

October 30th 2017



Second High School

listen.DESIGN.deliver





1 INTRODUCTION TO PROCESS

2 SITE PLAN + FLOOR PLANS

3 3D VIEWS

4 VR EXPERIENCE

Agenda

Major Team Submissions including Architectural, Civil, Structural, Mechanical, Electrical, Plumbing, & Fire Protection

Schematic Design Phase	15%
Design Development Phase	30%
Construction Documents Phase	30%
Bidding Phase	3%
Construction Phase	22%
Total Basic Services	100%



Projected Milestones

°Design Team

BOE Work Session—30 Oct '17

Schematic Design—Second HS

Municipal Code Review

Nichols Career Center Review

Schematic Design—Current HS

BOE Work Session—1 Dec '17 (+/-)

Municipal Code Review

Design Development Kick-Off Meeting

Design Development Report—Second HS
16 Feb '18

Design Development Report—Current HS
15 Mar '18

Construction Documents—Second HS
15 May '18

Construction Documents—Current HS
15 June '18

°**CMaR—Pre-construction Services**
Schematic Design Review
Aug-Nov '18

Design Development Review
Nov-Feb '18

Construction Documents Review
Mar-Jun '18



Projected Milestones

◦ Preliminary Site Investigations

Site Civil Survey—Open Areas

Jul '17

Geotechnical Investigations—Open Areas

Aug-Sep '17

◦ Construction Activities

Site Clearing & Grubbing Documents

Aug-Nov '17

Structural Documents

Nov-Feb '18

Phase One Second HS

Jan '18-Aug '19

Phase Two Second HS

Aug '19-Dec '19

Phase One Current HS

June '18-Dec '19



Frog Hollow Road

- A. Car Drop-Off
- B. Bus Drop-Off
- C. Service Area
- D. Entry Plaza
- E. Student Plaza
- F. Visitor Parking
- G. Faculty Parking
- H. Student Parking
- I. Multi-Purpose Field
- J. Second High School

MO-179

Site Plan

Mission Drive





Axonometric

LEGEND

- Administration
- Special Services
- Performing Arts
- Commons
- Media Center
- Fitness/Health
- Fine Arts
- Practical Arts
- Academics
- Collaboration
- Science
- Building Support

