
2024 Bond Update

Project Delivery & Utilization

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Educational Specifications



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Ed Specs

Data Used to Create Ed Specs

DPI Standards

- Ensure OCS standards meet or exceed DPI recommendations for new schools and renovations

Community Engagement

- Use feedback from **community** to influence upgraded facilities and programming possibilities

OCS Enrollment Studies

- Right size OCS schools based on current enrollment and population trends throughout the county
- Design schools for future-focused learning



Space Profiles

DPI vs OCS Comparison

Green Text - Best Practices

Purple Text - DPI Guidelines

Black Text - DPI Space Profile

Program Elements

Number of Students

Core Capacity

Special Education (S/C)

Dance/Drama Classroom

Pre-kindergarten Classroom

Core Classrooms (K-5)

Green Text - Best Practices													
Purple Text - DPI Guidelines													
Black Text - DPI Space Profile													
Program Elements		DPI K-5 Typical Space Profile					OCS K-5						
Number of Students		450					450						
Core Capacity		600					600						
Special Education (S/C)		1					1						
Dance/Drama Classroom													
Pre-kindergarten Classroom		1					1						
Core Classrooms (K-5)		20					20						
Pupil/Class		SF/ Pupil	No.	SF	Total		SF/ Pupil	No.	SF	Total		Delta	NOTES
Elementary (PK-5 Classrooms)													
Pre-K Classrooms	Toilets Storage	18	67	1	1,200	1,200	67	1	1,200	1,200	-		
								1	60	60	60		
								1	50	50	50		
Kindergarten Classrooms	Toilets	18	67	5	1,200	6,000	67	5	1,200	6,000	-		
								5	60	300	300		
Grade 1 Classrooms	Toilets	17	59	4	1,000	4,000	59	4	1,000	4,000	-		
								4	60	240	240		
Grade 2 Classrooms		17		5	1,000	5,000	0				(5,000)		
Grade 3 Classrooms		17	59	4	1,000	4,000	59	9	1,000	9,000	5,000		
Grade 4 Classrooms		26		3	850	2,550	0				(2,550)		
Grade 4-5 Classrooms		26	33	3	850	2,550	33	6	850	5,100	2,550		
Collab Spaces K-5								6	850	5,100	5,100		
Subtotal				25		25,300		31		31,050	5,750		

Goals

- Meet DPI standards while creating OCS guidelines for new construction & renovations
- Right size school capacities based on existing and projected future enrollment
- Provide future design teams with consistent standards
- Space Profiles will cover PK-5, 6-8, and 9-12 grades



Room Data Sheets

OCS Recommendations



SPACE CATEGORY: CLASSROOMS

SPACE NAME, CLASSROOMS, GENERAL

Intended Use / Function / Activities: Large and small group and individual instructional learning (teacher-led presentation, student group learning, inter-disciplinary work, peer-led learning)

Room Size: varies, see space profile

Capacity: varies, see space profile

Teaching Stations: 1

ENVIRONMENTAL QUALITIES

- Daylight and direct outdoor view
- Operable windows should be considered
- Learning environment should extend beyond the classroom into common spaces and corridors
- Consider connection to adjacent classroom
- Easy access to outdoor learning environments
- Acoustic treatment for occupant comfort
- Accent color/Visual interest

TECHNOLOGY / EQUIPMENT NEEDS

- Mobile interactive monitor
- Student device charging stations
- Marker boards / tack boards
- Area for display of student work

FURNITURE / CASEWORK NEEDS

- Provide option in student seating – variety of group tables, individual desks, soft seating, seating to promote movement
- Mobile instructor workstation
- Consider mobile marker board
- Open student storage for coats, bags
- Storage – wall and base casework or furniture with countertop
- Wardrobe cabinet

UTILITIES REQUIREMENTS

- Power/data on all walls
- Daylight harvesting and dimmable lights
- Dedicated wireless access point
- Consider sink area to support project-based learning needs
- Thermally comfortable / consider operable windows

