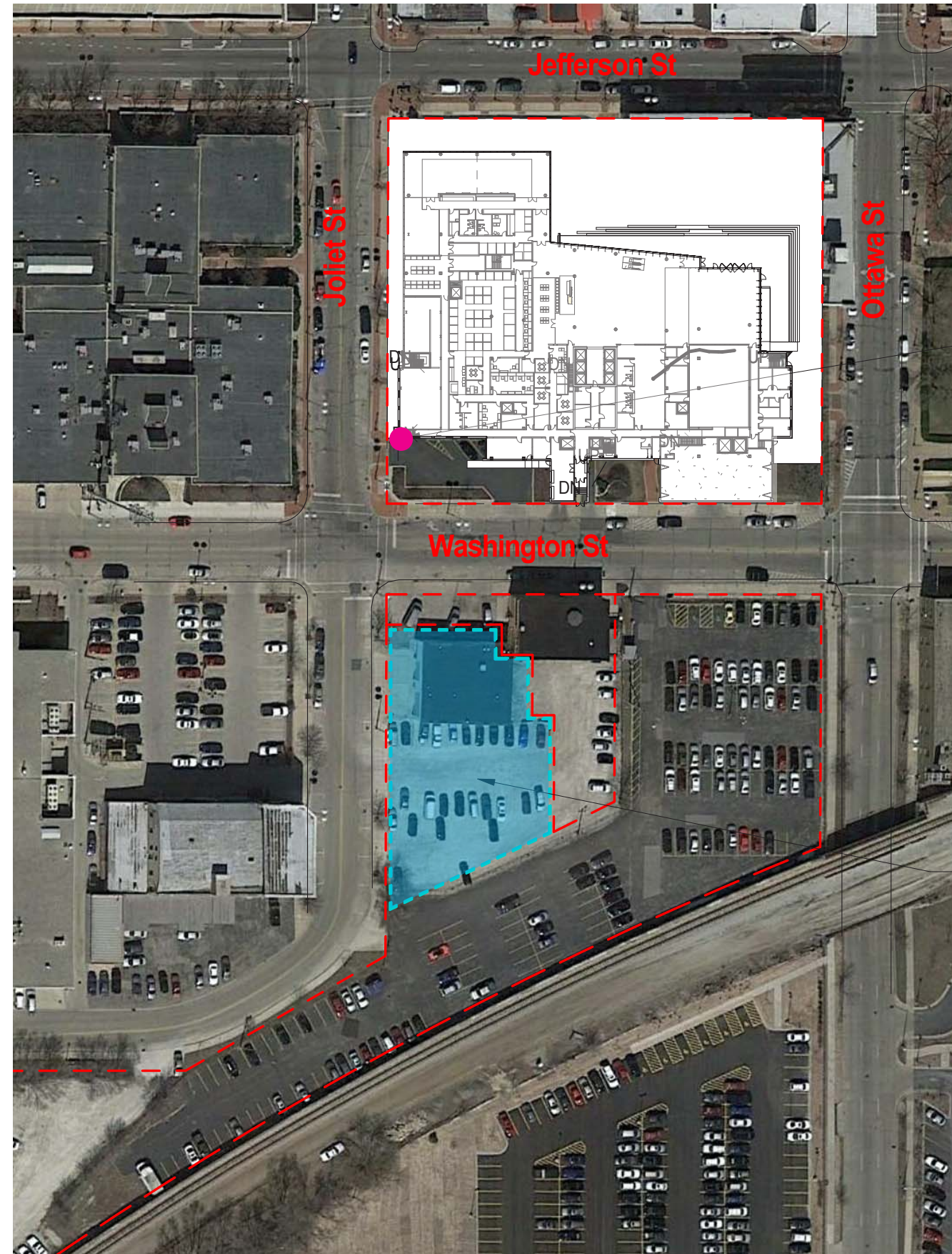
Callout Legend - Ground Level

- ① Precast Concrete Monumental Stair
(18" tread | 6" riser)
- ② ADA Access
(5% slope or less)
- ③ Stainless Steel Handrail
(34"-38" height)
- ④ Monument Sign Location
(sign attached to plinth wall)
- ⑤ Precast Concrete and Wood Seat Walls
(various lengths from 12' - 24' length x 18 inch height)
- ⑦ Precast Concrete Unit Pavers
(bituminous setting bed over structural concrete base)
- ⑧ Landscape Beds
(perennial groundcover, grasses, forbs, shrubs and trees)
- ⑨ Modular Precast Concrete Infiltration Trench
(public right-of-way)
- ⑩ Stainless Steel Security Bollard
(30"-36" height w/ 6" max diameter)
- ⑪ Green Wall
(Greenscreen™ or approved equal)
- ⑫ Brick Paver Banding
(public right-of-way; per Joliet city standards)
- ⑬ Standard Concrete Sidewalk
(public right-of-way; per Joliet city standards)