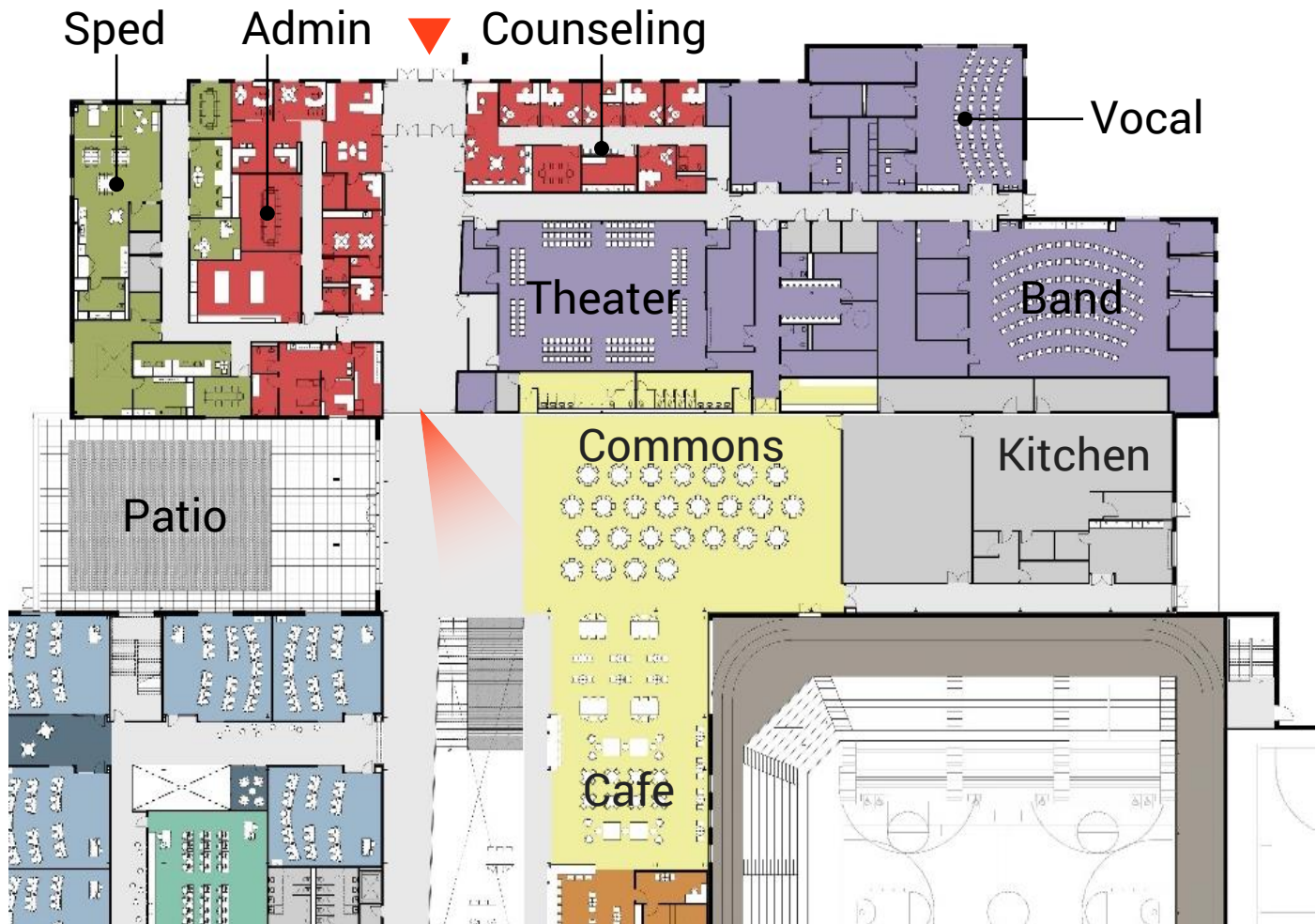


Floor Plan – Level 01



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Floor Plan – Level 01

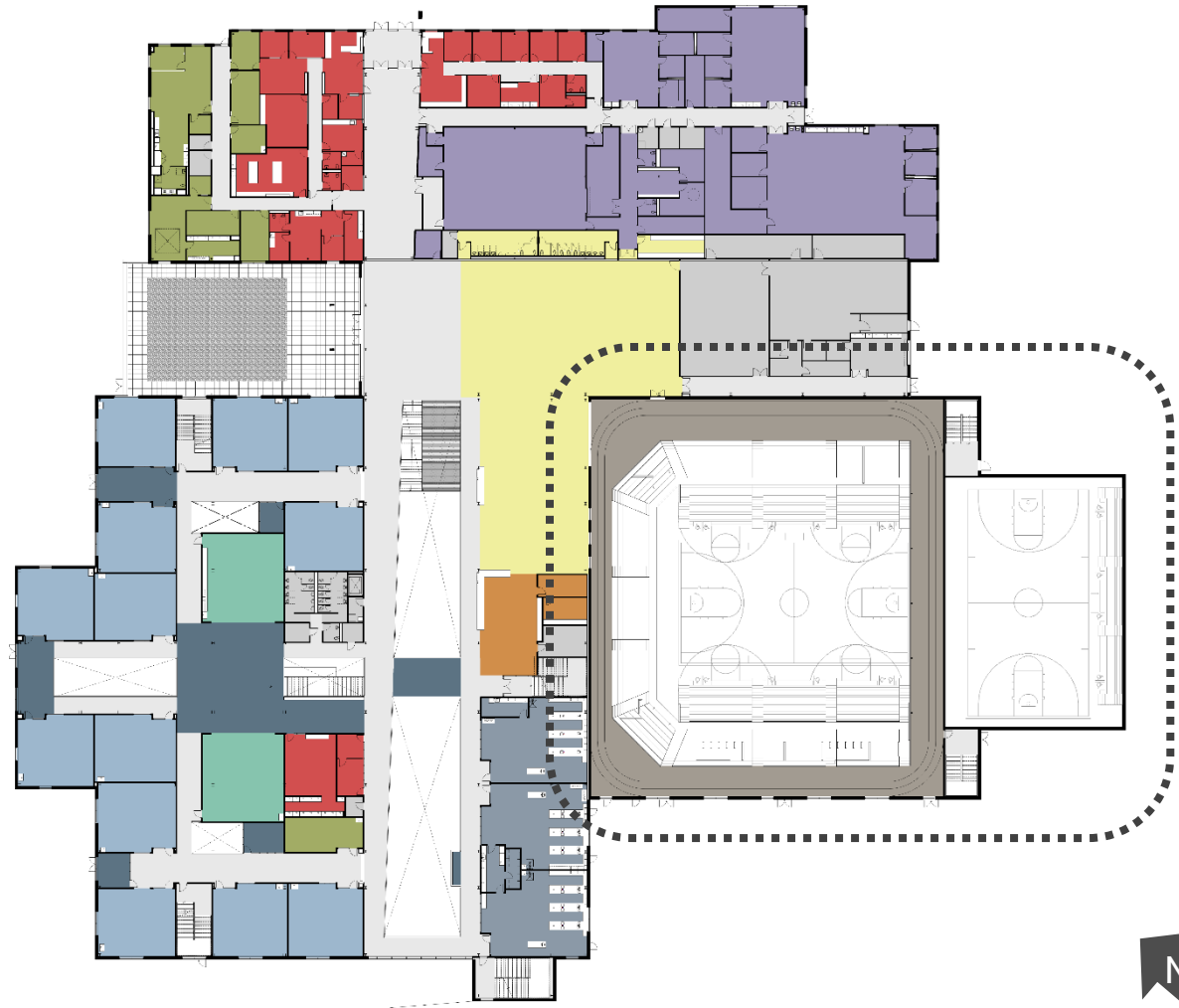


Interior Perspective



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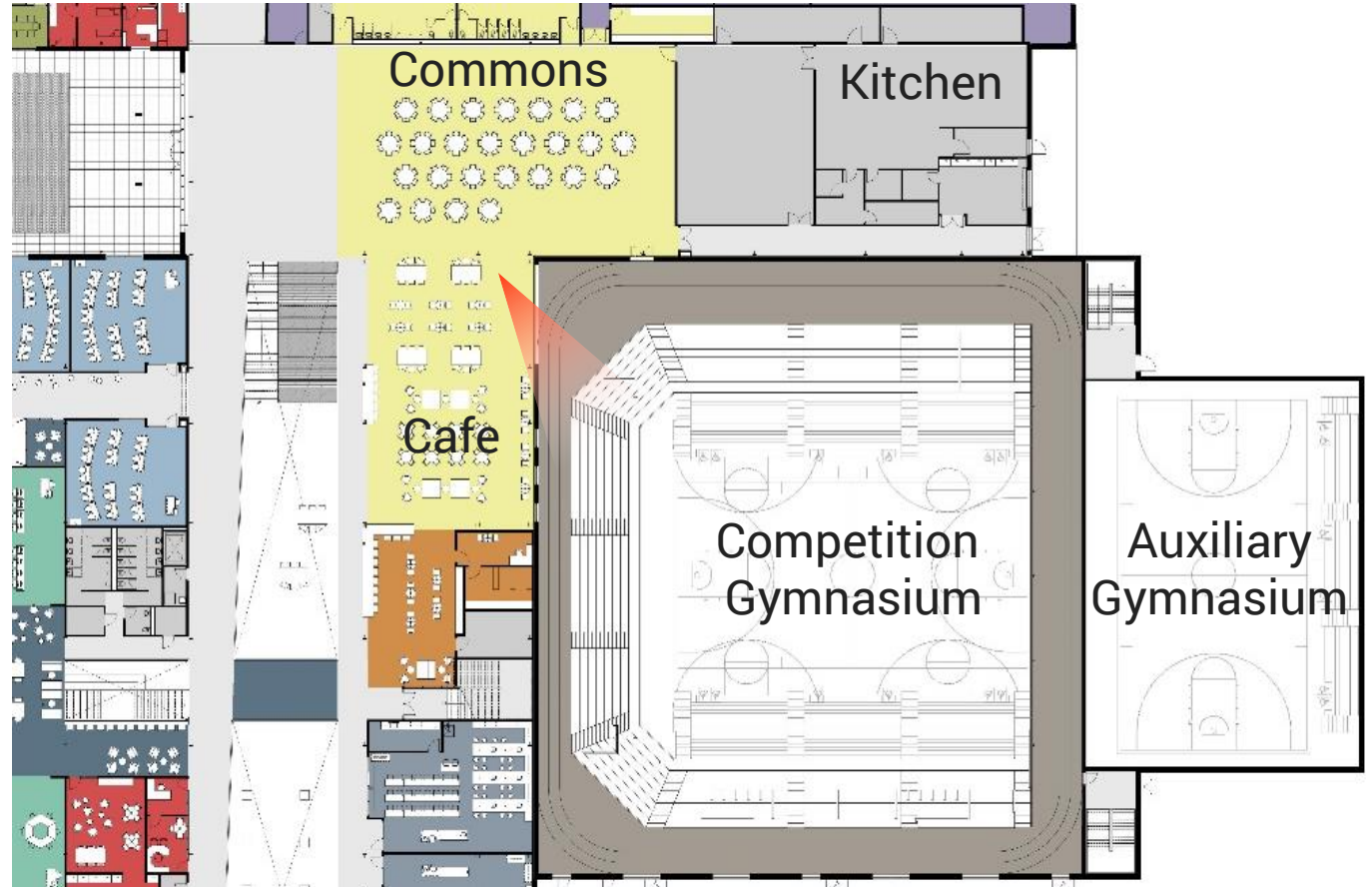