FINISHES

- Floors: resilient flooring
- Base: rubber
- Walls: paint
- Ceiling - Acoustic tile or exposed structure

SAFETY & SECURITY REQUIREMENTS

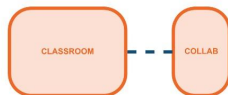
- Follow CPTED recommendations
- Identify shelter-in-place area without visibility from door
- Lockset operation from room side



SPECIAL CONSIDERATIONS

- Low VOC, high recycled content products
- Refer to state and local codes for individual room requirements (ex: Pre-K, K, 1, 2)

ADJACENCY CONSIDERATIONS



Goals

- List room specifications to provide consistency across OCS schools
- Graphic representation of adjacencies
- Inform design team on OCS standards while still allowing for design creativity



Project Delivery Options



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Project Delivery Options

Design-Build-Bid (DBB) (15%)

- Traditional competitive bid
- Final costs at bid day

Construction Management at Risk (CMaR) (80%)

- Construction Manager & subcontractors chosen by qualification
- Cost Forecasting included in preconstruction services

Design-Build (DB) (5%)

- Contractor led design, competitively bid
- State Construction Office requires proof of need to select over CMaR & DBB

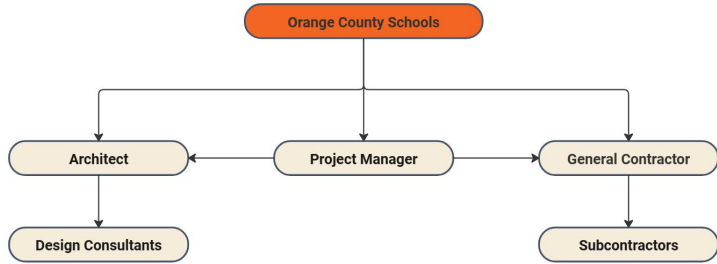


Percentages provided by NC Department of Instruction

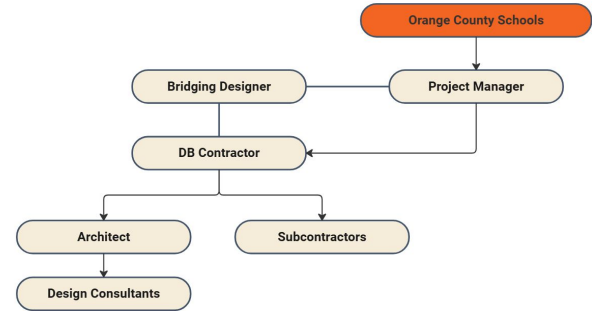
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Organizational Chart Comparison