Site | Utilities & Detention





Secured Building Entry

Secured Parking Location

LEVEL 01



Wight



WILL COUNTY JUSTICE CENTER | JOLIET, IL

Building Organization | Floor Plans



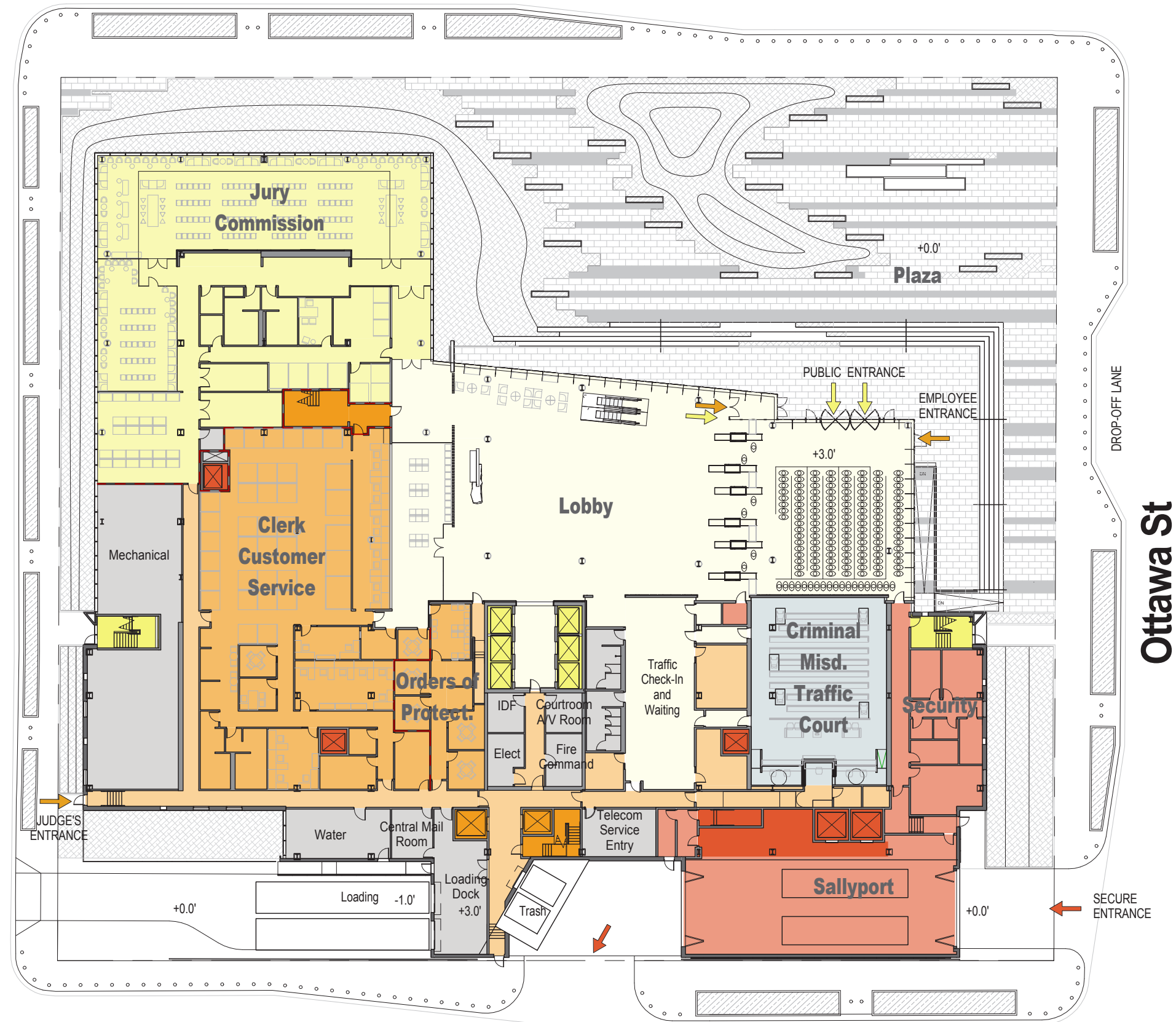
LEVEL B



Building Organization | Floor Plans

Jefferson St

Joliet St



Ottawa St

- PH
- 10
- 09
- 08
- 07
- 06
- 05
- 04
- 03
- 02
- 01
- B



Washington St



Building Organization | Floor Plans



PH

10

09

08

07

06

05

04

03

02

01

B

LEVEL 02



Building Organization | Floor Plans



PH

10

09

08

07

06

05

04

03

02

01

B

LEVEL 03



Building Organization | Floor Plans



PH

10

09

08

07

06

05

04

03

02

01

B

LEVEL 04



WILL COUNTY JUSTICE CENTER | JOLIET, IL

Schematic Design Presentation
09.20.2016

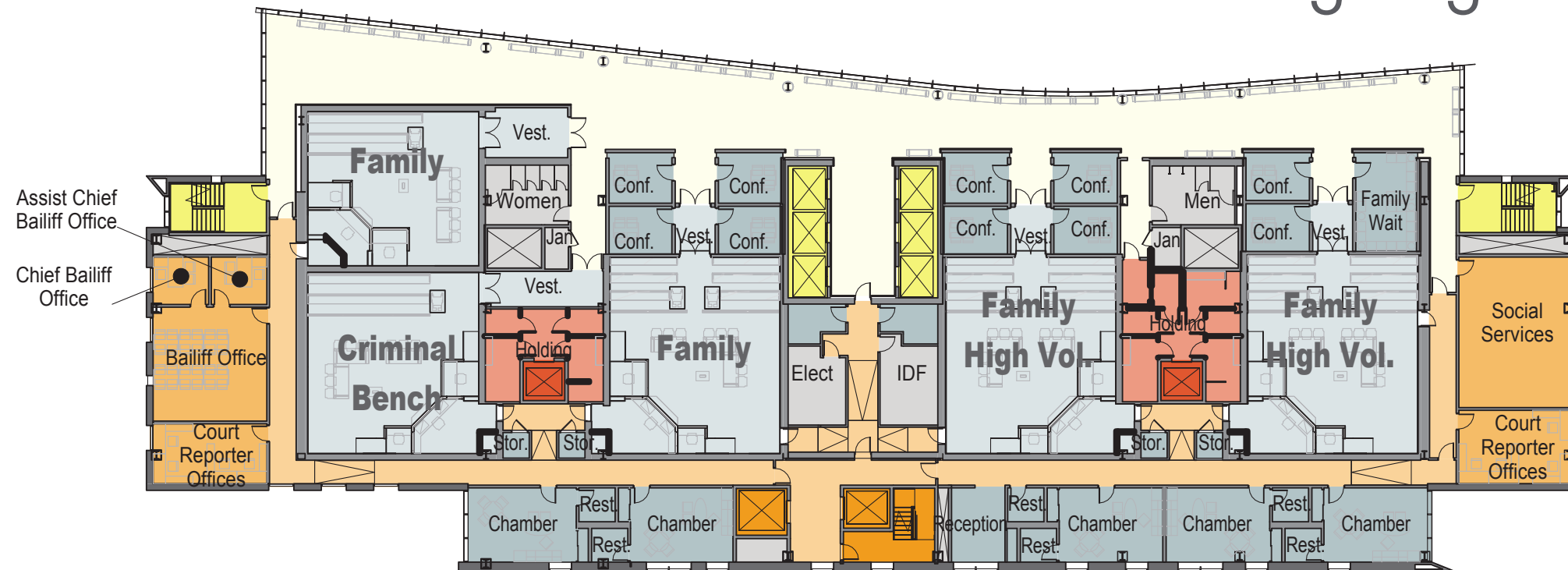
Building Organization | Floor Plans



LEVEL 05



Building Organization | Floor Plans



LEVEL 07



PH

10

09

08

07

06

05

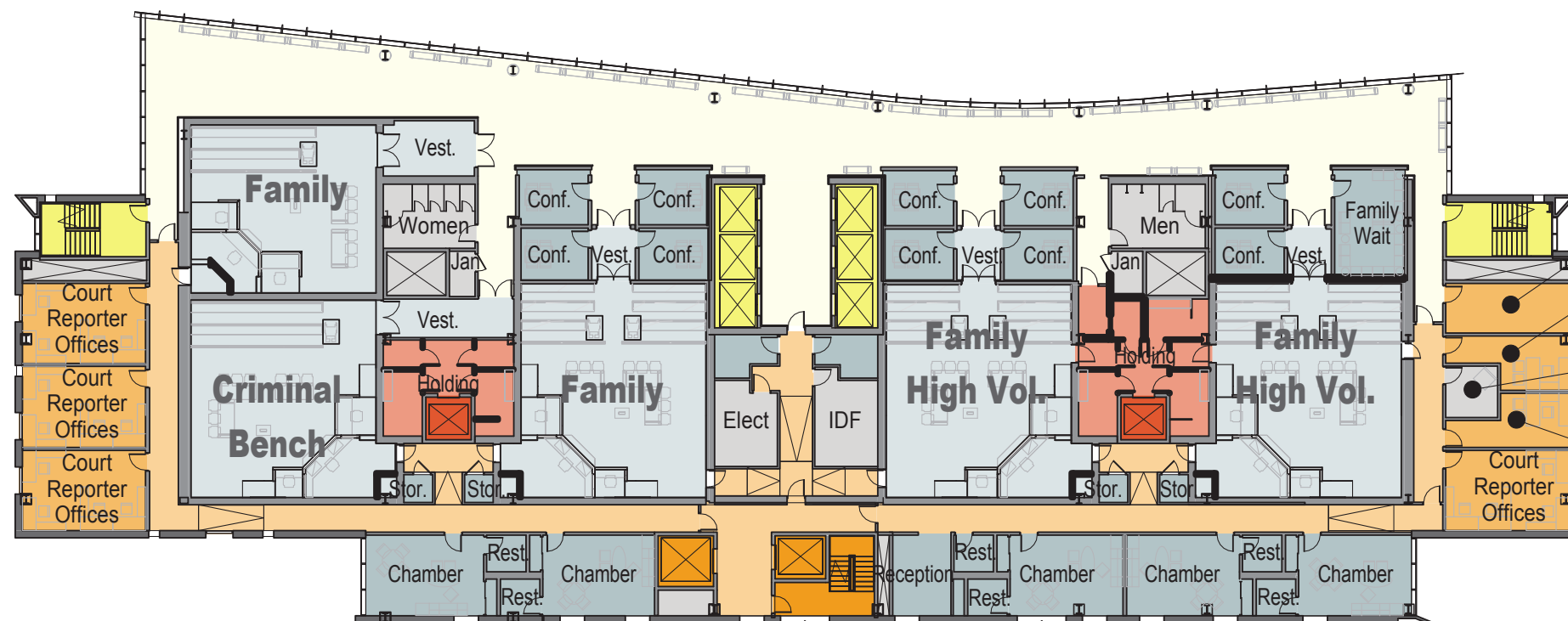
04

03

02

01

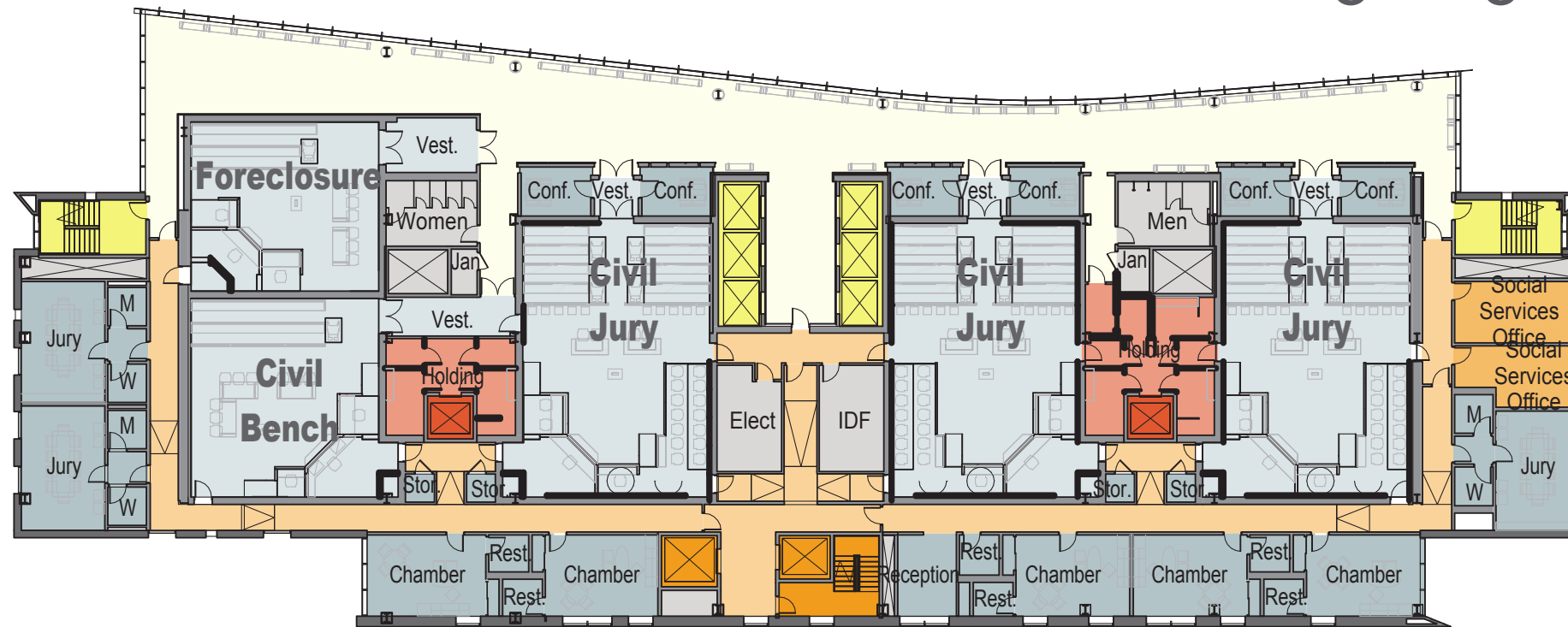
B



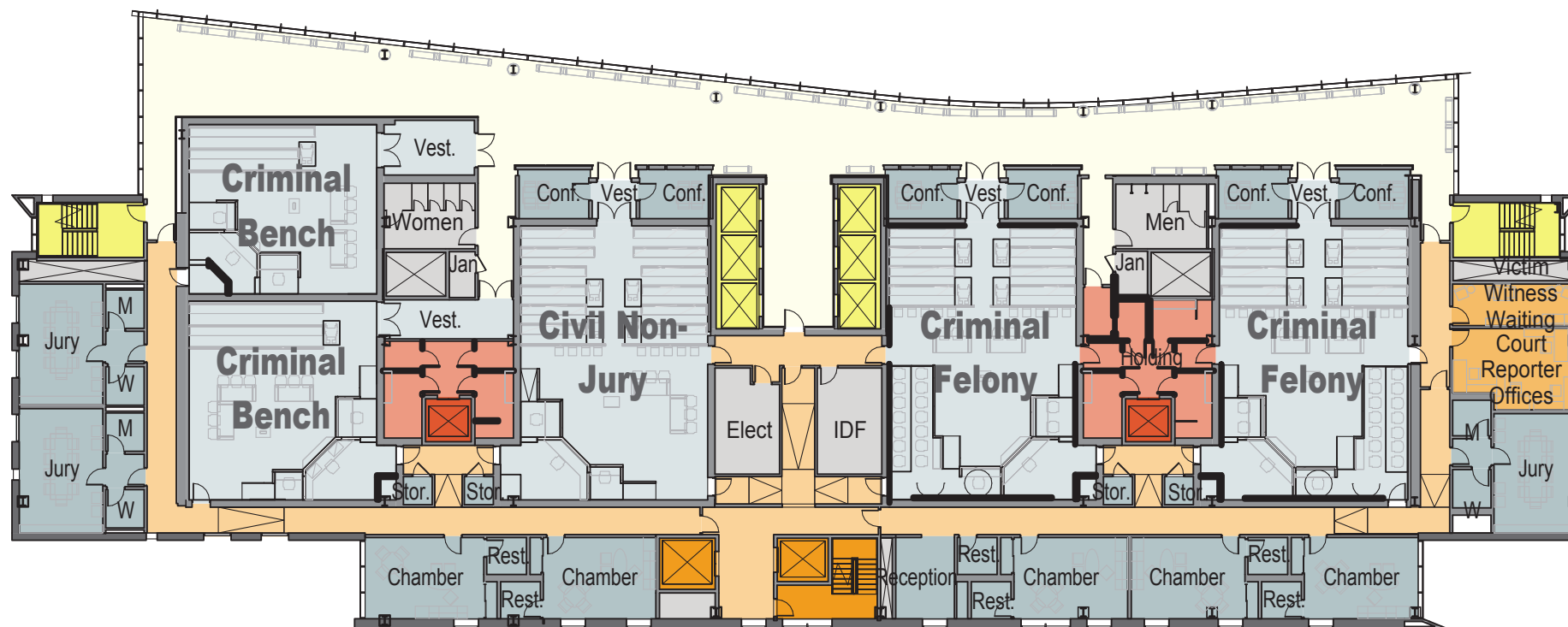
LEVEL 06