Floor Plan – Level 01



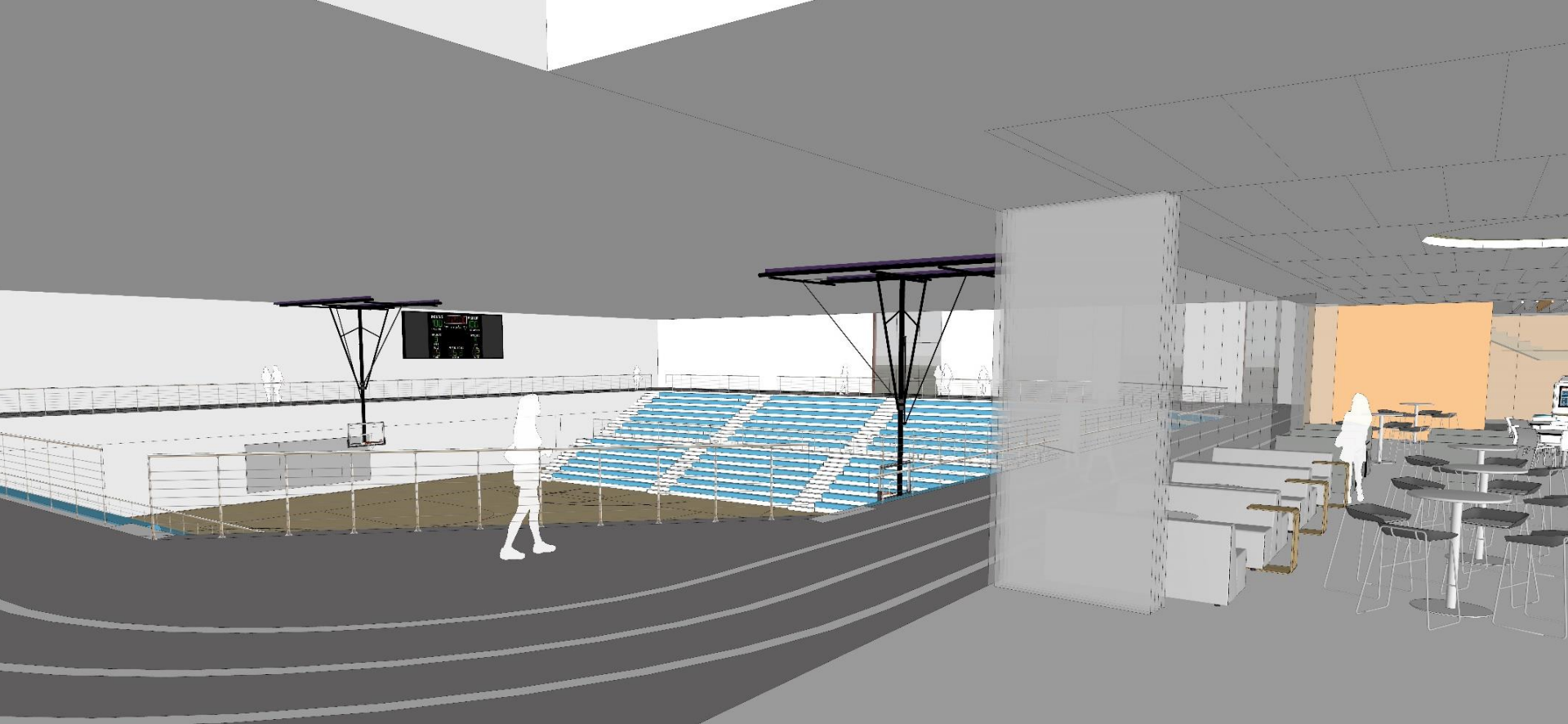
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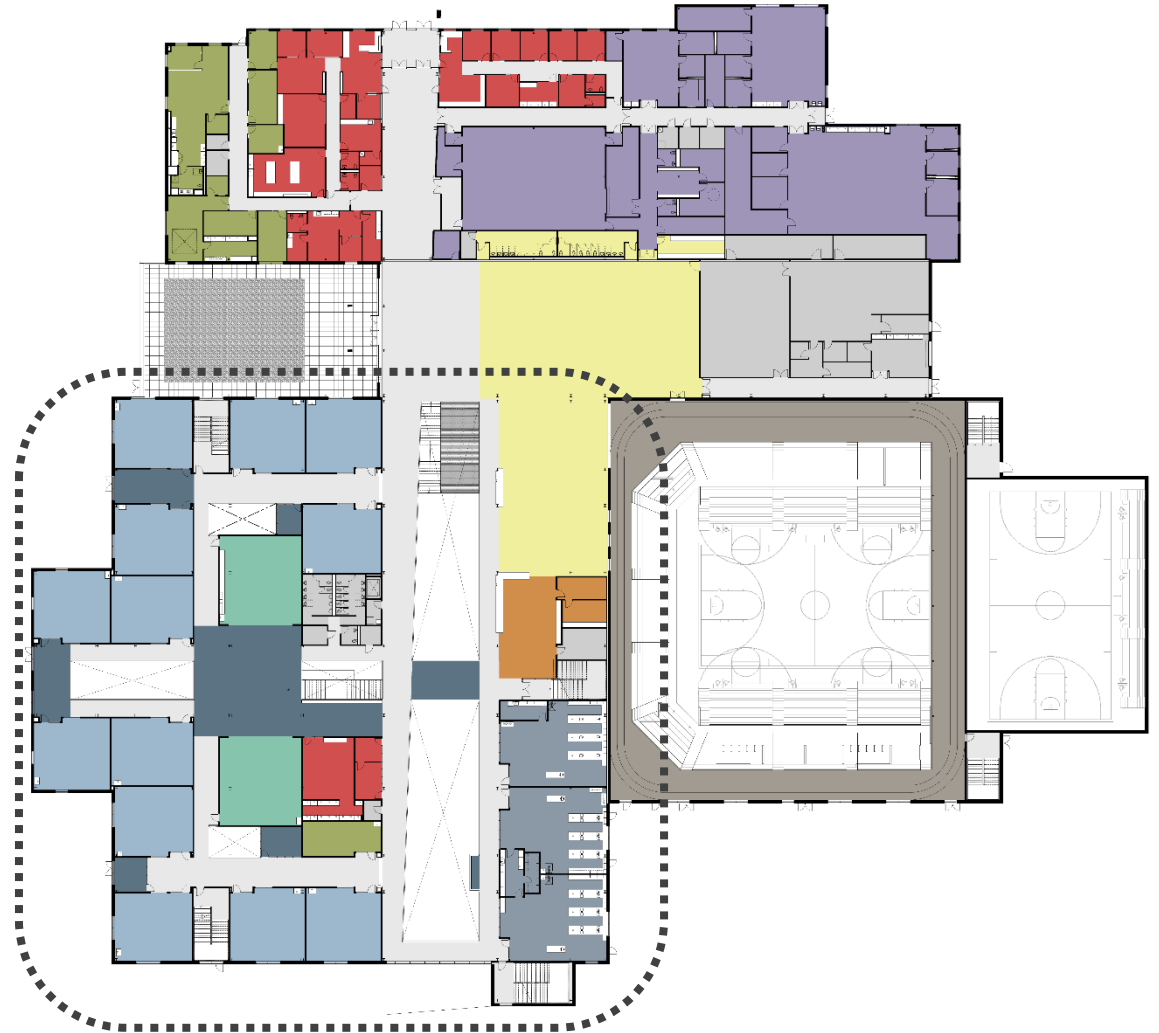


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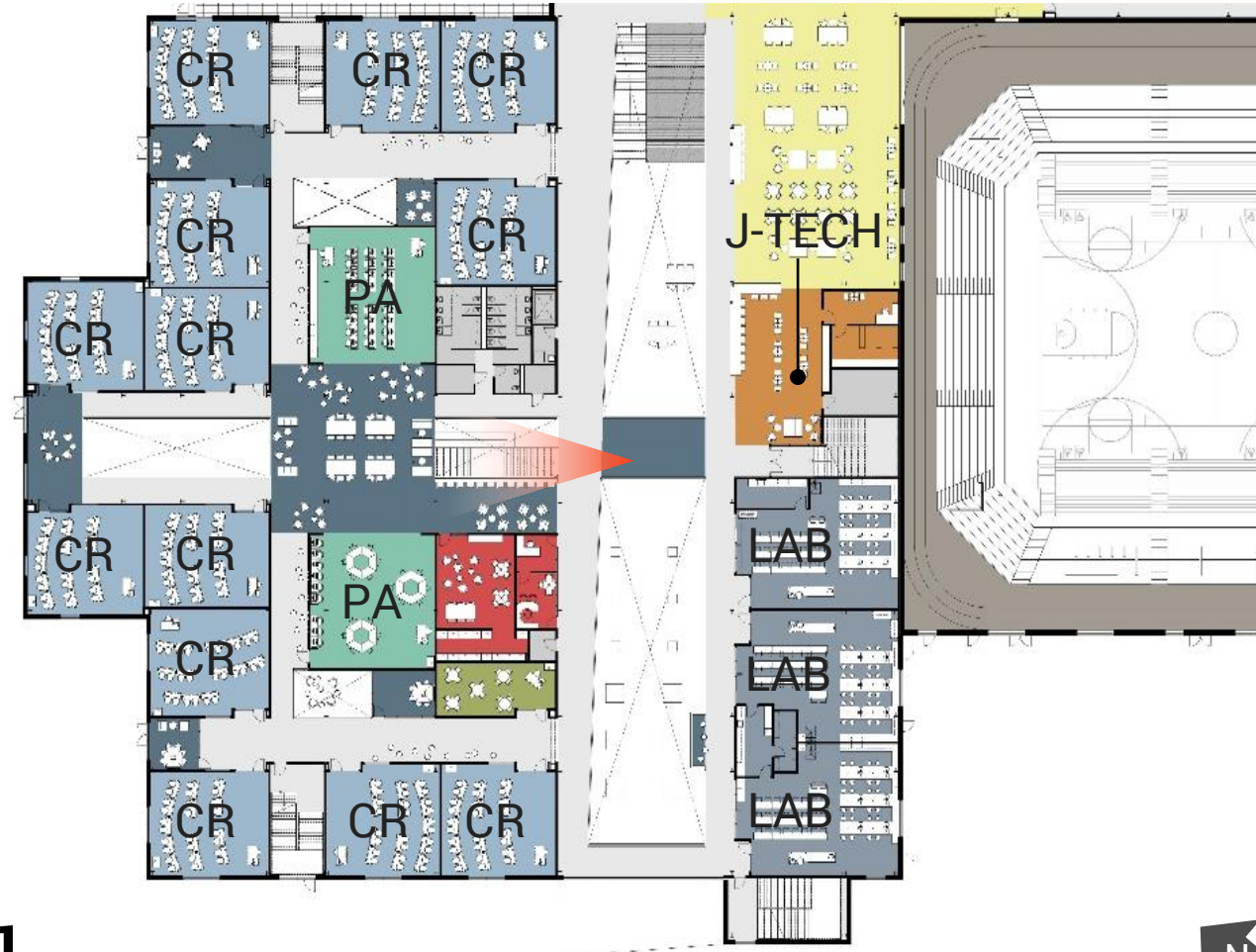