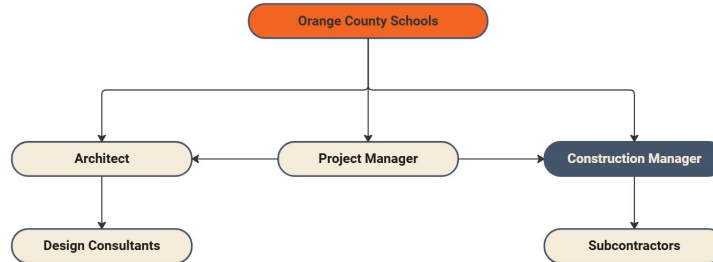
Hard-Bid



Design-Build

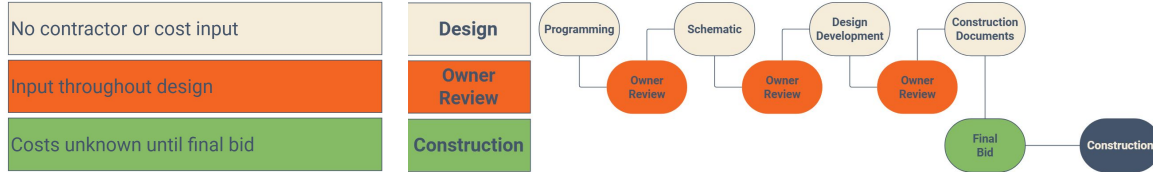


CM at Risk

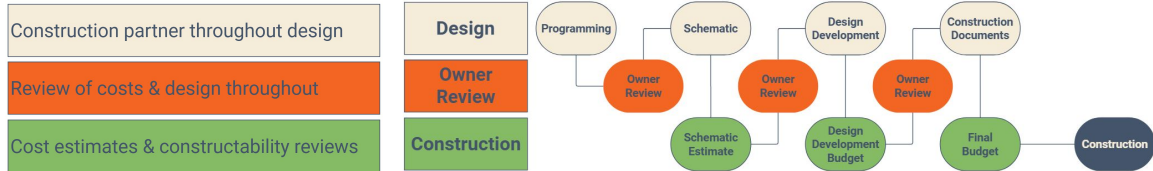


Delivery System Comparison

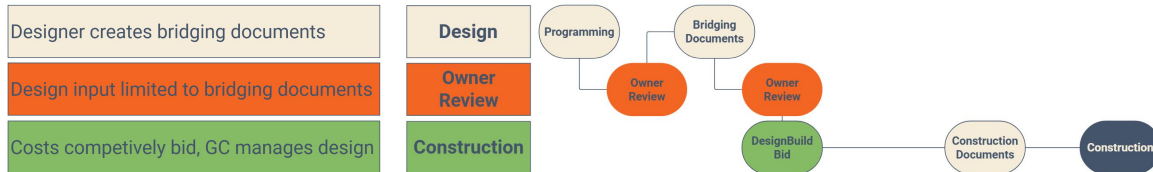
Design-Bid-Build



Construction Management at Risk



Design-Build



Delivery System Budget Certainty

Design – Bid – Build (Closed Book)

- Contract Budget fixed at sealed bid opening
- Owner manages 100% Contingency and Costs Risks
- Budget adjusted via Bid Alternates

Construction Management at Risk (Open Book)

- Contract Budget developed through competitive subcontractor bid packages
- Construction Manager and Owner manage separate contingencies
- Budget adjusted through Value Engineering & Bid Alternates

Design Build (Closed Book)

- Contract Budget fixed at Design Development.
- Contractor manages scope/design issues
- Owner manages contingency for scope changes

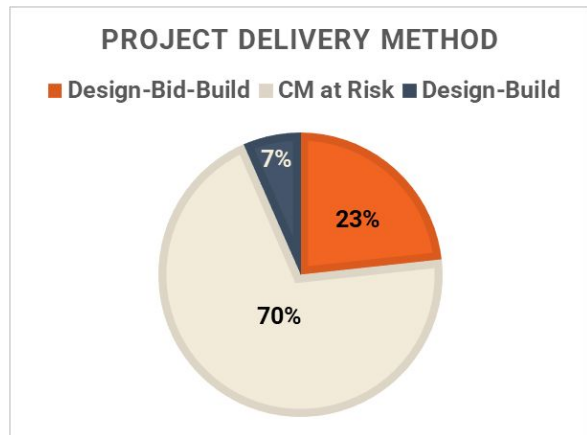


Delivery System Comparison

	Design-Bid-Build	CM at Risk	Design-Build
Owner Design Participation	Work with architect throughout the process	Work with architect along with GC Input	Limited to conceptual design
Architect Selection	Owner selects architect	Owner selects architect	Owner selects GC-architect team Limited pool
Contractor Selection	Owner prequalify bidders Lowest bid must be accepted.	Owner interview GC team Owner review of subcontractors	Owner interviews GC GC selects subcontractors
Collaboration	Owner - architect collaborate GC follows plans & specifications	Owner-architect-GC collaborate GC engages subcontractor input Estimating & constructability reviews	Owner-architect collaborate early GC-architect collaborate Limited owner involvement
Schedule	Least flexible scheduling option Construction starts after bid	Early bid packages allow construction to overlap with design	Additional step of hiring bridging designer Early bid packages allow construction to overlap with design
Costs	Costs determined at design completion Competitive, binding bid of GC	Costs estimate reviews during design Able to adjust scope to budget	Costs locked in at conceptual design Competitive, binding bid of DB team
Costs Transparency	Closed book Owner has no right to review	Open book Owner has right to review Potential for shared savings	Closed book Owner has no right to review
Zoning & Permitting	Owner manages zoning & permitting team	Owner manages zoning & permitting team	Owner manages zoning team GC manages permitting team