Building Organization | Floor Plans



LEVEL 09



LEVEL 08



PH



10



09



08



07



06



05



04



03



02



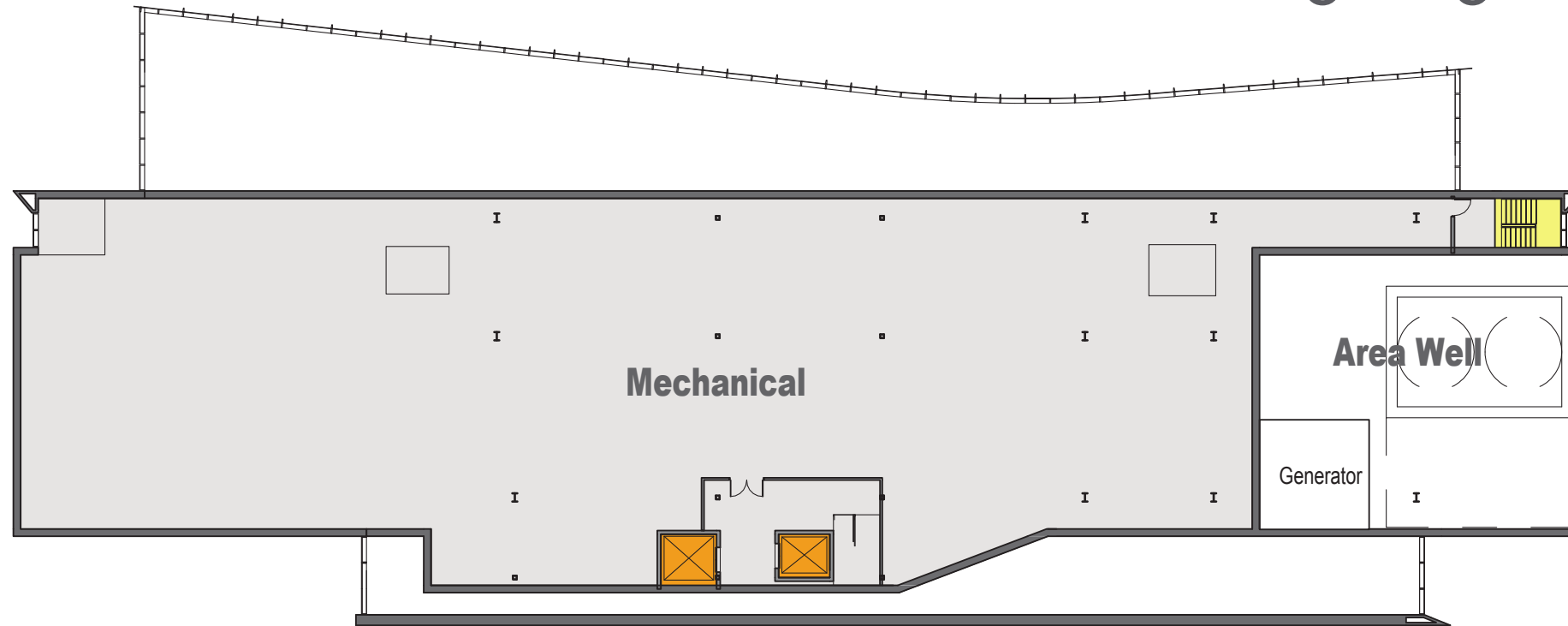
01



B



Building Organization | Floor Plans



LEVEL PH



PH



10



09



08



07



06



05



04



03



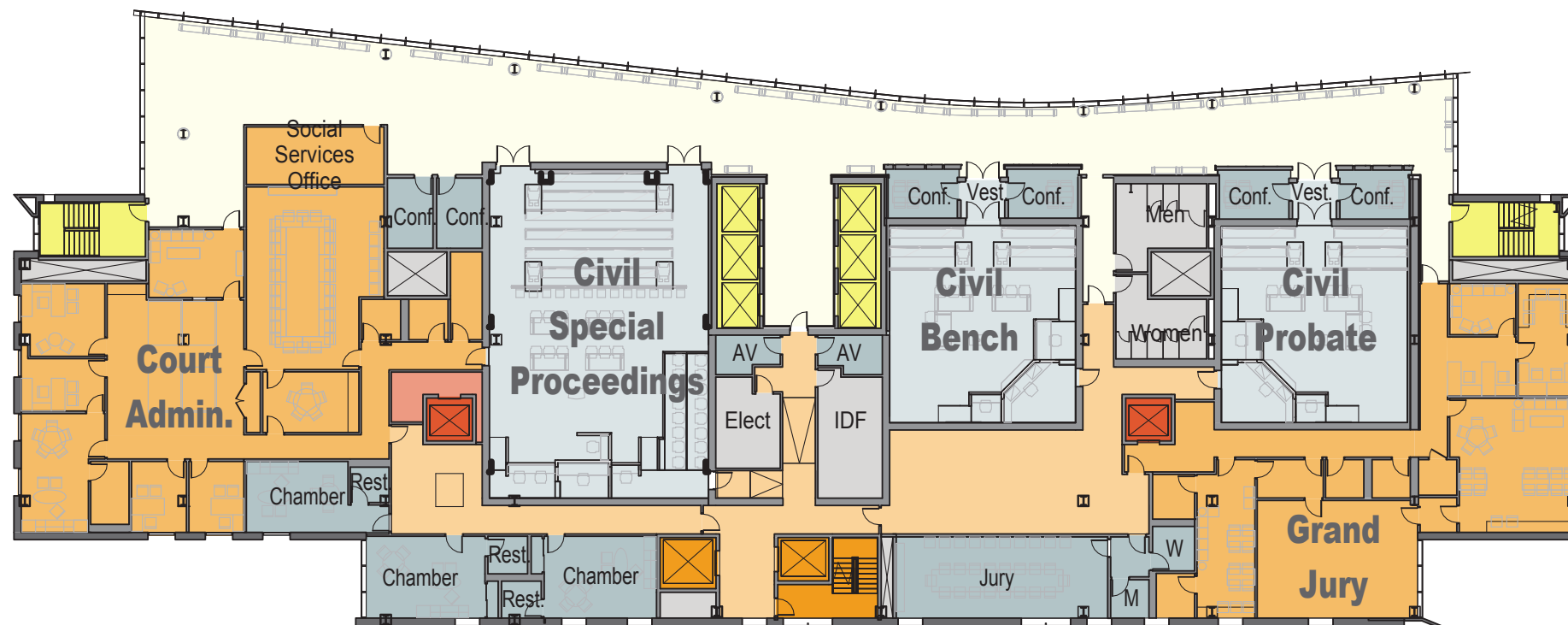
02



01



B



LEVEL 10



Courtroom Summary			
New Courthouse	Current Courthouse	Move-In	Build-Out
Courtrooms by Division	# of Courtrooms	# of Courtrooms	# of Courtrooms
Criminal and Traffic Court	14	16	20
Special Proceedings Courtroom	0	1	1
Felony Courtroom	8	6	8
Criminal Courtroom - High-Volume	1	1	1
Misdemeanor Courtroom	4	4	4
Traffic Courtroom - High-Volume	1	1	1
Specialty Courtroom	0	1	1
Bench Courtroom	0	2	4
Civil Court	2	4	10
Special Proceedings Courtroom	0	1	1
Civil Trial Courtroom	0	0	3
Civil Non-Jury Courtroom - High-Vol.	1	1	1
Chancery Courtroom	0	0	0
Probate Courtroom	0	1	1
Foreclosure Courtroom	0	0	1
Non-Jury Courtroom	1	1	2
Bench Courtroom	0	0	1
Family Court	7	8	8
High-Volume Family Courtroom	2	4	4
Family Courtroom	5	4	4
Total Courtrooms	23	28	38