Floor Plan – Level 01



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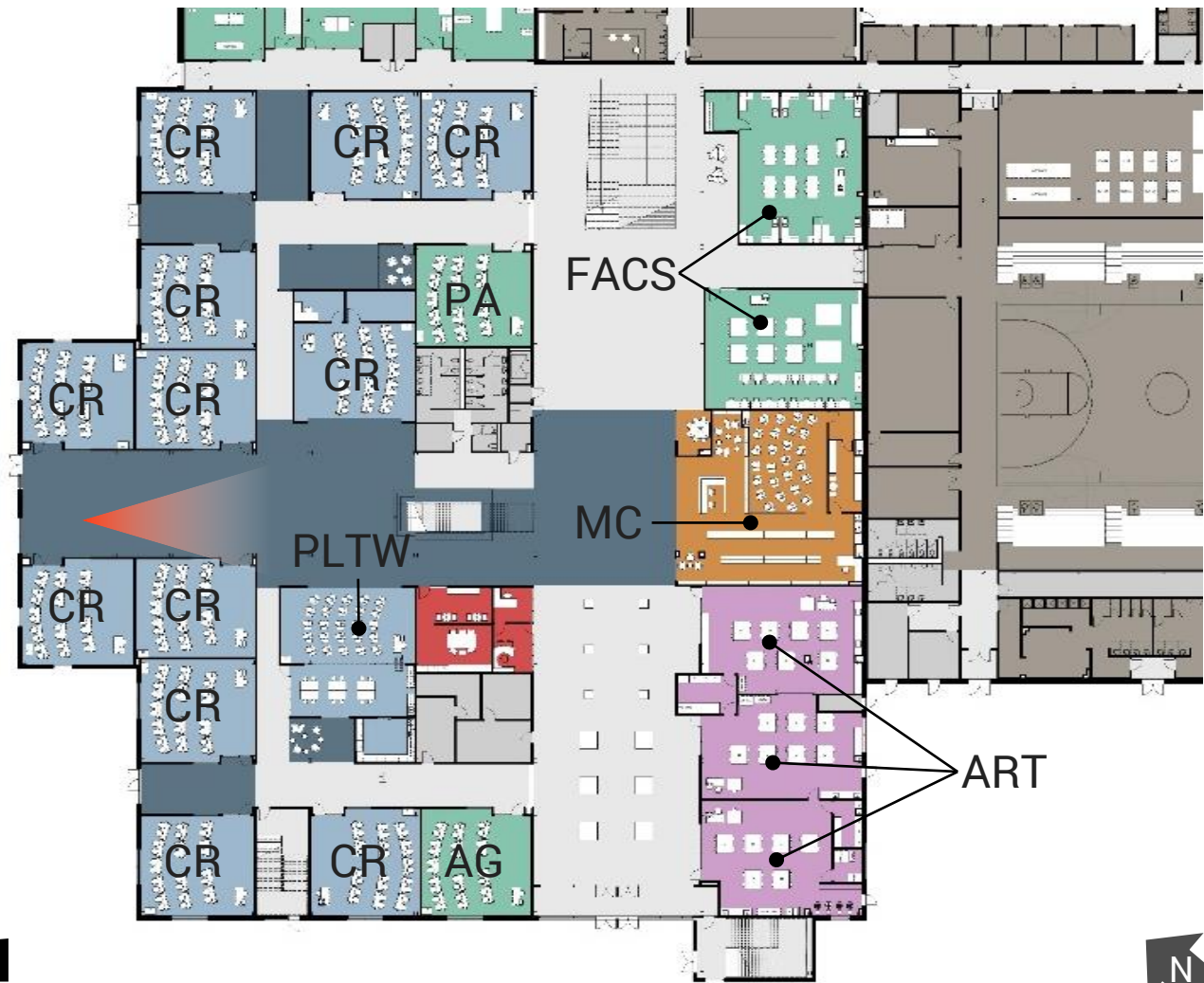


Floor Plan – Level 00



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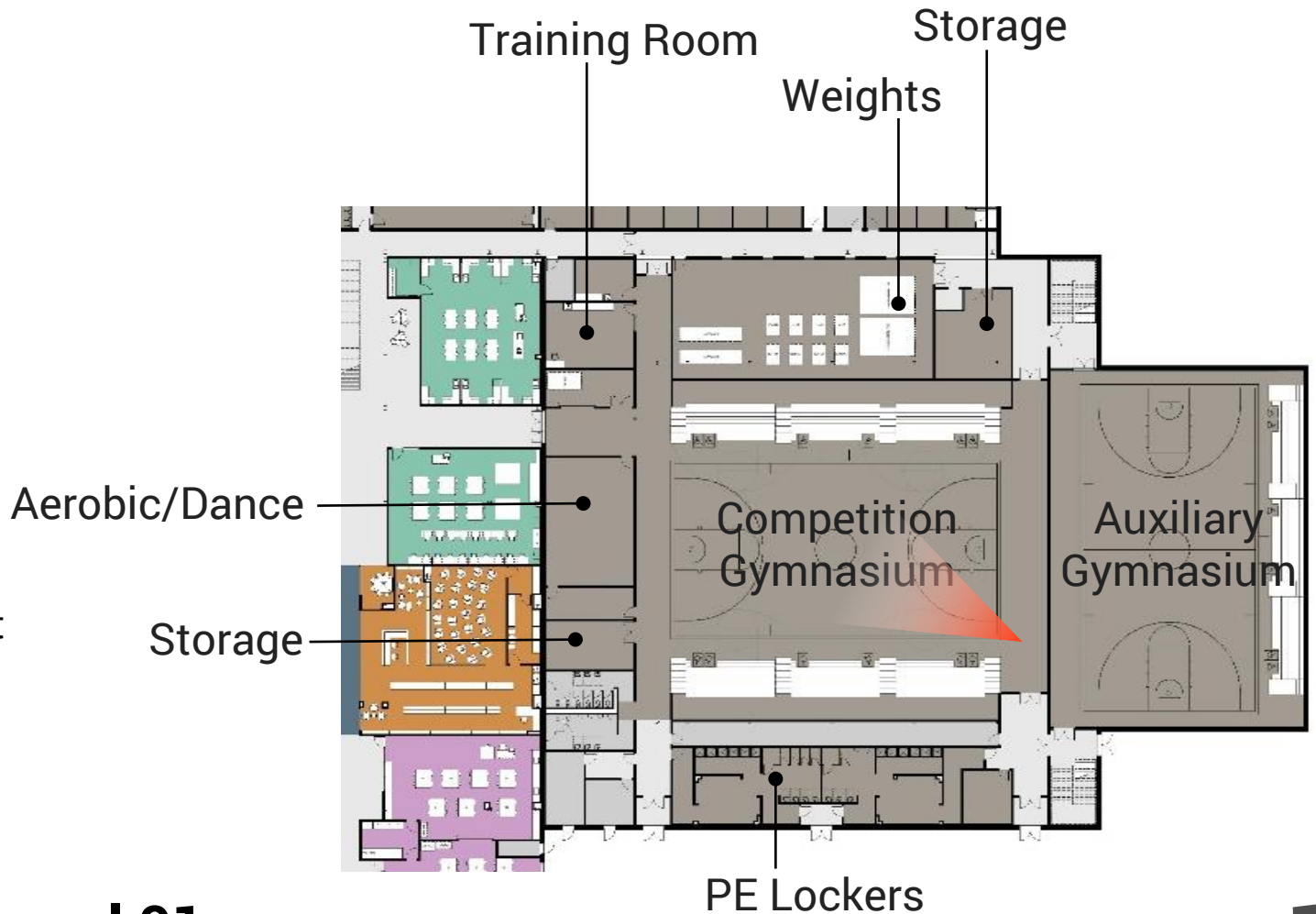