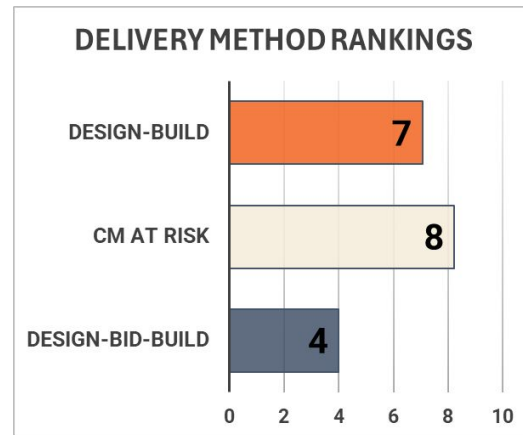
Survey Results



**Hard-Bid
trending to
CMaR**



**Adjust scope
to budget
during design**



**Growing
interest in
Design-Build**



Questions?

Resources



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Utilization Rate



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Enrollment Projections

Projection Summary		
	2025 SAPFOTAC	2016-2025 Trend
Elementary	-1.41%	-8.25%
Middle	-4.43%	-8.44%
High	-8.82%	-0.88%

2025 SAPFOTAC Orange County Student Projections													
		2023- 2024	2024- 2025	2025- 2026	2026- 2027	2027- 2028	2028- 2029	2029- 2030	2030- 2031	2031- 2032	2032- 2033	2033- 2034	Overall % Change
Elementary	Membership	3,055	3,011	2,985	2,970	2,964	2,950	2,961	2,975	2,985	2,996	3,012	-1.41%
	Average % Change	-0.13%	-1.44%	-0.86%	-0.50%	-0.20%	-0.47%	0.37%	0.47%	0.34%	0.37%	0.53%	
Middle	Membership	1,579	1,572	1,586	1,593	1,562	1,539	1,524	1,516	1,497	1,502	1,509	-4.43%
	Average % Change	-1.19%	-0.44%	0.89%	0.44%	-1.95%	-1.47%	-0.97%	-0.52%	-1.25%	0.33%	0.47%	
High	Membership	2,382	2,377	2,306	2,259	2,270	2,268	2,250	2,251	2,229	2,184	2,172	-8.82%
	Average % Change	-4.22%	-0.21%	-2.99%	-2.04%	0.49%	-0.09%	-0.79%	0.04%	-0.98%	-2.02%	-0.55%	

2025 Draft SAPFOTAC Annual Report p.40



Utilization Rates

Utilization Rate Comparison

	2025 Orange County	Mean	Wake ¹	EUA ²	New Mexico ³	NCES ⁴	Woolpert ⁵
Elementary	87.9%	93.0%	95%	90%	95%	95%	90%
Middle	69.5%	88.8%	95%	80%	85%	95%	90%
High	82.2%	89.3%	98%	80%	85%	95%	90%

1: 2013 WCPSS Facilities Utilization p.5

2: Why K-12 School Capacity Matters _EUA

3: 2013 New Mexico PSCOC Utilization Report

4: NCES Condition of America's Public School Facilities 1999 p.vi

5: 23-11-22 Woolpert OC Optimization Plan

ORED recommends 85%-95%



Portfolio Masterplanning Factors

Portfolio Masterplan Factors

- Utilization & Capacity
- Transportation Study
- Facility Condition Index

Utilization Articles



Recommendations



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Recommendations

Project Delivery Method- Utilization Rate

Project Delivery Method

- Construction Manager at Risk(CMar)

Facility Utilization Rate

- Board adopt a building utilization rate within the range of 85-95%. 90% goal.



Questions



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