Courtroom Stacking | Move-In

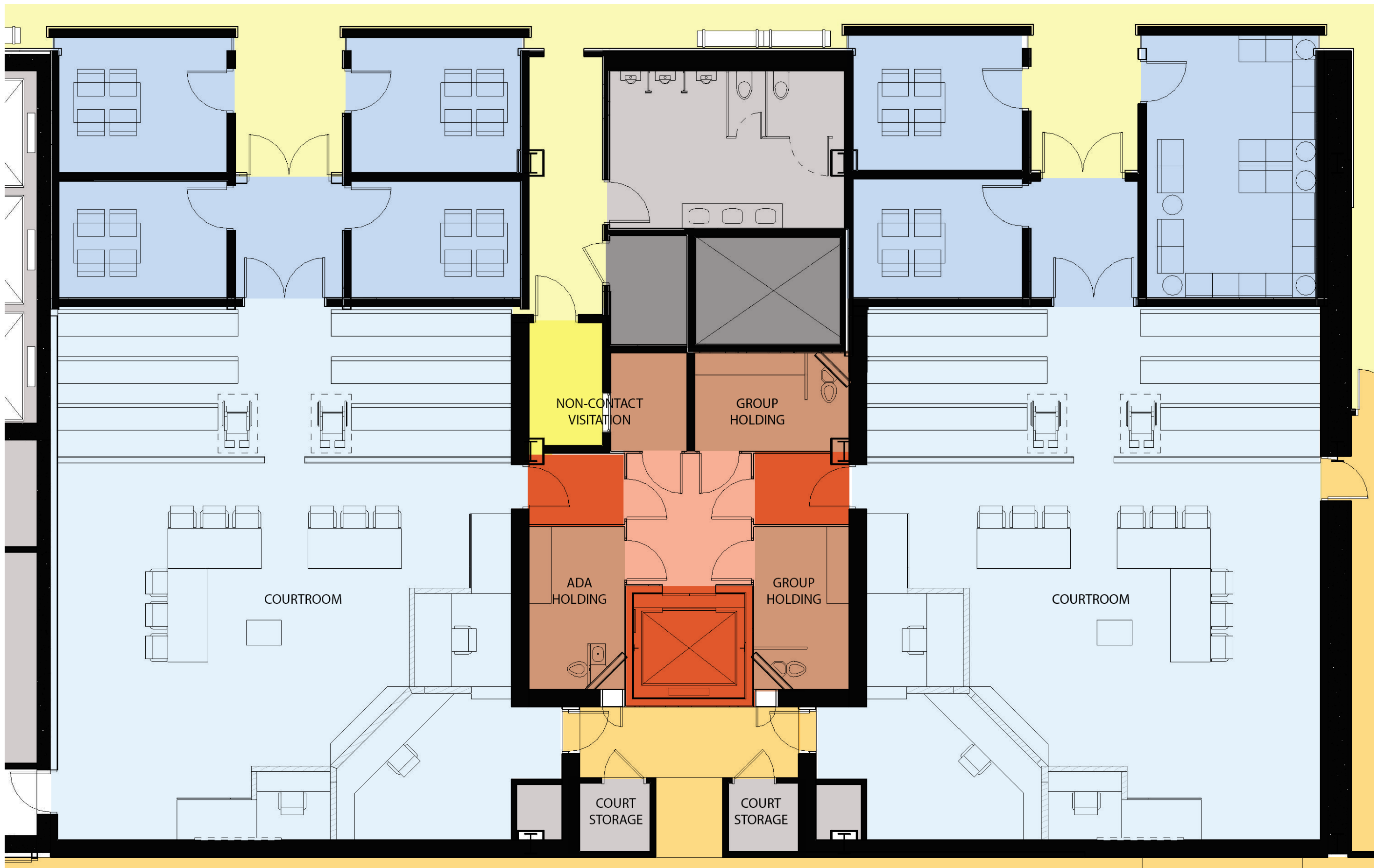
Level	East Support	East		West		West Support		SW Wing	NW Wing	Move-In
10	Grand Jury	Civil Probate	Civil Non-Jury		Civil Special Proceedings	Court Administration				3
9										0
8										0
7	Court Report	Family High Volume	Family High Volume		Family	Crim. Bench	Family		Social Service	5
6	Court Report	Family High Volume	Family High Volume		Family	Crim. Bench	Family		Baliff	5
5	Jury Rooms	Felony	Felony		Felony	Cafeteria				3
4	Jury / Attorney	Felony	Felony		Felony	Criminal Specialty Court	Jury Rooms	Criminal Special Proceedings	PD Shared Conf. ADR	5
3	Jury / Interpreter	Misdemeanor	Misdemeanor		Misdemeanor	Misdemeanor	Jury Rooms	Law Library	Adult Probation	4
2	Conf. / Recording	Civil High Volume-Small Claims	Criminal Misd. High-Volume		Clerk					2
1	Security Office	Misd. Traffic	Traffic Queue		Orders of Protection	Clerk Customer Service			Jury Commission	1
B		Central Holding				Facility Services				28

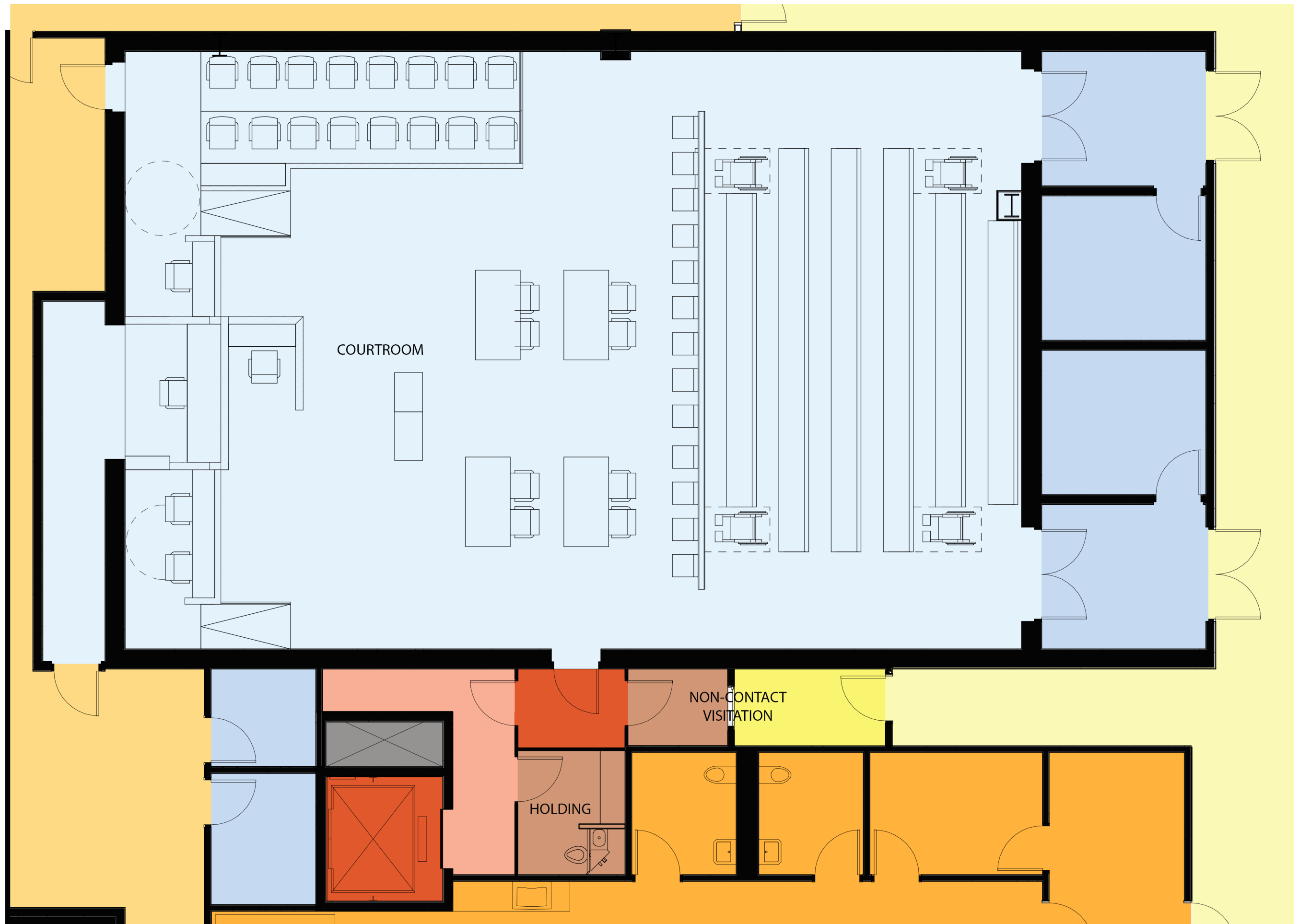


Courtroom Stacking | Build-Out

Level	East Support		East		West		West Support		SW Wing	NW Wing	Future	
10	Grand Jury		Civil Probate	Civil Non-Jury		Civil Special Proceedings	Court Administration				3	
9	Jury / Court Report		Civil Jury	Civil Jury		Civil Jury	Civil Bench	Fore-Closure		Jury Rooms	5	
8	Jury Rooms		Felony	Felony		Civil Non-Jury	Crim. Bench	Crim. Bench		Support	5	
7	Court Report		Family High Volume	Family High Volume		Family	Crim. Bench	Family		Social Service	5	
6	Court Report		Family High Volume	Family High Volume		Family	Crim. Bench	Family		Baliff	5	
5	Jury Rooms		Felony	Felony		Felony	Cafeteria				3	
4	Jury / Attorney		Felony	Felony		Felony	Criminal Specialty Court		Jury Rooms	Criminal Special Proceedings	PD Shared Conf. ADR	5
3	Jury / Interpreter		Misdemeanor	Misdemeanor		Misdemeanor	Misdemeanor		Jury Rooms	Law Library	Adult Probation	4
2	Conf. / Recording		Civil High Volume-Small Claims	Criminal Misd. High-Volume		Clerk						2
1	Security Office		Misd. Traffic	Traffic Queue		Orders of Protection	Clerk Customer Service			Jury Commission		1
B			Central Holding				Facility Services					38