Interior Perspective



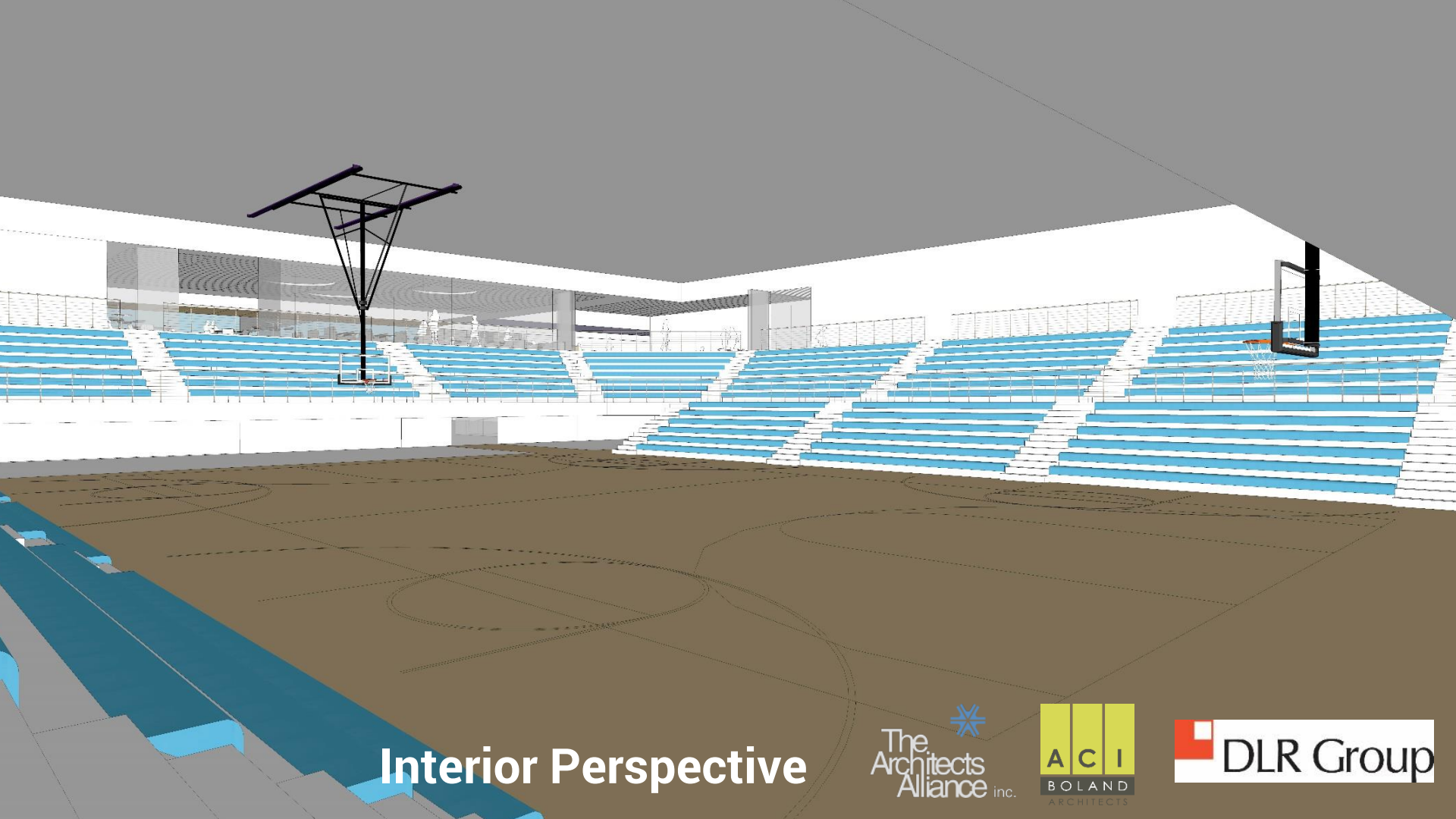
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Floor Plan – Level 01





Interior Perspective



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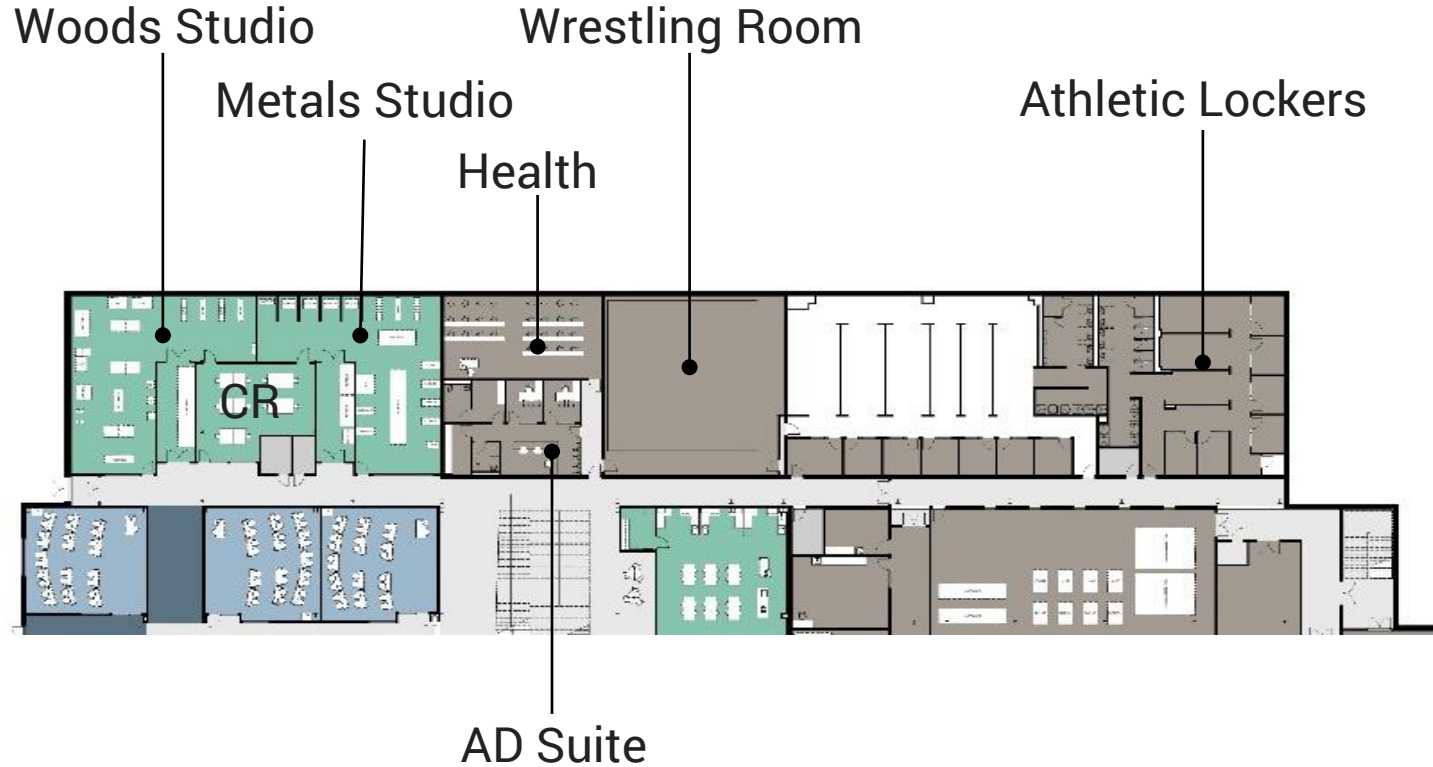


Floor Plan – Level 00



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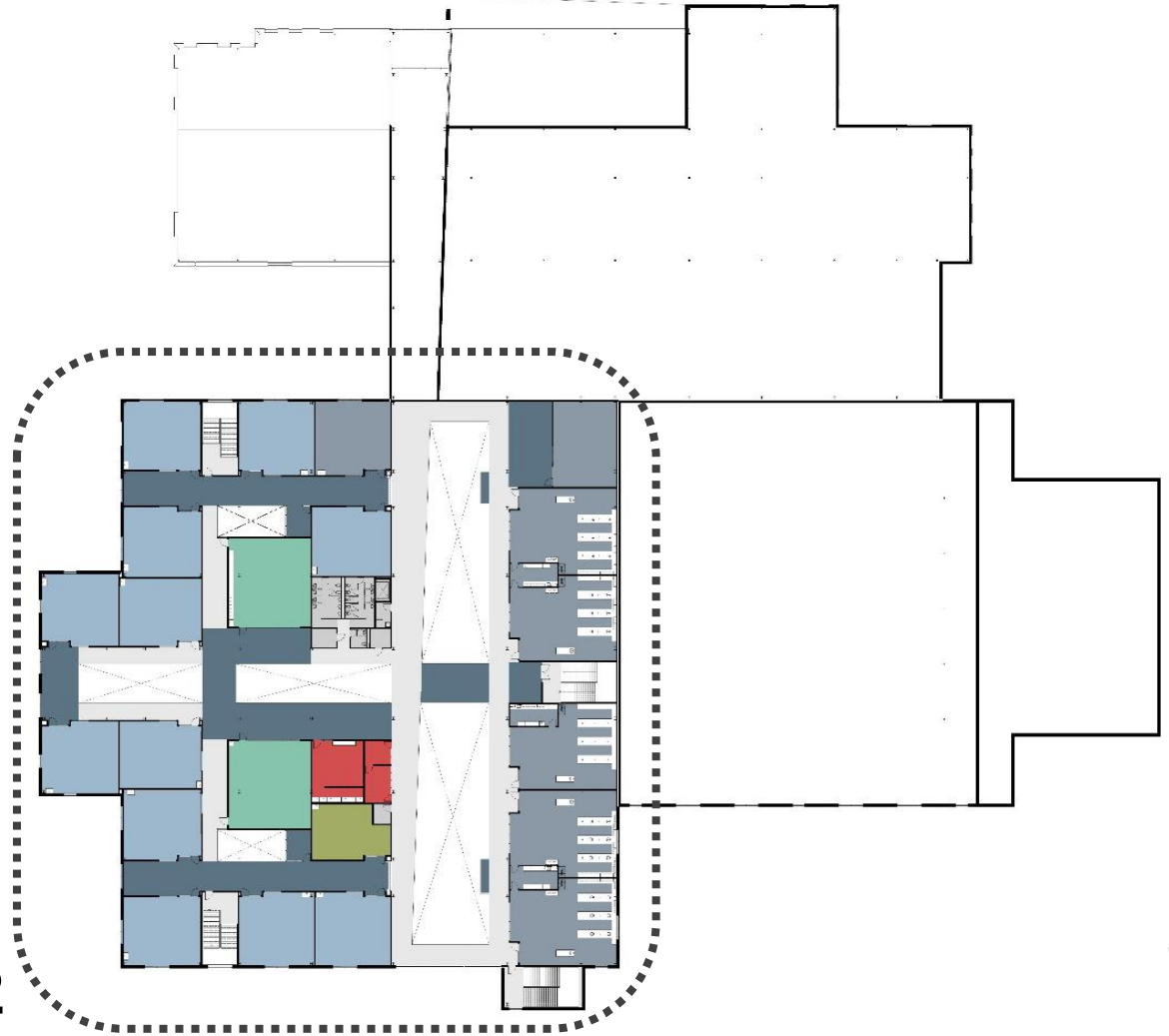


Floor Plan – Level 01



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Floor Plan – Level 02





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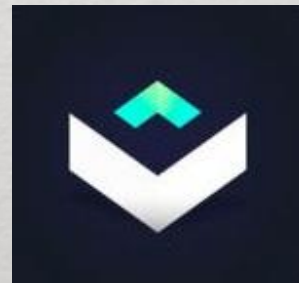
DLR Group



3D Flythrough



- CLICK TO ADVANCE SLIDES
- EXPERIENCE 360° ENVIRONMENTS



Download **Kubity** app,
scan barcode, place
phone into viewer.


VR Experience

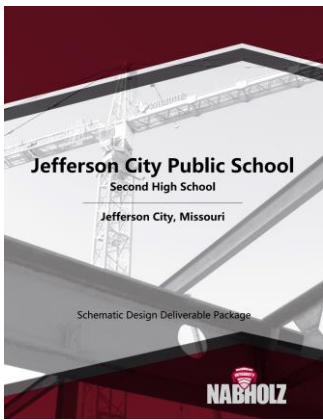


QUESTIONS?

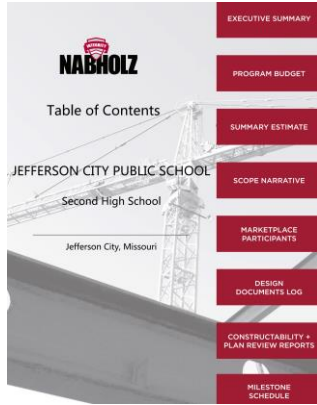

The
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inc.


ACI
BOLAND
ARCHITECTS

 DLR Group



Cover



Contents

8/15/20
 PROJECT NAME: Jefferson City 2nd HS - Schematic Design 7.27.17 Page 1
 PROJECT LOCATION: Jefferson City, MO 10/20/17
 PROJECT DATE: 10/27/17
 ARCHITECT: NABHOLZ
 ESTIMATED DURATION: 24 term
 BIDDING DATE: 03/05/18

CSI Div.	Description	Takeoff Quantity	Total Condition	Total Amount
01-0000	General Requirements	24.00 sqm	73,186.79 sqm	1,756,853
03-0000	Concrete	252,000.00 sqft	24,12 sqm	6,877,252
04-0000	Masonry	252,000.00 sqft	3.35 sqm	844,433
05-0000	Metal	252,000.00 sqft	29.39 sqm	5,139,251
06-0000	Wood, Plastic, & Composites	252,000.00 sqft	8.81 sqm	2,292
07-0000	Thermal & Moisture Protection	252,000.00 sqft	15.54 sqm	4,524,542
08-0000	Openings	252,000.00 sqft	18.17 sqm	2,563,369
09-0000	Finishes	252,000.00 sqft	25.90 sqm	6,392,256
10-0000	Specialties	252,000.00 sqft	3.44 sqm	867,499
11-0000	Equipment	252,000.00 sqft	4.43 sqm	1,117,213
12-0000	Furniture	252,000.00 sqft	5.48 sqm	1,381,180
14-0000	Conveying Equipment	252,000.00 sqft	8.80 sqm	195,419
21-0000	Fire Suppression	252,000.00 sqft	4.44 sqm	1,118,565
22-0000	Plumbing	252,000.00 sqft	9.37 sqm	2,418,355
23-0000	Heating Ventilation Air Conditioning	252,000.00 sqft	20.50 sqm	5,166,256
24-0000	Electrical	252,000.00 sqft	17.48 sqm	4,483,289
27-0000	Communications	252,000.00 sqft	2.30 sqm	578,540
29-0000	Electronic Safety & Security	252,000.00 sqft	1.48 sqm	372,481
31-0000	Earthwork	252,000.00 sqft	48.82 sqm	12,699,847
32-0000	Exterior Improvements	252,000.00 sqft	13.44 sqm	3,396,104
33-0000	Utilities	252,000.00 sqft	7.21 sqm	1,818,952