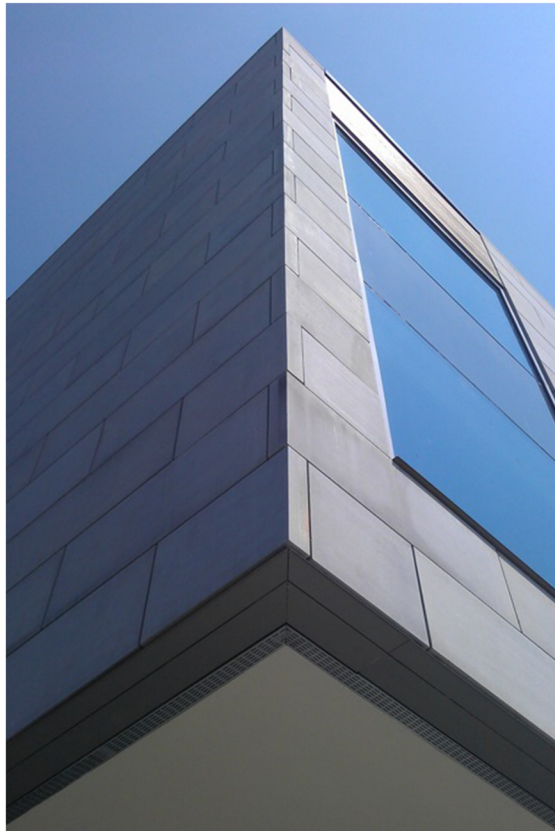
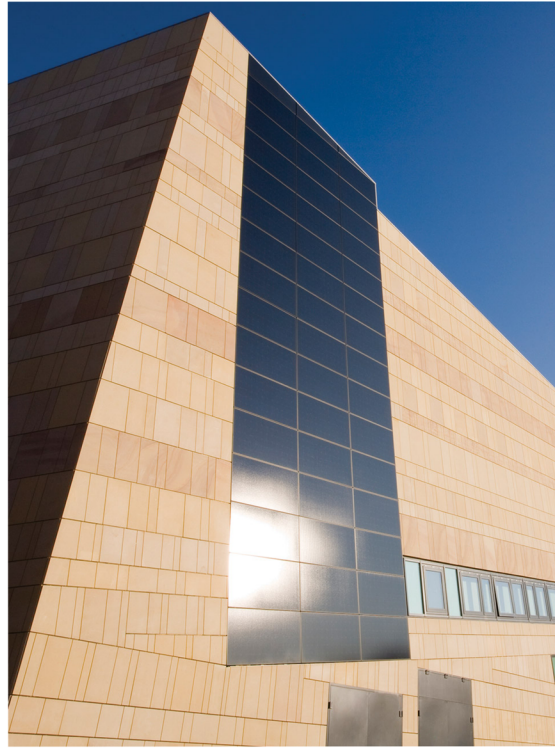
WILL COUNTY JUSTICE CENTER | JOLIET, IL

Schematic Design Presentation
09.20.2016

limestone rainscreen

LIMESTONE RAINSCREEN

Rainscreen systems use thin, lightweight exterior veneer as its primary defense against the weather. A secondary means of defense is with a waterproof membrane within the wall assembly. Joints between cladding panels are left open to allow wind driven rain out by way of guttering and convection.



stacked cast stone veneer

STACKED CAST STONE VENEER

Stacked veneer is a traditional method of building walls where a course of stone bears on the one below. The use of cast stone allows for efficient articulation of the envelope where natural stone is very costly such as reveals, variable angles, and stepped facades.



architectural precast concrete

ARCHITECTURAL PRECAST CONCRETE

Architectural precast concrete panels are large monolithic panels that are cast off site. Articulations, window openings, and textures are part of the cast. This in combination with their large size allow for efficient installation which helps reduce the cost of the envelope.