Summary 1

8/15/20
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Estimate Totals

Description	Amount	Total
Labor	16,176,642	
Material	28,088,024	
Subcontract	4,581,373	
Equipment	1,285,724	
Other	11,427,178	
Sublet Permit	21,925	
Waiver	177,388	
Profit	388,288	62,871,415
State Sales Tax		
County Sales Tax		
City Sales Tax		
Taxes		62,871,415
Sub Contractor (Basis) (D&B)	582,164	
General Liability	682,141	
Risk/Ret Risk	170,258	
Insurance Total	1,334,564	64,177,229
Performance Payment Bond	210,807	
Bonds	210,807	64,888,036
General Conditions	1,584,806	
Construction Manager Fee	1,348,108	1,900 %
Construction Fee	2,932,914	67,480,952
Contingency	3,547,891	5,000 %
Total		75,857,814

Summary 2

Scope Narrative

Jefferson City Public Schools
 Second High School
 Jefferson City, MO

Schematic Budget Narrative Scope
 Estimating Scope Narrative of Activities Required

- 02-41-18 Selective Demolition
 - o Site tree and stump removal
 - o Electrical overhead lines
 - o any existing
 - o still under review
- DIVISION 03 CONCRETE
 - o 03-30-00 Cast-In-Place Concrete
 - 4" thick slab on grade
 - 4" thick sidewalks
 - Elevated slabs: metal decking and CIP concrete
 - No special pour/ pile foundation
 - Foundation retaining walls below grade
 - No green walls
 - o 03-45-00 Precast architectural concrete
 - Possible option
 - PC mass likely at the
 - main gym
 - aux gym walls
 - Nonstructural bearing
 - o 03-45-01 Structural precast with brick liquid proof for option
- DIVISION 04 MASONRY
 - o 04-20-00 Unit Masonry

JCPS SD Deliverable



Building Slab	133528.0 SQ FT
Sod Area	324964.4 SQ FT
Sidewalk/Concrete	10919.5 SQ FT
Light Asphalt	272045.1 SQ FT
Heavy asphalt	82969.8 SQ FT
Site Area	1367291.6 SQ FT
Practice Area	181132.9 SQ FT
City Road	76008.6 SQ FT
Pasture	398586.8 SQ FT



HVAC

Ref. Only	Class	Address	266500	tons	DOAS	ERU / tons	RTU		reheat gas	
							reheat gas	reheat gas		
common	Class		100000	VRF/DOAS	1	70	80	860000		
common	Address		41000	VRF/DOAS	5	6	6	72000		
common	Med		30000	VRF/DOAS	10	5	5	60000		
common	Misc Areas not in MEP narrative		90000	VRF/DOAS	96	40	40	480000		
common	Auditorium		30000	RTU	25	25	25	300000		
common	Stage		30000	RTU	15	15	15	180000		
common	Performing Art		55000	RTU	13	13	13	144000		
common	Park Gym		76000	RTU	25	25	25	300000		
common	Gym		25000	RTU	80	80	80	960000		
common	Volleyball		30000	RTU	15	15	15	180000		
common	PT/Strength/Recreation		4000	RTU/DOAS	12	8	8	144000	100% OA	
common	Locker Rm 1		25000	RTU	15	15	15	180000	100% OA	
common	Locker Rm 2		25000	RTU	15	15	15	180000	100% OA	
common	Kitchen		45000	VRF/DOAS	0	5	5	120000		
common	Commons		70000	RTU	25	25	25	300000		
common	Server/ Data Rm									
common	Adjust scope narrative to footprint									
Ref. Only	Required Cooling		870		651	219	219	9400000		

60/40 split

Tons	tons DOAS	Heat CR	Heat Com
170	80	960000	
commons	commons	20000	
10	5	60000	
commons	commons	480000	
30	18		300000
commons	commons		180000
commons	commons		144000
commons	commons		800000
commons	commons		960000
commons	commons		120000
commons	commons		144000
commons	commons		180000
commons	commons		380000
commons	commons		120000
commons	commons		300000
3	0		0
125	75	900000	
389	176	2472000	2928000
VRF	DOAS	(gas reheat)	(gas reheat)

Commons	RTU	DOAS
282	43	

VRF
91

CFM	people	CFM	Sensitivity power
155	6200	243000 (20/208)	
EA mech, rest rooms			
toilet, lav, closets etc.	10000	7500	
Kitchen Hood		4500	
Dish Washer EA Duct		1500	
EA		37000	

- Scope Clarity
- Quantify Building Materials
- Cost Modeling



NABHOLZ

COLLABORATION

ITEM DESCRIPTION	QUANTITY	LABOR	MATERIAL	Total Cost/Unit	SUBTOTAL	TOTAL AMOUNT
Panelboards, 3 phase 4 wire, main lugs, 277/480 V, 225 amp, 36 circuits,	5.64 ea	5,930	10,637	2,937.46 /ea	16,567	17,386
Motor starter, combination, with fused switch, size 1, 10 HP, NEMA 1	3.76 ea	1,095	2,454	943.77 /ea	3,549	3,634
Motor control centers, enclosure, CB's, switches, avg. cost per amp	235.00 amp	1,946	1,965	16.64 /amp	3,910	4,385
Surface raceway, metal, straight section, base & cover, blank, no. 6000	846.00 lf	6,405	9,683	19.02 /lf	16,088	17,215
Exploratory Labs hookups	3.76 ea	5,854	7,550	3,565.00 /ea	13,404	14,611
A/V dimming controls points in each room/area	146.64 ea	11,416	13,987	173.23 /ea	25,402	27,854
Backbox, ring, wire & pigtail, single pole switch, plate, avg cost/ea	119.38 ea	2,824	3,047	49.18 /ea	5,872	6,534
Backbox, ring, wire & pigtail, 3-way switch, plate, avg \$/ea	39.48 ea	1,214	1,732	74.63 /ea	2,947	3,174
Backbox, ring, wire & pigtail, duplex receptacle, plate, avg \$/ea	948.46 ea	14,809	34,680	52.18 /ea	49,490	50,438
Backbox, ring, wire & pigtail, GFI duplex receptacle, plate, avg \$/ea	107.16 ea	1,673	4,703	59.50 /ea	6,376	6,377
Backbox, ring, wire & pigtail, quadplex receptacle, plate, avg \$/ea	197.40 ea	3,885	10,930	75.06 /ea	14,816	14,818
Circuit breaker, 3 pole, 600 volt, 30 amp, enclosed (NEMA 1)	84.60 ea	10,007	42,469	620.29 /ea	52,476	50,549
Circuit breaker, 3 pole, 600 volt, 60 amp, enclosed (NEMA 1)	3.76 ea	508	2,322	752.65 /ea	2,830	2,710
Control stations, heavy duty, hand/off/automatic, NEMA 1	3.76 ea	230	378	161.45 /ea	607	643
Generator set, diesel, 3 phase 4 wire, 277/480 V, 500 kW, incl battery, charger, muffler, & day tank, excl conduit	0.94 ea	4,906	82,107	93,331.83 /ea	87,732	78,419
LED 1 2x4	1,236.10 ea	82,087	168,110	202.41 /ea	250,196	258,708
LED 2 2x2	45.12 ea	3,634	8,347	265.54 /ea	11,981	12,236
LED 3 4" wrap around	129.72 ea	15,839	31,781	367.11 /ea	47,621	49,352
LED 4 8' x 12" strip	75.20 ea	5,371	16,920	296.42 /ea	22,291	22,049
LED 5 down lights	91.18 ea	17,257	18,692	394.26 /ea	35,949	39,985
LED 6 high hat cans decoative down lights	38.54 ea	2,177	9,057	291.50 /ea	11,234	10,840
LED 9 exterior wall wash down lights	13.16 ea	1,245	4,277	419.63 /ea	5,522	5,418
Lighting & Special Systems allowance, fixtures, raceway/wiring, Orch Pits	705.00 sf	3,336	5,663	12.76 /sf	8,998	9,502
Lighting raceway, to 3/4" EMT w/ conductors, avg. \$/sf, fitout	113,740.00 sf	107,633	64,235	1.51 /sf	171,868	204,106
Lighting dimmer and/or motion sensor controls allowance, avg. \$/sf, fitout	113,740.00 sf	-	-	0.65 /sf	73,931	63,954
Exit lighting, LED w/ battery unit, single face, ceiling or wall mount	30.08 ea	2,588	4,832	246.67 /ea	7,420	7,751
Emer LED lt units, btry, twin sealed bm lt, 25 W, 6 V ea, nickel cadmium btry	28.20 ea	2,669	15,855	656.87 /ea	18,524	17,398
Fixtures -LED 7 hi bay with wire guards NAB	35.72 EA	6,430	16,967	680.00 /EA	24,290	24,323
Fixtures -LED 8 hi bay with wire guards NAB	16.92 EA	3,046	6,599	595.00 /EA	10,067	10,277
Bored Piles (Pier Drilling)	205.00 EACH	37,070	244,309	1,466.30 /EACH	300,591	279,119
Learnina Community	252.000.00 soft	4,976.012	12,882.642	78.20 /soft	19,706.010	40,507,000