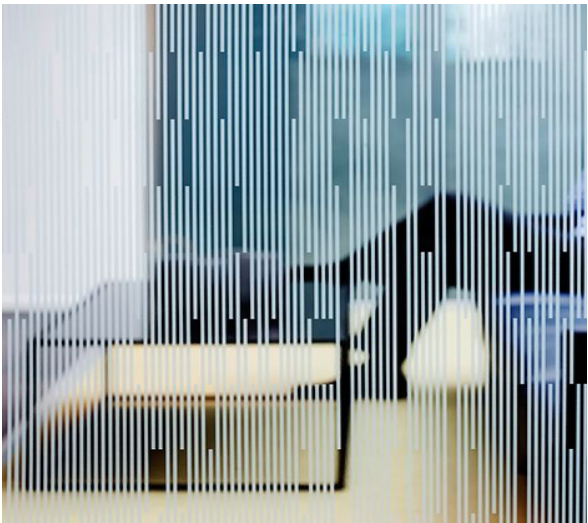
Wight

h+k

WILL COUNTY JUSTICE CENTER | JOLIET, IL

Schematic Design Presentation
09.20.2016

INTERIORS

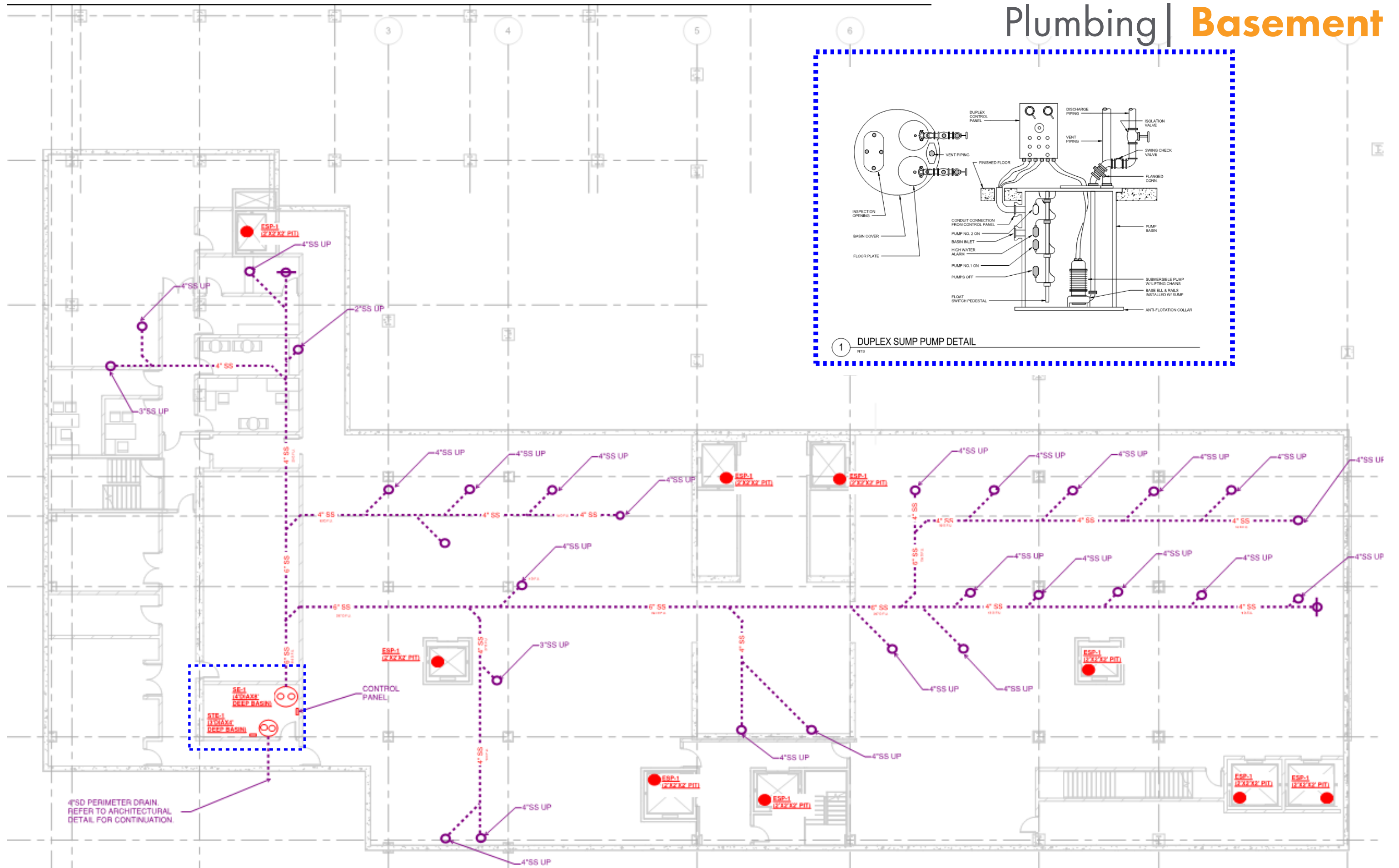




Choosing By Advantages Study of: Concrete vs. Steel										
		Alternative 1			Alternative 2			Alternative 3		
		Steel			Mild Reinforced Cast In Place Concrete			Post Tension Cast In Place Concrete		
Factor: Schedule										
Criteria: Impact of structure on overall schedule		Requires longer lead time, Lead times not critical for this project schedule			Requires shoring/reshoring that restricts access until removed			Requires shoring/reshoring that restricts access until removed		
		Attribute Advantage	schedule preferred by contractor	3	No advantage		1	No Advantage		1
Factor: Market Price Fluctuation										
Criteria: Which system is more susceptible to material cost fluctuations		Historically more volatile market price			Historically less volatile market price			Historically less volatile market price		
		Attribute Advantage	No advantage		more predictable pricing		3	more predictable pricing		3
Factor: Capable contractors										
Criteria: Availability of qualified contractors for bid coverage and construction		Good availability in Chicagoland Area			Good availability in Chicagoland Area			More specialized due to post-tensioning		
		Attribute Advantage	Better Availability	3	No Advantage		2	Fewer Contractors		1
Factor: Future Flexibility										
Criteria: Ease of modification & reinforcement.		Future penetrations and openings are feasible. Reinforcement and modification of structure is straight forward.			Size and location of openings restricted. Structural analysis usually required. Reinforcement is complex.			Size and location of openings restricted. Structural analysis and slab scanning usually required. Reinforcement is complex.		
		Attribute Advantage	Easily modify structure	3	scanning may not be required		2	no advantage		1
Factor: Floor to floor height										
Criteria: Depth of Structure		36" structure w/ voids between beams			20" structure + including drop panels/beams			16" structure + including drop panels/ beams		
		Attribute Advantage	no advantage	1	reduce 16" per floor		2	reduce 20" per floor		3
Factor: Acoustics										
Criteria: Noise transmission and vibration criteria		least mass and damping. Additional steel, concrete or ceilings may be required.			best mass and damping			moderate mass and damping		
		Attribute Advantage	no advantage	1	meets all acoustical		3	meets all acoustical		3
Factor: Column Size										
Criteria: Impact on space planning and layout		small profile and voids for vertical services			moderately large columns required for strength and punching shear			large columns required for strength and punching shear		
		Attribute Advantage	smallest column area	3	no advantage		1	no advantage		1

Choosing By Advantages Study of: Concrete vs. Steel						
	Alternative 1			Alternative 2		
	Steel	Mild Reinforced Cast In Place Concrete		Post Tension Cast In Place Concrete		
Factor: Seismic Loads						
Criteria: Magnitude of seismic lateral loads	Lightest structure		Heaviest structure - ~25% larger lateral system		Moderately heavy structure - ~ 20% larger lateral system	
Attribute Advantage	least seismic loads	3	no advantage	1	no advantage	1
Factor: Foundations						
Criteria: Size of foundation element	Lightest structure		Heaviest Structure		Moderately heavy structure	
Attribute Advantage	Smallest foundations	3	no advantage	1	no advantage	1
Factor: Uplift forces						
Criteria: Additional anchorage required for uplift forces	net uplift in some locations		large dead load resists all uplift forces		large dead load resists all uplift forces	
Attribute Advantage	no advantage	1	no supplemental anchorage required	3	no supplemental anchorage required	3
Factor: Placement of MEP/FP services						
Criteria: Ease of routing and placement of ductwork, piping, conduits, etc.	deep beams and structural depth		flat slab with some shallow beams		flat slab with some drop panels at columns	
Attribute Advantage	no advantage	1	mostly open ceiling sandwich with shallow beam interference	3	mostly open ceiling sandwich and flat structure soffit	3
Factor: Coordination of MEP/FP services						
Criteria:	Sleeves and embedded items can be easily accommodated after the slab pour		sleeves and embedded items must be in place prior to pour		sleeves and embedded items must be in place prior to pour	
Attribute Advantage	minimal coordination prior to pour	3	no advantage	1	no advantage	1
Factor: Slab elevation changes/stepping						
Criteria: Ease of accommodating changes in slab elevation	Framing out elevation changes is straight forward		More difficult to form and loss of slab continuity		More difficult to form and loss of slab continuity. Add'l labor for PT stressing	
Attribute Advantage	minimal impact on cost and schedule	3	no advantage	2	no advantage	1
Factor: Exterior wall attachment						
Criteria:	supplemental steel and slab reinforcement required		Embeds in slab edge can support exterior walls. Beams may be required		Embeds in slab edge can support exterior walls. Beams may be required	
Attribute Advantage	no advantage	1	simplified attachment	3	simplified attachment	3
Total Importance		29	28		26	
Capital Cost		\$50.32 sf	\$56.40 sf		\$51.61 sf	

Plumbing | Basement



Plumbing | Basement Vacuum System

Number: 000
Revision: 00
Description: Basement Sanitary System

Date: 8/17/2016
Champion: Thomas Pickrell
Collaborators: Mark Crawford

Background:

The proposed basement function consist of central holding that is located below the invert elevation of the gravity building sewer and will require mechanical means to discharge sewer from all basement plumbing fixtures. Site conditions have bedrock at an approximately elevation of 530 feet and is located approx. 500 feet from the Des Plaines River. Basement finished floor elevation is at 529'-10". The site is not located in a flood zone or have ground water concerns.

Goal:

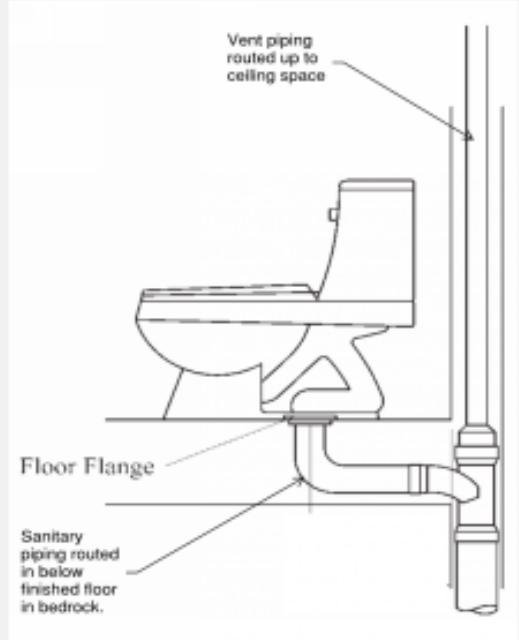
The primary goal is to come up with a basement sanitary system that meet the follow requirements:

- 1. Cost
- 2. Minimal Structural and floor plan impact
- 3. Serviceable
- 4. Security/emergency conditions

Options:

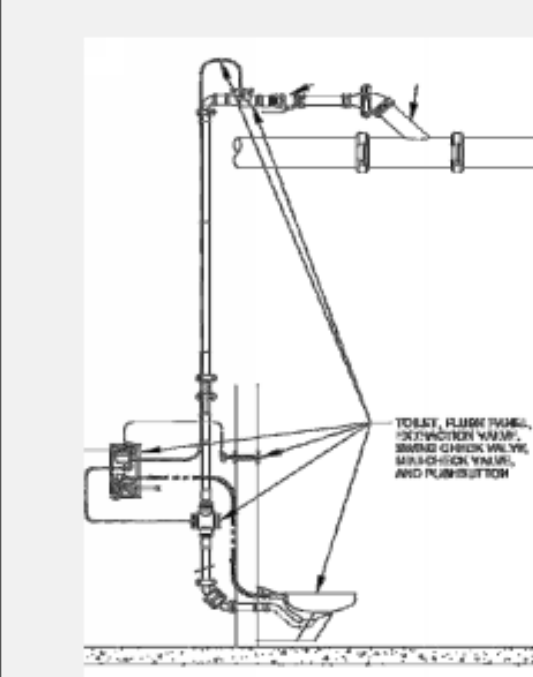
Alternative #1: Gravity system with a sewage ejector

Typical Water Closet detail



Alternative #2: Vacuum System with a sewage ejector

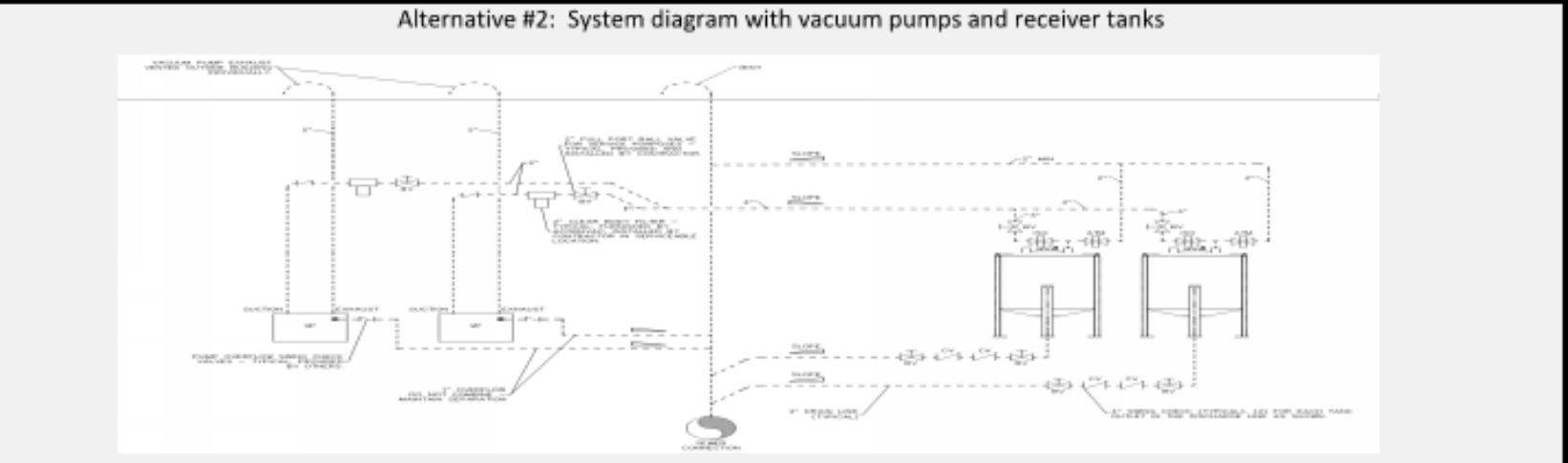
Typical water closet detail



Alternative #3: PVC underground sanitary sewer.

PVC material used in baseline Franklin County project. System has a lowest first cost and highest life span of 40 years. PVC is not allowed per the 2014 Illinois State Plumbing Code and No further analysis provided.

System Diagram:



Analysis:

BASEMENT SANITARY SYSTEM		Alternative 1	Alternate 2
LEGEND Underline Least Preferred Attribute Yellow cell = most important Advantage in Factor Blank = no advantage Circle = paramount advantage		GRAVITY SYSTEM	VACUUM SYSTEM
Factor:	Ceiling space	Requires larger cast iron waste and vent piping routed above ceiling.	Smaller copper sanitary pipe and no vent piping.
Criteria:	Area the system require above the ceiling.		
Factor:	Minimizes floor space	Requires no equipment	Requires 2 vacuum pumps, 1 grinder, and 2 receiver tanks
Criteria:	SF of space for mech room		
Factor:	System Lifecycle cost	Cast iron pipe last approx. 20 years.	Equipment has routine maintenance. Less maintenance calls for plugged drains. Lower flow fixtures, lower water consumption
Criteria:	Includes energy costs, equipment lifecycle replacement costs, maintenance/service costs (including system applicability to desert climate)		
Factor:	System Redundancy/ Reliability	Has no equipment to fail. Piping prone to plug cause system shut downs.	Redundant storage tank and vacuum pumps. Less prone to plug up. Benefit function is each fixture can be isolated.
Criteria:	Reliability of equipment based on equipment type, sizing, and location and equipment redundancy.		
Factor:	System Simplicity to Own and Maintain.	Gravity system - no training needed	Requires additional operating training. Loss/down time of system due to plugs or leaks.
Criteria:	System controllability after contractor leaves. Ability of system to stay tuned during lifespan of project.		
Factor:	Provide for any Future Expansion	Have to cut the slab and trench bed rock. Adds slab penetrations.	Piping routed overhead. Easy to add new fixture.
Criteria:	Ability to Expand to Serve Future fixtures		
Factor:	Constructability	4' deep pipe trenches located in bed rock. Higher cost and takes longer to trench.	Minimum pipe below slab in bedrock.
Criteria:	Ease of Installation		
Factor:	Security/emergency	Prone to be plugged by prisoners when flushing large items.	System can be isolated. Allows for large items to be flushed.
Criteria:	Meet the demands of the security.		
Cost Difference		less secure Base Design	higher security \$125K more

Recommendation:

Due to the critical nature of the basement holding cells we are deferring the decision to the owner. The decision should not be made solely based on cost and needs to take into account prisoner & faculty safety with facility operations.

HVAC | Lobby + Corridors

Will County Justice Center

Number: MEP-

Revision: 0

Description: HVAC System - Lobby & Waiting

Date: 8/17/2016 Rev 0

Champion: D R Hartdegen

Collaborators: N. Pal, M. Crawford, J. Fait, T. Pickrell, D. Sleboda, D. Appello, A. Malhotra

Background:

Franklin County Courthouse (FCC) is the benchmark for the project. The system used in FCC includes central AHU's, chillers, boilers, reheat VAV boxes, and return duct, using air side economizer. The lobby and waiting areas are served by overhead VAV air distribution with hot water radiation at the perimeter glass.

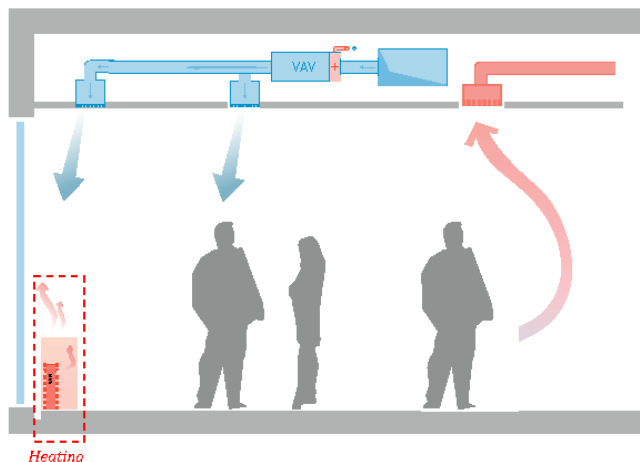
CURRENT STATE: Matching the FCC benchmark systems for the Tower including the Lobby and Waiting Areas on each floor has the following issues:

1. Penthouse for air handling units is not large enough requiring space with additional cost and architectural impact.
2. Tower shaft space for ductwork is not sufficient for air distribution similar to FCC.
3. Radiators at the Lobby along the glass and diffusers in the ceiling significantly impact the architectural goals for the space.

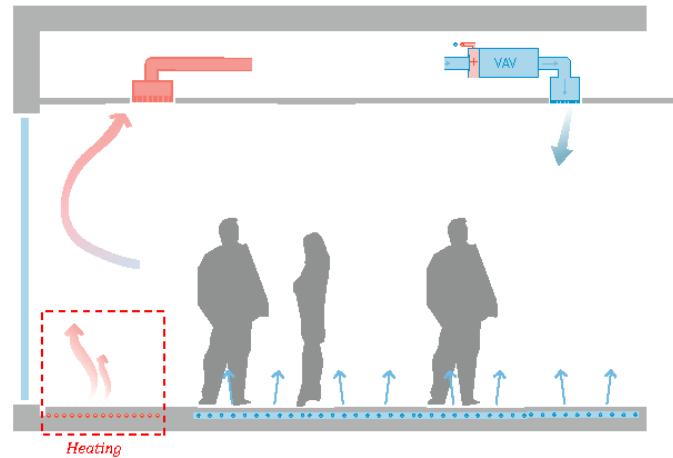
FUTURE STATE: Create an alternate design that will meet resolve the issues above in accordance to the project conditions of satisfaction (project goals).

Alternates:

Alt. 1 - Overhead VAV Air Distribution w/ Baseboard Radiation



Alt. 3 - Radiant Heating & Cooling Floors w/ Overhead Ventilation



Recommendation:

Radiant Heating and Cooling Floors with Overhead Ventilation provide better performance and architectural impact at less cost.

Analysis:

HVAC - Lobby/ Waiting Airside/HVAC		Alternate 1	Alternate 3
LEGEND Underline Least Preferred Attribute Yellowcell = most important Advantage in Factor Blank = no advantage Circle = paramount advantage		Overhead VAV Air Distribution with baseboard radiation (FCC Basis)	Radiant Heating/ Cooling Floors with Overhead Ventilation
ALTERNATE REMARKS 1.		Design Attributes 1. 76,000 CFM supply air and return air 2. 1.5 cfm/sf 3. SA diffusers and RA grilles in ceiling 4. Requires economizer (air or water) in base unit. 5. Minimum SA/ Fresh Air temperature is 55F 6. Energy recovery wheel at rooftop unit.	Design Attributes 1. 36,000 CFM supply air and return air 2. .7 cfm/sf 3. Fresh Air and RA grilles high in wall or ceiling 4. Requires economizer (air or water) in base unit. 5. Minimum SA/ Fresh Air temperature is 55F 6. Energy recovery wheel at rooftop unit.
Factor:	Attribute - Penthouse Mechanical Space.	Increases penthouse requirements for equipment. Very tight	Fills roof/penthouse with equipment.
Criteria:	SF of penthouse space for air handling unit, vertical mech duct/pipes risers including associated clearance space.		
	<i>Advantage:</i>	no advantage	Significant reduction of architectural impact versus alt 1.
Factor:	Attribute - Mechanical Space on occupied floor	FCC VAV distribution does not fit into shafts without additional costs and controls for medium pressure return air. Need space for exhaust riser.	VAV SA + Fresh Air + Exhaust fits, tightly.
Criteria:	SF of space for vertical mech duct/pipes risers and mechanical rooms (This does not include mezzanine mechanical space)		
	<i>Advantage:</i>	no advantage	Fits into shaft including exhaust duct. Tight
Factor:	Attributes - Architectural impact in space.	Ceiling Diffusers and Return Air Grilles. Baseboard Radiation	Ceiling Diffusers and Return Air Grilles for 80 % less airflow.
Criteria:	Architect opinion/acceptance of layout		
	<i>Advantage:</i>	No advantage	Eliminate Baseboard at glass. 50% less airflow supplied with Ceiling diffusers or wall grilles
Factor:	Attributes - Comfort	Cooling - comfortable Heating - comfort acceptable Lobby will stratify with a little higher temperatures on 2nd floor.	Cooling - very comfortable Heating - very comfortable
Criteria:	Comfort in Space		
	<i>Advantage:</i>	no advantage	Better comfort than alternate 1
Factor:	Attributes - Acoustics	Possibly additional air noise will make it louder. Not clear if this is good/bad "white noise".	Air noise will be less than overhead SA distribution. Not clear if this is good or too low "white noise".
Criteria:	Sound level meets allowable NC range for space.		
	<i>Advantage:</i>	no advantage	no advantage
Factor:	Attributes - Operational efficiency	Air and water systems at space require little maintenance. Baseboard covers are typical source of issue.	Air and water systems at space require little maintenance. Pump and controls add a small amount of additional maintenance.
Criteria:	Maximize staff operations. Includes Ease of Service and Maintenance. Includes system applicability to this climate.		
	<i>Advantage:</i>	simpler controls, no additional pumps	No radiator covers to maintain is a significant advantage.
Factor:	System Simplicity to Own and Maintain.	Standard hydronic heating is well known hydronics. Floor system dependable like most hydronics. Air systems require standard calibration over time.	Systems a little different from well known hydronics. Floor system dependable like most hydronics. Air systems require standard calibration over time.
Criteria:	System controllability after contractor leaves. Ability of system to stay tuned during lifespan of project.		
	<i>Advantage:</i>	no advantage	no advantage
Factor:	System Flexibility	Flexible overhead services.	Radiant tubes in floor and manifolds in wall limit modification of these areas. Change in lobby/waiting is perceived as a low risk.
Criteria:			
	<i>Advantage:</i>	Advantage	no advantage
Factor:	System Energy cost	Base meets current code energy requirements.	Off hours cooling uses much less energy. Normal hours energy use is less. (% savings to be calculated).
Criteria:	Energy costs		
	<i>Advantage:</i>		Better
Factor:	Attributes - Meets or exceeds benchmark FCC budget.	Matches FCC scope and budget.	Reduces budget both for mechanical pricing and total pricing.
Criteria:			
	<i>Advantage:</i>	no advantage	Approx. 250k savings (Mech only)