NABHOLZ

LINE ITEM ESTIMATES

ITEM DESCRIPTION	10/6/2017 SCHEMATIC DESIGN	OWNER BUDGET
CONSTRUCTION	114,052,968	100,000,000
EXISTING HIGH SCHOOL ADDITIONS AND RE 2ND HIGH SCHOOL	43,095,151 70,957,817	35,000,000 65,000,000
DESIGN	8,291,040	0
ARCHITECTURAL & ENGINEERING FEES	7,500,540	
CIVIL	640,000	
GEOTECHNICAL INVESTIGATION	74,500	
REIMBURSABLES	76,000	
OTHER COSTS	11,310,500	30,000,000
ASBESTOS MITIGATION	150,000	
FURNITURE, FIXTURES, AND EQUIPMENT	4,000,000	
TECHNOLOGY	4,000,000	
OWNER'S CONTINGENCY	2,500,000	
OFFSITE UTILITIES	660,500	
<hr/>		
TOTAL	\$133,654,508	\$130,000,000
DIFFERENCE FROM OWNER BUDGET	3,654,508 2.81%	
CITY ROAD ALLOWANCE	\$ 1,206,961.00	



PROGRAM BUDGET

ID	Task Name	Duration	Start	Finish	Timeline												
					1/22	April 1	5/7	8/20	November 1	12/3	3/18	June 1	7/1	10/14	January 1	1/27	5/12
1	1 JCPS MILESTONE DATES	584 days	Fri 10/6/17	Wed 1/1/20	[Gantt bar from 10/6/17 to 1/1/20]												
2	1.1 PRECON	181 days	Fri 10/6/17	Fri 6/15/18	[Gantt bar from 10/6/17 to 6/15/18]												
3	1.1.1 SCHEMATIC DESIGN	1 day	Fri 10/6/17	Fri 10/6/17	[Vertical tick at 10/6/17]												
4	1.1.1.1 Second HS and Current HS Presentation to JCPS	1 day	Fri 10/6/17	Fri 10/6/17	[Vertical tick at 10/6/17]												
5	1.1.2 DESIGN DEVELOPMENT	21 days	Fri 2/16/18	Fri 3/16/18	[Gantt bar from 2/16/18 to 3/16/18]												
6	1.1.2.1 Second HS 100% DD's	1 day	Fri 2/16/18	Fri 2/16/18	[Vertical tick at 2/16/18]												
7	1.1.2.2 Current HS 100% DD's	1 day	Fri 3/16/18	Fri 3/16/18	[Vertical tick at 3/16/18]												
8	1.1.3 CONSTRUCTION DOCUMENTS	163 days	Wed 11/1/17	Fri 6/15/18	[Gantt bar from 11/1/17 to 6/15/18]												
9	1.1.3.1 Second HS Civil Deliverable 1: Site Clearing and Initial Grading	1 day	Wed 11/1/17	Wed 11/1/17	[Vertical tick at 11/1/17]												
10	1.1.3.2 Second HS Civil Deliverable 2: Final Grading Plan	1 day	Mon 1/15/18	Mon 1/15/18	[Vertical tick at 1/15/18]												
11	1.1.3.3 Second HS Civil Deliverable 3: Site Utilities	1 day	Thu 3/1/18	Thu 3/1/18	[Vertical tick at 3/1/18]												
12	1.1.3.4 Second HS Structural 100% CD's	1 day	Fri 3/2/18	Fri 3/2/18	[Vertical tick at 3/2/18]												
13	1.1.3.5 Second HS Civil Deliverable 4: Site Improvements and Paving	1 day	Tue 5/15/18	Tue 5/15/18	[Vertical tick at 5/15/18]												
14	1.1.3.6 Second HS 100% Remaining CD's	1 day	Tue 5/15/18	Tue 5/15/18	[Vertical tick at 5/15/18]												
15	1.1.3.7 Current HS 100% CD's	1 day	Fri 6/15/18	Fri 6/15/18	[Vertical tick at 6/15/18]												
16	1.1.4 LOCAL BID DAYS	136 days	Tue 11/28/17	Tue 6/5/18	[Gantt bar from 11/28/17 to 6/5/18]												
17	1.1.4.1 Second HS Bidding: Site Clearing and Initial Grading	1 day	Tue 11/28/17	Tue 11/28/17	[Vertical tick at 11/28/17]												
18	1.1.4.2 Second HS Bidding: Earthwork	1 day	Tue 2/6/18	Tue 2/6/18	[Vertical tick at 2/6/18]												
19	1.1.4.3 Second HS Bidding: Site Utilities	1 day	Fri 3/23/18	Fri 3/23/18	[Vertical tick at 3/23/18]												
20	1.1.4.4 Second HS Bidding: Structural Packages	1 day	Fri 3/23/18	Fri 3/23/18	[Vertical tick at 3/23/18]												
21	1.1.4.5 Second HS Bidding: Remaining Packages	1 day	Tue 6/5/18	Tue 6/5/18	[Vertical tick at 6/5/18]												
22	1.2 CONSTRUCTION	541 days	Wed 12/6/17	Wed 1/1/20	[Gantt bar from 12/6/17 to 1/1/20]												
23	1.2.1 Second HS Construction Phase 1	443 days	Wed 12/6/17	Fri 8/16/19	[Gantt bar from 12/6/17 to 8/16/19]												
24	1.2.2 Second HS Construction Phase 2	458 days	Mon 4/2/18	Wed 1/1/20	[Gantt bar from 4/2/18 to 1/1/20]												
25	1.2.3 Current HS Construction (Construction and Precon Schedule TBD)	333 days	Wed 5/23/18	Fri 8/30/19	[Gantt bar from 5/23/18 to 8/30/19]												



NABHOLZ

SCHEDULE