Electrical | Emergency Generator Tiers

Tier 1 (Code Minimum)

1. Emergency lighting
2. Means of egress lighting
3. Exit Signs
4. Fire Command Center
 - a. Fire Alarm System
 - b. Emergency voice/alarm communication systems
 - c. HVAC for Room?
5. Security System
6. Building Automation System
7. Telephone switching system
8. Fire Pump
9. Jockey Pump
10. Sump Pumps
11. Ejector Pumps
12. Passenger/Private Elevators (total of 6)
13. (MDF/IDF Rooms)
 - a. server rooms/communication equipment
14. Stairwell Pressurization AHUs
15. Central Holding
 - a. Lighting and power
 - b. Air Handling Units

Tier 2 (Owner Priority Items Added)

1. Recommended Building Backup System
 - a. Heating (Radiant Floors)–Boiler, Pumps etc.
2. Owner Priority equipment/systems.
 - a. Kitchen Refrigeration Units
3. Owner Priority Functional Areas
 - a. Offices as selected by the County
 - b. Court Rooms as selected by the County
 - c. HVAC Courtrooms and support offices

Tier 3 (Franklin County Courthouse)

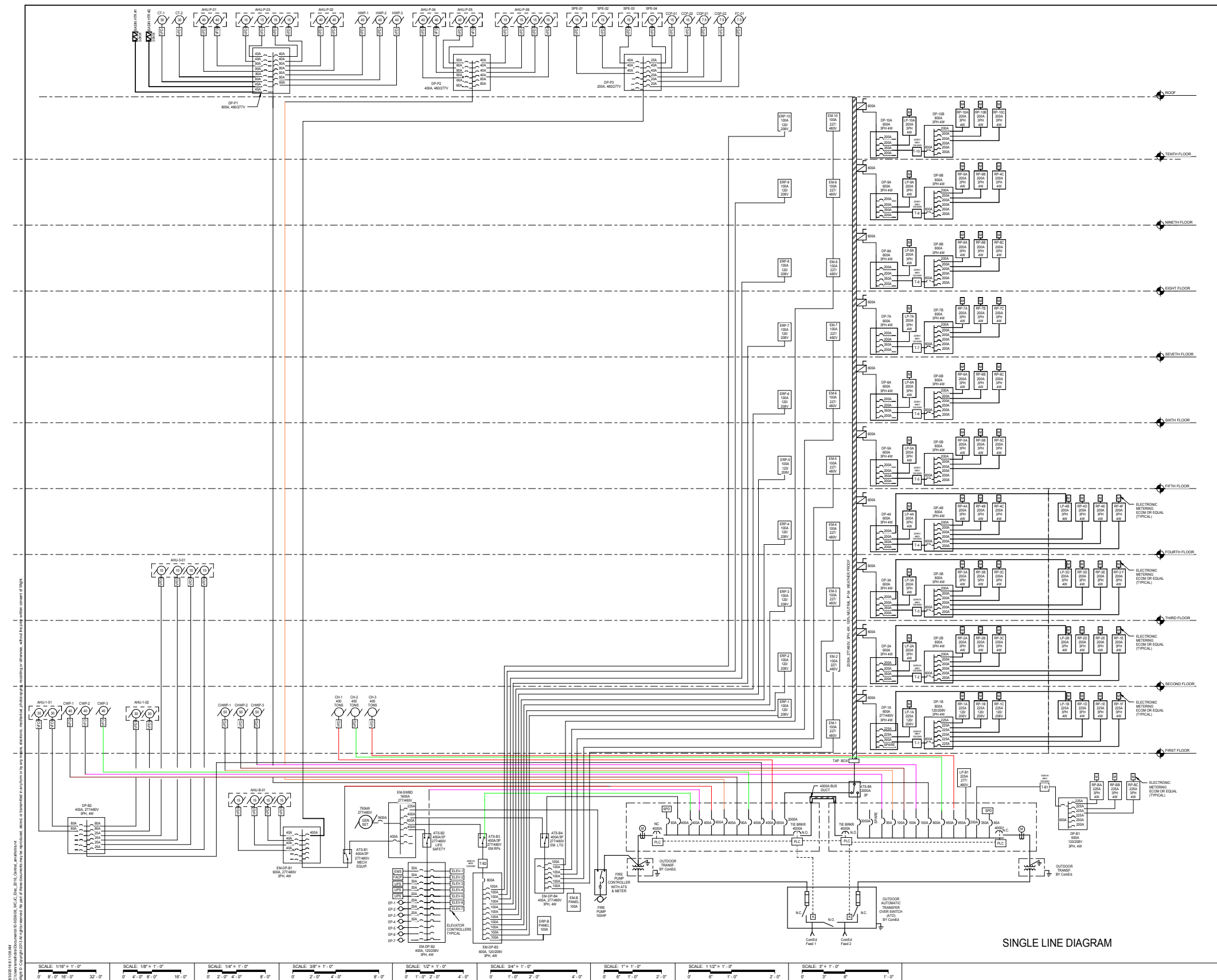
1. Entire Building lighting, power and equipment on Emergency Power.
 - a. Will require multiple generators and Paralleling Switchgear,
 - b. Requires additional space
 - c. No Chillers and Cooling Towers, pumps, etc. to be included

Tier 4 (Complete Building Power Backup)

1. Requires multiple and paralleling switchgear.



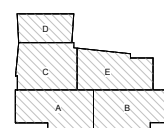
Electrical | Single Line Diagram Alt 3



Owner



Wight & Company
2500 North Frontage Road
Darien, IL 60551
t +1 630 969 7000 f +1 630 969 7979
Helmuth, Obata + Kassabaum, Inc.
60 East Van Buren Street, 14th Floor
Chicago, IL 60605
t +1 312 782 1000 f +1 312 782 6727



NOT FOR CONSTRUCTION

REV DESCRIPTION DATE
WILL COUNTY JUSTICE CENTER

SINGLE LINE DIAGRAM

Project Number:
10-5036-06
Drawn By:
ANDY MALHOTRA
Sheet:
E3.1

AV

- Recommending combined and converged technology at inject points (cameras, microphones, etc) in various spaces to minimize clutter in the courtrooms, while providing secured outputs to each stake holder (state, county, Sheriff) that will economize costs and maximize flexibility.

Telecommunications

- The telecommunications infrastructure goal for the new Will County Courthouse is to provide an integrated technology network with a robust infrastructure that supports high reliability, redundant bandwidth capacity and flexibility to extend current and future technology services to the employees located within the new facility.
- The Intent is to design converged telecommunications spaces (MPOE, MDF, MER, IDFs and AV) that provide adequate space, security, cooling and power management to support the facilities requirements for low voltage technologies.

Security

- Separate systems for building as well as for all holding spaces
 - Security systems work to separate public from secure areas and provide for further separation between departments
- Security screening to take place in the lobby with multiple stations to be staffed at differing levels dependent upon the time of day.
- Security system will be segmented to provide the ability for different departments to utilize portions of the base system for their needs, i.e. camera systems



LEED 2009 for New Construction and Major Renovations

Project Checklist

Will County Courthouse

Date: 5/25/2016

14 10 2 Sustainable Sites Possible Points: 26

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
	1		Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
		1	Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
	1		Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
	3		Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
	2		Credit 4.4	Alternative Transportation—Parking Capacity	2
	1		Credit 5.1	Site Development—Protect or Restore Habitat	1
		1	Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
	1		Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
	1		Credit 8	Light Pollution Reduction	1

6 1 3 Water Efficiency Possible Points: 10

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
4			Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
2	1	1	Credit 3	Water Use Reduction	2 to 4

14 10 11 Energy and Atmosphere Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
10	5	4	Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
	3		Credit 5	Measurement and Verification	3
	2		Credit 6	Green Power	2

6 1 7 Materials and Resources Possible Points: 14

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	?	N			
1	1		Credit 4	Recycled Content	1 to 2
2			Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

10 2 3 Indoor Environmental Quality Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
		1	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
	1		Credit 7.2	Thermal Comfort—Verification	1
		1	Credit 8.1	Daylight and Views—Daylight	1
		1	Credit 8.2	Daylight and Views—Views	1

5 1 Innovation and Design Process Possible Points: 6

Y	?	N			
1			Credit 1.1	Innovation in Design: Low Mercury Lighting	1
1			Credit 1.2	Innovation in Design: Heat Island - Non-Roof	1
	1		Credit 1.3	Innovation in Design: Green Building Education	1
1			Credit 1.4	Innovation in Design: Green Housekeeping	1
1			Credit 1.5	Innovation in Design: Integrated Pest Management	1
1			Credit 2	LEED Accredited Professional	1

2 2 Regional Priority Credits Possible Points: 4

Y	?	N			
1			Credit 1.1	Regional Priority: SSc2 Development Density & Community Connectivity	1
1			Credit 1.2	Regional Priority: SSc4.1 Public Transportation	1
	1		Credit 1.3	Regional Priority: SSc4.3 Low Emitting & Fuel Efficient Vehicles	1
	1		Credit 1.4	Regional Priority: SSc4.4 Parking Capacity	1

57 27 26 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110





WILL COUNTY JUSTICE CENTER | JOLIET, IL

Schematic Design Presentation
09.20.2016

